The Health Dilemma of Urban Densification

A Study on the Health Effects of Urban Densification in Three Swedish Cities

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Abstract

In recent years, Sweden has undergone urbanization, with cities growing and the population increasing. At the same time, there is a great shortage of housing and a great need to expand. As Swedish cities grow, densification has been used as a planning ideal and strategy. This is because densification is in many ways seen as a sustainable way of building. At the same time, research shows that densification can have negative health effects. Therefore, this thesis has investigated whether health aspects are safeguarded in densification processes and how they are safeguarded in three Swedish municipalities, Gothenburg, Malmö and Jönköping.

The study was done through interviews with urban planners at each municipality and by analyzing the municipalities' comprehensive plans. The result of the thesis shows that the municipalities work with the health perspective in planning and the planners are aware of the importance of health issues in the planning process. The municipalities point out that there are health risks with densification, such as loss of green areas, but mention that densification can also have positive health effects such as increased opportunities for mobility. Even if municipalities are proactive, health issues are often de-prioritized in densification processes due to economic or political interests. Mental health issues also receive less attention in the planning process than physical health issues. The conclusion for what needs to be done is that planners need to take a clearer role and address mental health more in densification processes. More research on the health effects of densification is necessary in order to provide planners and decision-makers with clearer guidelines on how planning can safeguard health aspects.

Keywords: Urban Densification, Physical health, Mental health, Planners role, Municipal planning.
1. Introduction

A current trend in Swedish urban planning and housing construction is to densify both new residential areas and existing ones. The population of Swedish cities is growing and growing fast. This has led to a great need for more housing and many cities are suffering from a housing shortage (The Swedish national board of housing, planning and building, 2017). To tackle the housing shortage, the focus for many cities has been to build as much new housing as possible, as quickly as possible. At the same time, the planning ideal has been densification, instead of building cities outwards, municipalities want to build them inwards (The Swedish national board of housing, planning and building, 2017). This has led to a discussion about urban densification and what effects densification might have on society and cities, but also on humans living in those environments (The Swedish national board of housing, planning and building 2017).

Densification is a hot topic and some headlines from news articles discussing densification in Sweden from recent years include, "Qualities such as air and light have been forgotten", "Growing cities must provide space for children", "Densify without destroying" (Svenska Dagbladet, 2019a; Svenska Dagbladet 2019b; Svenska Dagbladet, 2015). The titles show some of the concerns about densification and Berghauser Pont et al. (2020) mentions through their review of the scientifically demonstrated effects of densification, that urban densification might have both positive and negative effects. Berghauser Pont et al. (2020) explains that positive side effects of urban densification could mostly be found in sectors like transport, services, technical infrastructure and economics, while more negative side effects could be found in areas of ecology, urban environment, social impact and health. Berghauser Pont and Haupt (2009) mentions that they see three important areas of future research relating to density and one of those are health and environments. Therefore, it is interesting to study how the health perspective is cared for when the recent trend in Swedish planning is densification.

Hajrasoulih et al. (2018) says that cities around the world are growing fast and with that comes a concern about urban environments and people’s health and well-being. Hajrasoulih et al. (2018) continues by saying that even though quality of life has increased over the world, mental health problems have increased, especially in developed industrialized countries. The World Health Organization (WHO, 2017) explains that the physical environment is a determinant of health. The determinants of health are factors that affect people's health but that the individual itself can not directly control. The physical environment is therefore interesting to study from a health and urban planning perspective, especially when talking about urban densification, as this trend might affect people's health status both mentally and physically.

This thesis will therefore study how municipalities and planners value health in relation to the ideal of densification in Swedish urban planning and if they see any health-related risks with densification. The thesis will also investigate what the municipalities and planners do and can do in order to minimize potential conflicts between densification and health.

1.1 Aim and research questions

The aim of the thesis is to investigate how Swedish municipalities and urban planners work with the health perspective, with a focus on mental health, when cities densify.

- Is health and mental health considered in the municipalities plans and strategies when areas are densified, and new areas are built denser?
• Do the municipalities see any health-related risks with densification and if so, what do they do to minimize these risks?
• What are the beliefs and ideas of planners about health and mental health? How do planners understand their mission and what is their role in terms of planning for health when densifying?
2. Background

Cities and health have long been topics of interest to social scientists. There is a clear link between urban planning and health, and creating cities that focus on people's health and well-being can be dated back to ancient Greece (Barton, 2015). Modern planning as we know it today was largely created in the late 19th century, when unsanitary, overcrowded and inhumane conditions prevailed in many of Europe's dense and compact major cities (Barton, 2015). In response, it was recognized that the physical environment in which we live has an impact on human health. But beyond direct physical impacts such as unsanitary streets, bad air or polluted water, it was also understood that indirect social behaviors, physical movement, human encounters, access to essential services and proximity to nature all play an important role in human health (Barton, 2015).

2.1 Health

Health has been the focus of planning historically, but what really is health? The concept of health is a very broad concept with many different layers and angles. The World Health Organization defines it as “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 2023). Important to point out here is that this definition of health has also received criticism, in part for the word "complete" which may imply that people with chronic diseases could never be healthy. This has led to new formulations and concepts of health being discussed, one of which is positive health by Machteld Huber, who sees people's capabilities rather than incapacities (van Druten et.al, 2022). Positive health focuses on resilience and self-management in social, physical and emotional challenges (van Druten et.al, 2022). The concept also identified six dimensions of health by asking stakeholders what they thought were important aspects of health. The six dimensions that emerged were bodily functions, mental functions and perception, spiritual/existential dimension, quality of life, social and societal participation and daily functioning (van Druten et.al, 2022). Positive health has in turn also received critique and this spiral continues. Health is a complex concept, depending on your perspective, health can mean something different to different people. However, what can be seen is that there are common themes that emerge when talking about health and a few of these are mental and physical well-being, social factors and environments etc. (van Druten et.al, 2022).

In order to study health, we need to know what aspects affect people's health. The world health organization (2017) says that there are many different aspects that affect health outcomes. The determinants of health are a way of defining what affects people's health. WHO (2017) points out that the reason why people are healthy or not depends largely on the circumstances and the environment. Where we live, the quality of our environment, genetics, income and education, and relationships all influence how we feel. In general, the social and economic environment, the physical environment and a person's characteristics and behaviors are the determinants of health. Often the determinants of health are factors that individuals themselves cannot directly influence (WHO, 2017).

2.1.2 Mental Health

The world health organization (2022) also defines mental health as “... a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community” (WHO, 2022). Mental health can be affected by multiple different determinants like social, economic, environmental and personal factors. In
order to promote and prevent mental health, environments and housing are important factors (WHO, 2022).

Bhugra, Till and Sartorius (2013) describes that mental health does not exist on its own but is an integral part of the overall concept of health. Mental health means that the individual is able to have functioning relationships with others, perform in social roles that exist in society or culture, express positive emotions and have the ability to cope with sadness and depression. Mental health gives individuals a sense of worth, control and understanding of themselves. Mental health is also about feeling good, joy and happiness (Bhugra, Till & Sartorius, 2013). Both mental health and mental illness are influenced by biological, social, psychological and environmental factors. Therefore, the interactions between the individual and society are critical for creating communities which promote mental health (Bhugra, Till & Sartorius, 2013).

The Swedish Public Health Agency (2020) mentions that the concept of mental health encompasses many different health conditions with varying degrees of severity. Depression is one of the most common mental illnesses and together with anxiety disorders and stress-related illnesses, they are the most common reasons for people to report ill and take time from work in Sweden (The Swedish Public Health Agency, 2020). In 2018, 17% of the Swedish population suffered from impaired mental health, which means that individuals suffer from some form of mental illness such as depression or anxiety etc. Since 2006, the overall level of impaired mental health in Sweden has increased among virtually all groups from women and men, age and education (The Swedish Public Health Agency, 2020).

2.2 Public Health

Public health is the overall health of a population and includes both health and ill health. Good public health means that the health of the population is as good and evenly distributed as possible (The Swedish Public Health Agency, 2022a). To achieve good public health, there needs to be a good interplay between factors that lie within the individual, such as heredity, living conditions and habits, and factors that lie within political decisions and the organizations and resources of society (The Swedish Public Health Agency, 2022a).

Public health is the promotion of human health and the prevention of disease and is a part of social sustainability. Preventing and promoting public health is commonly referred to as public health work and many parts of society work with public health in one way or another (The Swedish Public Health Agency, 2022a). Preventing poor public health is about taking action to prevent things that negatively affect public health from happening. Instead, promoting public health is about identifying and strengthening individuals' own capacity for health and taking action at the population level (The Swedish Public Health Agency, 2022a). The interaction between the individual and society is important in promoting public health. Distinguishing between prevention and promotion can be complicated as they often overlap, but in general health promotion is based on the knowledge of what makes individuals thrive, while prevention is about the knowledge of what causes ill health and disease in individuals (The Swedish Public Health Agency, 2022a).

Sweden has a public health policy set by the Swedish government and Riksdag. The public health policy is not a direct law in itself but is integrated through other laws and regulations (The Swedish Public Health Agency, 2023). The public health policy consists of eight target areas which are: Early life conditions; Knowledge, skills and education; Work, working
conditions and working environment; Income and livelihoods; Housing and local environment; Lifestyle habits; Control, influence and participation; Equitable and health-promoting health care. Housing and local environment is the goal that has a direct relation to urban planning (The Swedish Public Health Agency, 2023).

Urban planning has an important role to play in public health as it shapes our living environment and has the potential to influence the determinants of more equitable and sustainable development. When it comes to planning for the physical built environment, it is about building good quality housing, creating good neighborhoods, reducing noise and air pollution, and having access to green and open spaces, community services, culture and opportunities for physical activity in order to promote public health and prevent disease or illness (The Swedish Public Health Agency, 2022b). The Swedish planning and building act (SFS 2010:900) states that the planning of land, water and buildings shall be done in such a way as to promote a good and sustainable living environment for present and future generations. The Swedish environmental code (SFS 2020:1174) emphasizes that the law shall be applied to protect human health and the environment. These laws both point to the importance of urban planning to create healthy living environments.

2.3 The Compact City and its Relation to Health

The dense or compact city, often reminiscent of the intense medieval city with its clear urban boundaries that were often the centre of commerce and daily activities, is similar to the concept of the compact city. The compact city can be difficult to describe in just one way, but is usually defined as a high-density, mixed-use, growth-focused city (Thomas & Cousins, 1996). The compact city can also be said to have an intensified land use with higher population densities and centralized activities (Thomas & Cousins, 1996). In the latter part of the 19th century, dense, overcrowded and unsanitary cities grew organically in connection with the industrial revolution but created unsustainable living conditions (Thomas & Cousins, 1996). This type of compact city clearly led to problems. The first part of the 20th century saw a reaction against the unhealthy, compact city of the 19th century and ideas of urban and population sprawl became increasingly popular (Moroni, 2016).

Sprawl or more commonly known as urban sprawl was the reaction to the then unhealthy compact city. The compact city created a fear among policy makers and planners against density and dense cities as it was seen to lead to overcrowding, noise, pollution, disease, crime and poverty (Moroni, 2016). Planners assumed that the dense city leads to a deterioration in quality of life and health which they did not want to plan for. Hence, attempts were made to reduce urban density and to separate different functions like housing, commerce and industry to create healthier living environments (Moroni, 2016). Ebenezer Howard’s Garden cities concept emerged from these decentralization ideas, where he argued that there is an optimal numerical size for the population, but also a limit on the size, density and area of the city. Howard described the cities of the time as ugly, dangerous and chaotic messes that clearly have not been created by a purposeful plan. Instead, Howard's basic idea was to increase the amount of green space and reduce the density of the city in order to create functional cities with a high quality of life (Moroni, 2016).

The ideal of urban sprawl, where the idea was to counteract the negative aspects of density, has been reversed since the time of Ebenezer Howard, where dense cities have now become a planning ideal (Moroni, 2016). As the problem of extreme urban overcrowding and dirt was solved, planners became more aware of the positive aspects of the compact city and its
functions. Today, urban sprawl is the enemy, and the compact city is something to aspire to, but will this cause risks for the health perspective when new areas are built? (Moroni, 2016).

2.4 Why Densify? Potential Risks and Benefits

The Swedish National Board of Housing, Planning and Building (2017) describes that densification has become an urban planning trend in Sweden and there are several reasons for this. Swedish cities are growing, and the population is increasing while there is a shortage of housing. Several cities and towns have historically grown outwards, which has partly increased car dependency but also reduced important natural and agricultural land. Urban densification, which has involved building the city inwards rather than outwards, has been a strategy to counteract the encroachment on important land and to increase mobility through better public transport, walking and cycling routes and generally reduce transport distances, thereby reducing greenhouse gas emissions (The Swedish National Board of Housing, Planning and Building, 2017). The compact city is said to make more efficient use of technological infrastructure and lead to the creation of meeting places where more and different types of people meet. Many cities want to use densification to link different neighborhoods together and create a more cohesive city. Cities and municipalities also want to be attractive places and increase their population and their number of visitors, which in turn leads to more revenue and economic opportunities for the municipality. (The Swedish National Board of Housing, Planning and Building, 2017).

In Swedish planning, densification has become synonymous with sustainability. At the same time, there are disadvantages to densification. In the pursuit of creating a good built environment, there are many challenges. Some of these are the reduction of green spaces as they might be taken up by densification, the amount of sunlight decreases, and it becomes more difficult to achieve the quota for a good amount of daylight in buildings. Wind and turbulence between buildings can increase with densification. Noise levels are likely to increase as well as air pollution, especially if car traffic is not reduced when densifying (The Swedish National Board of Housing, Planning and Building, 2017).

There is a limit to when densification becomes what planners have historically tried to avoid. In the past, people moved from cities when they were overcrowded and unhealthy and that risk still exists but can be avoided if the risks are understood and considered (The Swedish National Board of Housing, Planning and Building, 2017).

Haupt et al. (2020) describes in their literature study of the pros and cons of densification, that in comparison with Swedish municipalities comprehensive plans, the motives for densification are missing in three out of four cases. Where densification is mentioned, there is usually no motivation for it, and where a motivation is given, it is usually in relation to transport, services and urban environmental qualities. The least used motives for densification are health and ecology. Haupt et al. (2020) also point out that comprehensive plans generally have a more positive attitude towards densification as an approach to sustainable development, which is not always supported by the empirical evidence. A large part of the comprehensive plans' motivations for densification also lacks scientific support (Haupt et al., 2020). Haupt et al. (2020) mentions that several of the most common outcomes of densification are not even addressed by many of the comprehensive plans. Physical and mental health are two of these.
3. Literature Review

The literature review will explain previous research on density, densification as a phenomenon and densification and its relation to health and social issues. This is done to provide a clearer picture of how the research field explains densification and its health effects.

3.1 Density

We know that there are pros and cons to densification and that the concept of densification is linked to the compact city with sustainability as an ideal. At the same time, it is important to explain density and densification as there are different ways of looking at densification and different ways of measuring it. Density is a complex concept that has many different definitions depending on how it is measured. Berghauser Pont and Haupt (2009) talk about different definitions of density and how to measure it and how this in turn can affect urban form and space. They argue that one must first distinguish between physical density and perceived density and that it is dangerous to draw conclusions about one perspective when using the other. Perceived density means that different people will have different reactions to certain urban densities and designs, while the physical density can be measured in different ways like population and dwelling density, land use intensity, building height, spaciousness or coverage (Berghauser Pont & Haupt, 2009). However, it is important to note that this is not necessarily a given. As Berghauser Pont and Haupt (2009) explain, density per se is usually not the problem; instead, it is about how density is used. Depending on how cities are designed, it is possible to achieve a high density while still safeguarding health values. However, density can become a problem when the physical density exceeds a certain limit, and the buildings are so close together that health values such as daylight etc. are impaired.

Density is often confused with building types and Berghauser Pont and Haupt (2009) argue that density and physical layouts are independent of each other, and that very different physical layouts can still have a similar measured density. This means that density per se need not be a problem, but rather how densification and urban form are created, as this can affect the perceived density, which is important to consider when trying to create attractive dense areas. Berghauser Pont and Haupt (2009) also argues that it is important to make a distinction between describing and prescribing density. When using density to prescribe, or force designers and planners to design areas from certain density conditions, it implies that the density standard comes first and then the urban form. Berghauser Pont and Haupt (2009) thinks that density instead should be used to describe flexible density guidelines and principles which leaves the designer or planner free to shape the area according to the ideals and goals that exist in order to reduce the risks of urban form problems. Moroni (2016), like Berghauser Pont & Haupt (2009), mentions that density in itself has little meaning unless it is meant to be used as a tool or condition to achieve something further. Moroni (2016) argues that there is no way to create an optimal density in advance on the drawing board. Instead, one must foster the conditions in which density can generate and create itself.

3.2 Densification as a Phenomena

As explained earlier, urban sprawl was a planning ideal and a phenomenon where people wanted to live outside the busy inner city that was dirty, polluted, noisy and compact. In the 20th century, cities were built outwards, and the problem was the inner cities, but today the problem is the sprawling outer cities. Sprawl can hinder the future development of denser cities and they might therefore stand in the way of the creation of sustainable cities. Pelczynski and
Tomkowicz (2019) says that urban sprawl reflects an unsustainable way of planning as it uses the environment inefficiently and thus makes inefficient use of the earth’s resources. By urbanizing cities outwards, valuable land such as arable land is consumed, various biotopes and habitats that produce valuable ecosystem services are destroyed, there is less open space and natural land that are valuable recreational areas, and there is a greater dependence on the car and private travel (Pelczynski & Tomkowicz, 2019). As the number of people increases and urbanization continues, strategies and policies are needed to limit urban sprawl, and densification is one such strategy. Densification can be characterized by a more efficient use of buildings, for example by giving existing and new buildings multiple functions, such as housing at the top of the building and retail or offices at the bottom (Pelczynski & Tomkowicz, 2019). An intensified use of the city’s spaces where open spaces between buildings are used and expanded. Existing buildings are given extra floors both upwards and downwards and some buildings are demolished and replaced with new, usually taller buildings (Pelczynski & Tomkowicz, 2019). Pelczynski and Tomkowicz (2019) conclude that urban densification is, in general terms, a way to increase the efficiency of the use of the city and its resources. Developing new areas opens opportunities to enrich urban structure, develop for diversity and make greater use of existing services and infrastructure.

Ståhle (2008) argues that if cities are to survive in the future and in the long run, they will need to be a mix of both density and sprawl. If energy and transport costs continue to rise in the future after the so-called “peak oil”, economic patterns will change, likewise transport patterns (Ståhle, 2008). People will walk and cycle more, while other infrastructure investments will require cities to have higher densities. Ståhle (2008) also argues that it is possible that future urban economies will not be able to cope with the transport costs of sprawling cities, while denser cities will be able to compete economically in a different way. Hence, a denser city would be more resilient, especially economically. At the same time, Ståhle (2008) also points out the importance of qualitative open spaces, as these are often highly valued by the city’s inhabitants; there is also a fear around densification that open spaces and green areas are taken up but are not replaced by anything else (Ståhle, 2008).

3.3 Health in Relation to Urban Planning and Urban Densification

There is as said a clear connection between health and urban environments. The area has been studied for a long time historically and was part of how urban planning began to take shape. Jackson (2003) writes that health today does not drive development and planning in the same way as it did in the 19th and 20th century, but that urban form and planning have just as much influence on health as it did then. There are many factors in urban planning that can be linked to health, which can make it difficult to delineate, but there is a strong consensus amongst the literature about health, planning, design and urban form. That urban form and design influences individuals’ health and that aspects like open space, green space, natural light, noise and air pollution are important factors that affects health outcomes (Jackson, 2003; Wasfi & Kestens, 2021; Berghauser Pont et al., 2021). However, studies related to urban densification and health impacts are limited.

Jackson (2003) states that there are strong public health reasons to integrate green spaces, natural light, and visual and physical access to open spaces as they affect people’s well-being. Jackson (2003) points out that high residential densities, mixed land uses, and gridded street patterns can increase social connections and physical mobility through walking and cycling. At the same time, increased density can lead to increased transparency and reduced privacy (Jackson, 2003). Wasfi and Kestens (2021) argues that one possible reason for an
increase in obesity is related to the design of the urban environment. Urban forms that do not promote physical activity or movement, such as walking and cycling, may lead to an increase in obesity. Denser environments and urban forms with walking and cycling friendly streets may lead to a reduction in obesity and related diseases to obesity (Wasfi & Kestens, 2021).

Stress is a factor that can lead to a reduced state of health, both physically and mentally. Prolonged levels of stress can lead to anxiety and sleep problems as well as, in some cases, more severe mental and physical illnesses (Han et al. 2022). The built environment and urban design have a direct impact on people's stress levels. A high quality-built environment that promotes outdoor activities, movement, recreation and stress reduction can reduce stress levels and increase people's well-being (Han et al. 2022). From a study done in South Korea by Han et al. (2022), it was found that hard surfaces such as walls and buildings increase people's stress levels while factors such as trees, open spaces and sky, reduce stress levels (Han et al. 2022). Liu et al. (2022) says that green spaces have an important restorative function for people both physiologically and psychologically. Natural green spaces or green areas have a greater restorative function than man-made spaces. Green spaces can reduce mental stress and make it easier for residents to recover (Liu et al., 2022). Densification is however a threat to the provision of high-quality green space, as cities grow and become denser, green spaces risk being exploited (Berghauser Pont, 2021). At the same time, research shows that densification does not necessarily mean a direct reduction in green space (Berghauser Pont, 2021). Densification can lead to increased perceived accessibility to green spaces as a denser city with an interconnected street network with more walking and cycling paths increases residents' chances of getting to a green space (Berghauser Pont, 2021). At the same time, a study from Vienna shows that when densification takes place in the vicinity of green spaces, there is a risk that the use of green spaces will increase to such an extent that people will choose to visit green spaces less often, for less time or avoid them altogether, which can have major negative consequences for individuals' health and psychological well-being (Arnberger, 2012).

Berghauser Pont et al (2021) describe that health is one of the areas seemingly most negatively affected when densification occurs. Berghauser Pont et.al (2021) say that studies done on densification and health are usually divided into several sections, how densification affects physical health, health in relation to air and noise pollution, mental health and health in terms of accidents and natural disasters. Berghauser Pont et.al (2021) say that studies on physical health and densification can be divided into sub-categories dealing with physical activity, obesity, lung cancer and heat vulnerability. Most studies showing positive links between health and densification are almost all about how higher densities make it easier for people to move around by walking and cycling, which in turn can reduce obesity and obesity-related diseases (Berghauser Pont et al, 2021). As for the other physical health factors, they are negatively affected by densification. Densification can lead to increased heat vulnerability, higher epidemic mortality rates and a higher risk of lung cancer. In the case of lung cancer, it is not density per se that has an impact, but car use in a denser city (Berghauser Pont et.al, 2021). Denser cities with less car traffic do not lead to a higher risk of lung cancer (Berghauser Pont et al, 2021). However, there is a large consensus in the literature on densification and health that mental health is negatively affected by densification (Berghauser Pont et al, 2021). People living in denser areas are more likely to suffer from stress-related disorders and depression. It appears that open spaces have a positive impact on mental health and that areas with less physical density, where buildings stand not as close together, do not have as negative an impact on mental health (Berghauser Pont et al, 2021). Burton (2000) say that densely populated and crowded areas lead to poorer mental health and an increase in depression, and that higher density forms of housing does not play as much of a role as overcrowding.
McCay et al. (2017) describes how mental health questions are often overlooked in urban planning and urban design. With many different demands, needs, research, activists and all kinds of different interests to consider in the planning process, planners and decision-makers must prioritize. Although it is possible to create environments that promote good mental health, these issues often fall further down the priority list (McCay et al., 2017). McCay et al. (2017) mention various barriers that may mean that mental health is often not prioritized. Some of these are stigma, fear of complexity and low prioritization becoming a self-fulfilling prophecy. The stigma aspect can negatively affect the prioritization of mental health, as planners or policy makers may have a negative image of mental illness, a high level of ignorance about what mental illness is, or simply not think of it as a problem. The fear of complexity aspect is about how there is a perceived complexity of mental health. Different mental disorders can arise from a variety of things such as early experiences, genetics or social settings which cannot always be addressed through urban design and planning (McCay et al., 2017). However, McCay et al. (2017) argue that urban design can and should play a role in mental health, just as aspects of physical health play a role in urban design. The third aspect, the self-fulfilling prophecy of low prioritization, is that as long as mental health is not addressed or prioritized in planning as physical health is, it will also not be prioritized. It is necessary for mental health issues to be mentioned and given exposure in order to get a higher priority and to succeed in making the same journey as physical health has made in urban planning (McCay et al., 2017).

Skrede and Andersen (2022) have studied the emotions that arise when residential areas are densified and how place identity is affected in Oslo, Norway. Skrede and Andersen (2022) say that personal and emotional reactions to planning have hardly been studied and receive little attention. Yet, emotions of planning decisions affect people’s life which in turn have an impact on people’s health. Skrede and Andersen (2022) conclude that there is a somewhat messy relationship between densification and emotions, but that people might feel insecurity, fear, anger and sadness over potential lost homes or altered place identity. Because of the increase in land value and gentrification that might occur when densification is done, some are bought out by construction companies and forced to move. Areas may also be significantly altered, changing the identity of the place and people's relationship with their former home (Skrede & Andersen, 2022). However, there are people who think that a change might be good and have a positive impact on the neighborhood or at least that some things with the change brings new good aspects (Skrede & Andersen, 2022).

3.3.1 Social Factors and its Relation to Densification and Health

In addition to the effects that densification has on human health, densification can also affect social aspects that in themselves may not always have a direct impact on health, but have an indirect link to health. Since social factors such as equality, segregation, crime and accessibility can affect people's well-being and health, it is worth mentioning the impact of densification on these factors.

The literature on the effects of densification on social factors is mixed and divergent. Some say that densification has a positive impact on social factors while others argue that it has a negative impact. Burton (2000) concludes in her analysis of the claimed social effects of the compact city in England that there are both advantages and disadvantages to all social factors when it comes to densification but concludes that four social aspects tend to be more negatively affected by it. Firstly, Burton (2000) say that densification may lead to less domestic living space as areas are densified. Secondly, there is a risk of lack of affordable housing as areas become denser, land will be scarcer and the change in current land use will also lead to more expensive
housing (Burton, 2000). Thirdly, denser cities may also lead to an increased crime rate. There are arguments that the compact city will reduce the crime rate because of the natural public surveillance that will occur, however, this is not necessarily true. Inequality in exposure to crime is greater in larger and more compact cities, there are also fewer private spaces and more communal spaces in a compact city that are vulnerable to crime (Burton, 2000). Burton (2000) says that it is difficult drawing conclusions about crime and density, results in one city cannot be generalized to another, therefore caution needs to be taken while discussing crime and densification. Fourthly, dense cities do encourage biking and walking, but it is usually low-income groups that do not have the possibility to use a car who walks or takes the bike which may make the results about walking and biking inconclusive (Burton, 2000).

Burton (2000) also mentions that there are three social aspects that are more positively affected by densification. Firstly, public transport can be used more efficiently and is more frequently used by lower socio-economic groups. Secondly, lower levels of social segregation can be found in areas with high density housing that contains a high proportion of flats and a high proportion of low-income groups (Burton, 2000). Important to say is that density per se is not the cause of lower levels of segregation but more density in terms of housing type. Segregation of low-income groups was found to be lower in cities with a high proportion of high-density housing such as flats and terraces. Segregation levels was higher in cities with low-density housing such as detached and semi-detached houses (Burton, 2000). Burton (2000) mentions that it is difficult generalizing these results and they might shift from different cities and neighborhoods. Thirdly, access to services increase when cities densify, where accessibility to shops, work, parks etc. can be increased. Important to mention is that access might differ depending on physical layout (Burton, 2000).

Burton (2000) and Cavicchia (2021) both say that densification has been identified as a way to address social inequalities and deliver social benefits. These arguments tend to simplify and embellish the effects of densification on social factors. Cavicchia (2021) says that many of the benefits of densification in social contexts are seen as self-evident and are accepted without reflection or criticism by many governments. Cavicchia (2021) points out that this type of ideology is called "Intensify or die" where densification as a solution to both spatial and social problems is never questioned.
4. Theory and Theoretical Frameworks
In the theory section, theories and theoretical frameworks related to densification and planning processes will be described and later used to understand and analyze the results.

4.1 New Urbanism

Densification and the compact city feature prominently in the community-designed concept of new urbanism. New urbanism is a reform that took off in the 1990s that seeks to promote desirable urban qualities like lively, beautiful, just and environmentally favourable human settlements (Talen, 2014). It can be somewhat difficult to discern what exactly counts as new urbanism, but some main tenets are that new urbanism favours a compact urban form that encourages its residents to walk and cycle by increasing walkability and bikeability. It also focuses on reducing the negative impact on the environment and its surroundings (Talen, 2014). New urbanism encourages social, economic and environmental diversity as opposed to homogeneity. New urbanism wants a qualitative public realm that connects different uses and functions that increase opportunities for interaction and exchange; offers equal access to goods and services; and protects human health (Talen, 2014).

Most people who encourage new urbanism would say that good urbanism depends on a certain density of social and economic relations. However, it is not possible to focus solely on density as it does not tell the whole story. Urbanism is the complex interaction of many different factors such as form and process, structure and function, and social and economic systems (Talen, 2014). New urbanism requires diversity but breaking down new urbanism into components such as land use categories, kilometers of roads, or square meters of office space or park space per capita undermines the main purpose of new urbanism, which is to try to maximize interaction, interchange and stimulate social and economic connections and thus succeed in creating diversity at all levels (Talen, 2014).

New urbanism has also received a lot of criticism. Some of the biggest criticism is about how new urbanism tries to use best practices from many planning traditions, which in the end often leads to contradictions (Talen, 2014). New urbanism seeks to define a type of multidimensional urbanism that takes many different contexts and scales into account. For example, in the American context, it has been difficult to succeed with a multidimensional approach as it faces resistance (Talen, 2014). Especially when it tries to merge ideas that in some cases contradict themselves. This also leads to a tendency to focus on one aspect of new urbanism in order to avoid constant conflict (Talen, 2014).

Moroni (2016) criticizes new urbanists who take the idea out of context and argues that they are off track in some cases, misunderstanding what Jane Jacobs, one of the pioneers of new urbanism, meant. Moroni (2016) claims, like Jane Jacobs, that the basic idea of new urbanism is to achieve diversity in an organic way at a small-scale level. Moroni (2016) argues that planners today seem to want to skip the organic and evolutionary process and instead create what they themselves consider to be the ideal outcome of that process which might lead to failure. Moroni (2016) also says that new urbanism tends to have an overconfidence that every problem can be solved through urban planning and design and believes that form determines content. Spatial form affects social opportunities, but the relationship is reciprocal and non-linear, which means that a certain scepticism should be shown to how form affects social processes (Moroni, 2016).
4.2 Role Dynamics Theory of Planning

Studying the role of planners and how it can influence decisions and thoughts requires a theory of how the role of a planner works. Role theory deals with this and in this section the article by Mayo and Johnson (2011), describing the dynamics of role theory in planning, will lay the base for this.

Planners largely work and live in practice. In the world of the planner, problems and situations often arise that require some kind of solution or response. Hence, planners work a lot on problem solving with the hope that their recommendations and suggestions will lead to better outcomes (Mayo & Johnson 2011). Sometimes the proposals lead to actual improvements but at other times they fail. Even if they do not always succeed, they need to move on to the next problem knowing that the previous problem was not solved or did not have the desired outcome. Meanwhile, the planner survives by juggling their competing roles. However, when the planner learns to manage roles instead of juggling them, they can go from merely surviving to shining (Mayo & Johnson 2011). The role of a planner is influenced by past experiences, roles they have acquired through work and the roles they choose to take and develop within. Through all the changes and lessons, they have learned from childhood, education, internships, volunteering and work experience, planners shape the way they perform their role. If planners choose to actively take on new roles and switch to new roles over time, they can thrive and have a great chance to make an impact through change (Mayo & Johnson, 2011).

But what is role theory? Role theory belongs to and is based on sociology. Robert Merton created the concept of the role set in 1957, which is an array of different associated roles that link a person's status with complex social structures (Mayo & Johnson, 2011). A role has specific features where certain behaviours and skills are required to perform it, such as creating population projections or giving a speech. However, a role is not a job. A role set on the other hand, is related to a job but is still not a job, an example being a senior planner, which is a role set. A role set contains many different roles consisting of different privileges and responsibilities in one's work resulting in a social status (Mayo & Johnson, 2011). There are also a variety of concepts linked to role sets and roles, some of the most central ones being: Role acquisition which is when the planner gains knowledge by performing a role. Role accumulation which is when the planner takes on more roles to improve their practice performance. Role dynamics which is a combination of social changes in role acquisition and role accumulation which can be created when, for example, politics puts a stop to some of the planner's roles (Mayo & Johnson, 2011).

What theorists have also seen is that planners experience role dilemmas when performing certain roles in a role set. There are different types of dilemmas, some of these are role overload, which means that a person in their task meets too many expectations that cannot be fulfilled (Mayo & Johnson, 2011). Role dissonance which is when a person feels that a role is important but is unable to perform it or feels constrained in performing a role. Role ambiguity which occurs when a person's expectations are insufficient or incomplete to guide their behaviour. Role conflict which occurs when a person must perform different roles that do not work well together (Mayo & Johnson, 2011).

Being a planner also involves a variety of roles. Throughout history, local officials have limited their planners to adopting roles as technicians, brokers, mediators, experts on processes or even public leaders (Mayo & Johnson 2011). Different models of planning and their ideal roles influence how planners preconceive planning problems and also how they choose to approach
problems and how they choose to act (Mayo & Johnson, 2011). Many of the planner's roles fall under four paradigms: rational planning, incrementalism, advocacy and communicative action. Depending on which roles and paradigms the planner belongs to, the person's approach to tackling different planning problems ultimately changes. Some planners simply use a regulation and move on, while others feel compelled to discuss alternatives with other actors (Mayo & Johnson, 2011). Most often, planners tend to use a mix of strategies that they want to use in practice. At the same time, they need to combine their own strategies with organizational and political visions, which can define their role. Role dynamics also play an important function here as planners may need to adapt their ideal strategies to political visions, for example. The different roles of the planner can create conflict with each other and with the planner's own ideals (Mayo & Johnson, 2011).

4.3 Policy and Practice

Understanding and analyzing the problems and challenges of planning policies and their impact on practice requires an explanation of policy and practice. Hence, this part will describe policy and practice and its part of urban planning.

Wharf and Callahan (1984) discusses social policy and its relation to practice. Policy is something that practitioners or outsiders often feel is something that comes "from above" or is made by someone else. Policies are often created by decision-makers and are about resources and regulations for how practice should be carried out (Wharf & Callahan, 1984). Policy can be seen here as limiting and restrictive rather than guiding and developing. On the other hand, policy is something that does not only have to be top down but can instead be developed by all practitioners at all levels. Everything from policies at state level to municipal or within an organization or family (Wharf & Callahan, 1984). Policies can be practiced by everyone and when talking about social policy, purpose and choice are important elements. A policy must have a purpose in order to create some kind of direction, as it is the main point with policies (Wharf & Callahan, 1984). At the same time, setting general directions and creating meaningfulness is complex and involves difficulties. What is important when making policies is that values are defined and that priorities are set early on. However, when policies are about setting directions for work at an early stage, it can be difficult to know what really needs to be done (Wharf & Callahan, 1984).

Cohen et.al (2007) says that there is a dilemma between policy and practice, policies create a gap with practice as it is moving a bit beyond it and the implementation of policies aim at closing that gap. Policies can be formed in a lot of different ways and different policy incentives have various outcomes in practice (Cohen et.al, 2007). Some of the instruments that policies deploy are funds, forbid actions, incentives to comply, deploying ideas to inform practice and offer flexibility to adapt to local conditions (Cohen et.al, 2007). Policies are often socially created and deployed by politicians which makes them a reflection of decision makers perspectives. Policies often deploy resources that are meant to change the practice (Cohen et.al, 2007). Cohen et.al (2007) argues that a reason why some policies are not working as intended is because the clients, practitioners and organizations are not following the policy, or doing as the policy promotes. Therefore, one of the main puzzles with policy and practice is to enable these actors to do as the policies propose (Cohen et.al 2007).

4.3.1 Policy, Practice and Strategic Planning

Planning strategies and policies are used in Swedish planning as a method to gain a broader understanding of sustainability issues and to bridge sectoral silos. However, there is a problem
in how strategies and policies are implemented in practice. In practice, many policies and strategies are transformed in an organizational complexity and usually clash with statutory planning (Saldert, 2021). Saldert (2021) explains that from her study in Gothenburg, in Sweden, that strategic planning is partly aimed at encouraging and facilitating the integration of different sectors, but in the case of Gothenburg it turned out that the statutory planning frameworks and bureaucratic processes are not adapted for this kind of purpose. Instead, practitioners are left to navigate the strategies and organizational challenges created by strategic planning itself (Saldert, 2021).

Saldert (2021) identified four overarching challenges with policies and strategies in practice. The first is how unclear and diverse strategies, objectives and visions in documents and policies can lead to a type of flexibility that makes it difficult for stakeholders to interpret and act based on what is written in the documents. At the same time, the flexibility of these strategies and policies can be an advantage when it comes to implementing social sustainability goals, as the vagueness may allow actors with different interests to find ways to reach an agreement (Saldert, 2021). The second challenge is how long-term goals clash with the short-term budget that does not support planning for long-term goals. This problem is common in planning when it comes to implementing strategic sustainability goals, both for economic and political reasons (Saldert, 2021). This problem becomes particularly evident in organizations and projects where both for profit and non-profit models are mixed (Saldert, 2021). A third challenge is the difficulty in merging current bureaucratic processes with unclear mandates with the organizational structure. The strategic planning structure is meant to bridge organizational boundaries, but this is a complex thing to do. It can lead to a mismatch between a municipality's bureaucratic structure and the strategic approach used (Saldert, 2021). This creates uncertainty about who takes responsibility for what in the planning process, not only between different departments but also between politicians and practitioners. This results in a gap between policy and practice, leaving practitioners to make micro-decisions based solely on their own personal interpretation of the strategy (Saldert, 2021). The fourth challenge is about the complex institutional context that practitioners must navigate. To make it possible to implement the strategies' goals and visions, practitioners need to have intentions, skills and abilities to take initiative, as well as good conflict management skills (Saldert, 2021). The practitioners' ability to communicate is extremely important for strategic planning to work. At the same time, the lack of political support and the institutional complexity create barriers to the possibility of implementing the strategies (Saldert, 2021).

Strategic planning is tasked with addressing urban sustainability challenges. However, it turns out that merging strategic planning and statutory planning can lead to problems, especially when it comes to implementing sustainability goals such as social sustainability in the planning process (Saldert, 2021). Many of the decisions end up in the hands of practitioners. Resolving conflicts in combination with unclear objectives means that in many cases it is up to people at the practical level to either give influence to the meaning of the objective, interpret the objective according to the person's own perspective or ignore the objectives altogether. Practitioners, such as planners, play a major role in the implementation of sustainable development goals (Saldert, 2021).
5. Method and Material

There are many ways of conducting research. The Swedish research council (2017) describes that there are diverse types of research and that distinctions can be drawn between hypothesis generating and hypothesis testing research, as well as between research using quantitative or qualitative approaches. You can also distinguish between research that are subsumed under the natural law and research that is trying to deepen our knowledge around certain processes, events or texts (The Swedish research council, 2017). This thesis uses a more qualitative research stance where the aim is to deepen the knowledge about health aspects in densification planning processes. In the method part I will explain the methods used for the thesis, various choices that had to be made, limitations and ethical considerations.

5.1 Research Design

Generally understood a research design is something that is planning for how the research will be conducted. The research design is usually produced in advance, before conducting the research (Farthing, 2016). Farthing (2016) says that the interest in research designs is essentially because it underpins the trustworthiness of the conclusions and claims that are made in a study. Farthing (2016) argues that some writers on research design say that there are only a few different designs from which a researcher needs to choose. Farthing (2016) rejects that view and says that several design decisions must be made and that these can vary. This thesis uses more of a qualitative research stance with a focus on urban planning issues. A qualitative research design best explains this paper, as a qualitative approach is good for gaining insight in human experience, thoughts and behaviours which in turn might provide explanations for unexplained issues (Delost & Nadder, 2014). This study could also be said to be a comparative study. Coccia and Benati (2018) explains that a comparative study in social sciences seeks to explain and analyze a combination of variables, such as similarities and differences that characterize structures, processes and policies. Coccia and Benati (2018) explains that there are three main approaches to the comparative study. One of these is the case study method, which focuses on subjects such as institutions, sectors or policy processes. This method can also be implemented in different ways. One of these ways is through a configurative-idiographic study which is a more descriptive comparative study, where the material is described and where insight is given into the relationship between the elements in the study (Coccia and Benati, 2018). This study could be said to describe and compare three cases (municipalities in this case) but not contribute to a specific theory.

Bryman (2016) mentions that social and qualitative research is something that is very complex and sometimes quite messy. Social research and its methods are embedded in larger contextual contexts which contains many factors that influence the research. Hence, in many cases it can be difficult to arrive at a single solution, which is usually possible in a different way in natural scientific research (Bryman, 2016). Therefore, it is important to discuss that the conclusions drawn in the work cannot be said to be correct with 100% certainty, but the conclusions are instead placed in a broad planning context where they can add another perspective and knowledge about a societal problem.

5.2 Municipal Documents

One of the methods used was analysing municipal planning documents. Documents can come in many different forms but are often described as things that we can read and that relate to aspects of society (Farthing, 2016). In one way or another, documents are used in an essay, for
example through previous research in the form of articles and books where the documents add knowledge and information regarding the topic (Farthing, 2016). Documents are potential sources of data and material in research, and municipal plans can be used to generate data on, for example, municipal policies in specific areas. Studying documents can be significant in finding out the author's view of the world and how they understand it, what values they think are important and why. Documents can show how organizations work and why they choose to work in a certain way and therefore the analysis of documents were made in this thesis (Farthing, 2016).

5.2.1 Procedure

In order to choose which documents to study you must first have an object to study. In this thesis, municipalities and planners are studied. The municipalities or cities chosen for this study were Gothenburg, Malmö and Jönköping. Initially, the idea was to choose Sweden's three largest cities, Stockholm, Gothenburg and Malmö, as these are all cities that are growing and that have experienced the effects of urbanisation in Sweden in recent years. They are also cities where densification is happening and where there has been discussion about densification. As Stockholm declined to be interviewed, Jönköping, an above middle-sized city in the southern parts of Sweden, was chosen instead. Jönköping, like Malmö and Gothenburg, is a city that has experienced population growth and urbanization and is therefore just as relevant for the study. As mentioned, there are many types of documents. In municipal planning contexts, one usually talks about different types of planning documents and strategic documents as well as policy documents. In this thesis, municipal planning documents in the form of comprehensive plans were in focus as that is a municipality’s main strategic planning document. The comprehensive plan serves as the main document for land and water use. All municipalities must have a comprehensive plan (The Swedish National Board of Housing, Building and Planning, 2022). The comprehensive plan describes how the built environment is to be used, developed and preserved and how the public interest is to be served. The comprehensive plan should also show how national goals for sustainability are followed (The Swedish National Board of Housing, Building and Planning, 2022). Therefore, the municipalities’ comprehensive plans were studied, especially to answer whether health and mental health are considered in the municipalities’ plans and documents in the context of densification. However, there is a risk that some documents and policies relevant to the paper have been missed. This risk could mean that information regarding densification and health in the municipalities are missed. However, this risk is not very great as the comprehensive plans are documents that contain most of the strategies and directions that the municipalities want to implement. The analysis of the comprehensive plans is also complemented by the interviews with planners from each municipality, which reduces the risk of missing important aspects.

After the selection of the documents, they were read in a general way to get an idea of the relevance and design of the documents. This was followed by a thematic analysis of the documents.

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Documents</th>
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<tbody>
<tr>
<td>Gothenburg</td>
<td>Comprehensive plan for Gothenburg (2022)</td>
</tr>
<tr>
<td>Malmö</td>
<td>Comprehensive plan for Malmö (2018)</td>
</tr>
<tr>
<td>Jönköping</td>
<td>Digital comprehensive plan 2016 - text part (2016)</td>
</tr>
</tbody>
</table>

Figure 1: Figure over studied municipalities and documents
5.3 Interviews

Farthing (2016) says that there is no simple answer on which method to use for any project. The decision of choosing a method involves taking a range of issues into account, such as research questions and purpose, methodological arguments, practical considerations, potential data sources and sampling etc. (Farthing, 2016). But as this thesis aims to investigate how Swedish municipalities and planners consider health in relation to the trend of urban densification, a qualitative method approach was used, and interviews were conducted as a method to examine the planners' perspective of urban densification and health aspects.

5.3.1 Semi-Structured Interviews

Gillham (2000) describes that the interview is a conversation but where one person, the interviewer, seeks answers to questions for various reasons from the other person, the interviewee. The interview is a good tool to gather information and to gain an understanding of what is being studied in relation to the purpose and the questions posed (Gillham, 2000). There are different styles of interviewing and ways of interviewing depending on the purpose of the interview. But what all interviews have in common is whether they are structured or not and how much the interviewer lets the interviewee lead the conversation. Structured interviews allow the interviewee very little space where the questions are specified to the extent that they are closed and do not lead to any discussion. Unstructured interviews, on the other hand, are very open-ended where only a few themes or a few key words may be enough to focus the conversation (Gillham, 2000). This paper uses semi-structured interviews which are in the middle of the structured to unstructured scale. The semi-structured interview has a structure but is still open-ended in style, allowing the interviewee to speak while allowing the interviewer to ask questions in addition to the prepared questions (Gillham, 2000). In this way, the interview will open up for reflection and follow-up questions, which can make the interview deeper and provide answers to more complex questions.

Before conducting the interviews, an interview guide was prepared. An interview guide serves as a list of pre-determined questions that provide a general direction on what questions to ask. It can serve as a script and help guide the interview (Bryman, 2016). A semi-structured interview guide does not have to be followed to the letter; the questions can be asked according to the wishes of the interviewer. The most important aspect of an interview guide in a semi-structured interview is that it offers flexibility and thus does not dictate the interview too much, but rather serves as an aid to elicit the interviewee's thoughts and views on the world (Bryman, 2016). Bryman (2016) says that when creating the interview guide and preparing for the interview, it is important to think about your research questions. Even though you are conducting a semi-structured interview, it is important to keep a focus on the research questions as you should not completely stray from the research topic. It is good to ask yourself what is puzzling about your thesis and problem formulation. Thinking through what you want to get out of the interviews and writing down ideas and thoughts is important in the creation of research questions and interview questions (Bryman, 2016). Discussing the topic with friends or colleagues can also be a good way to process the questions and of course previous research which can provide good insights (Bryman, 2016).

Bryman (2016) also says that it is good to familiarize yourself with the subject and the conditions in which the interviewee works or lives. Preparation for the interview also affects the outcome of the interview. Through preparation, it is possible to create the best conditions for the interview to be as good as possible.
5.3.2 Procedure

Part of the focus of the thesis is on planners and their role and ideas in relation to densification and health, therefore the focus was on finding planners to interview. As urban planner is a broad professional title, it can be difficult to define who counts as an urban planner. Within Swedish municipalities, urban planning is often divided into comprehensive planning and detailed planning, with comprehensive planning having a more strategic role and detailed planning a more practical role. Interviewees were selected through contact with each municipality's urban planning administration where planners who had the opportunity and were considered suitable were selected as interviewees. All interviewees are urban planners and work with urban planning in some way. Either through comprehensive planning, detailed planning, or social issues in urban planning, which makes them suitable. To be able to preserve the interviewees anonymity their exact job title will not be mentioned. This can be a disadvantage as the exact job title can corroborate what interviewees say. At the same time, a balance has been struck between the importance of preserving anonymity and the fact that the exact job title is not needed to change or improve the results in any way.

<table>
<thead>
<tr>
<th>Interviewees</th>
<th>Date of the interview</th>
<th>Role</th>
<th>Municipality</th>
</tr>
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<tbody>
<tr>
<td>G1</td>
<td>9th of March 2023</td>
<td>Urban planner</td>
<td>Gothenburg</td>
</tr>
<tr>
<td>G2</td>
<td>10th of March 2023</td>
<td>Urban planner</td>
<td>Gothenburg</td>
</tr>
<tr>
<td>G3</td>
<td>5th of April</td>
<td>Urban planner</td>
<td>Gothenburg</td>
</tr>
<tr>
<td>M1</td>
<td>19th of March</td>
<td>Urban planner</td>
<td>Malmö</td>
</tr>
<tr>
<td>M2</td>
<td>19th of March</td>
<td>Urban planner</td>
<td>Malmö</td>
</tr>
<tr>
<td>J1</td>
<td>11th of April</td>
<td>Urban planner</td>
<td>Jönköping</td>
</tr>
</tbody>
</table>

Figure 2: Figure of interviewees from each municipality. Each interviewee was anonymized and given a code.

After the interviewees were selected, a meeting link to teams was sent to them. All interviews were conducted via teams as it is a convenient method as the interviewees were located in different places around Sweden. Bryman (2016) mentions that there are limitations with online interviewing, some are the possibility of technical problems occurring that interrupt or complicate the interview in some way, which in turn can make it difficult to transcribe the interview. None of this was experienced in the conduct of the interviews, all interviews worked well and had a good flow. Some interviewees even preferred themselves to conduct the interviews remotely through teams. The interviews were recorded in order to be able to transcribe them and the interviewees were informed beforehand that they were going to be recorded. The interviewees were asked to read and sign a consent form in advance about the processing of personal data, which informed them that they will be recorded and how their personal data will be handled, processed and stored. The interviewees were anonymized in the paper where personal information linked to the interviewee such as name and exact job title is not mentioned.

Before the interviews, an interview guide was made that served as a template and help for how the interviews should proceed. The interview guide was also a help to get answers to questions that are important for the results of the thesis and research questions. The questions in the interview guide were based on the research questions but also on personal interests in the subject. During the interviews, the interview guide was followed but not from beginning to end. Sometimes the interviewees brought up specific examples of things that were interesting or they answered some question without being asked and then the interview guide was deviated from. All interviews were conducted in Swedish and transcribed in Swedish but translated into English when the transcripts were used to reference or quote the interviewees. Xian (2008) says
that translating is more about just translating each word. Sometimes there are words that does not have an equivalent word in the other language, which can complicate the translation process. Translations are also not value-free, argues Xian (2008), but the researcher's values play a role in translations and can influence the translation. This has been taken into account when referring to the material, especially in the case of quotes where it is very important to bring out what the material says.

5.4 Thematic Analysis of Interviews and Documents

In order to analyze the material emerging from the interviews and documents, an analysis method is needed. The method of analysis that was used is thematic analysis. Braun and Clarke (2006) describe that thematic analysis is a process of identifying patterns or themes within qualitative data. It is a flexible method that organizes your data set in rich detail. Thematic analysis is using a coding system where themes are found in the material in relation to the research aim and questions. But what is a theme? A theme captures something important in the material that in turn has a relationship to the aim and research questions (Braun & Clarke, 2006). It can be difficult to know exactly what counts as a theme and to what extent the presence of the theme must be present in the material to count as a theme. Here, the issue is one of prevalence both within each data item but also within the entire dataset (Braun & Clarke, 2006). At the same time, a theme does not have to be something that takes up a lot of space; if something has a strong relevance to the research questions, it can also be a theme (Braun & Clarke, 2006).

A thematic analysis can be conducted in several ways and themes can be identified in two main ways, either through an inductive bottom-up approach or a deductive top-down approach. An inductive approach means that the themes found are strongly linked to the data itself. If the data in this method has been collected through e.g. interviews, it may mean that the themes found may have a weak link to the questions asked during the interview (Braun & Clarke, 2006). Themes in the inductive method are not driven by the researcher's theoretical interest in the area. Thus, inductive analysis is a coding process that does not follow a predetermined coding scheme (Braun & Clarke, 2006). The deductive approach is more driven by the researcher's theoretical and analytical interests in the field. This tends to give a less rich description of the material but provides a more detailed analysis of certain aspects of the data that the researcher chooses to focus on (Braun & Clarke, 2006).

Another decision to make when conducting thematic analysis is the level at which themes should be identified. This is usually referred to as the semantic and latent approach (Braun & Clarke, 2006). In the semantic approach, themes are identified through the words that are said, written or expressed and do not go beyond that to the idea behind why they are said. The latent approach focuses more on what is behind the words or text itself and focuses on the underlying ideas (Braun & Clarke, 2006). If a semantic approach describes the surface of an object and its shape and meaning, the latent approach focuses on what caused the object to have that surface and its meaning (Braun & Clarke, 2006)

5.4.1 Thematic Analysis of Interviews and Documents

A more inductive approach was taken when the documents and interviews were thematized, where the data laid the base for the thematization and the themes that emerged. To find the different themes, a semantic approach was chosen where the focus was on the words written in the documents or said during the interviews.
The first thing that was done during the thematization was that the material was read through to create an understanding of how the material looks and to facilitate the coding. When thematizing, it is possible to use computer programs but also to do it manually. In this paper, the thematization was carried out manually using Excel. Interesting parts with relevance to the purpose and questions were copied into an Excel document where a code was assigned to that section (See figure 3, example from a municipality).

<table>
<thead>
<tr>
<th>Text</th>
<th>Page</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>With a holistic perspective on the city, planning should promote the</td>
<td>15</td>
<td>Goals</td>
</tr>
<tr>
<td>public space as a democratic arena - through the design and placement of squares, parks, streets and other functions and by always considering aspects such as equality, safety, accessibility, public health and justice.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning for a more socially cohesive Malmö is a high priority. This is promoted by more movement between different parts of the city and more and better meeting places. By breaking down barriers, strengthening routes and creating new destinations and attractions, the city can be linked together socially.</td>
<td>15</td>
<td>Attractiveness</td>
</tr>
<tr>
<td>At an overall urban planning level, strategies for safety and gender equality coincide to a large extent with the strategy of building a denser, mixed-use city.</td>
<td>16</td>
<td>Densification arguments</td>
</tr>
</tbody>
</table>

Figure 3. Example of how the material was coded in excel. Example given is from the coding of the Malmö comprehensive plan (2018).

After the material was coded, all the codes were sorted together to help identify patterns. All codes were reviewed and then some of the codes that were similar and had roughly the same content were merged. This in order to make it easier to divide them into themes. In figure 4 you can see an example of how the thematization process looked. When all the material was coded and thematized, a final revision was made of all the material and themes to come up with the three final themes shown in the result.
Ethics in research is about how values determine which path the researcher chooses to take. Research requires moral decisions to be made about various ethical issues that may arise (Farthing, 2016). According to the Swedish Research Council (2017), there are ethical codes to consider before conducting studies. Especially when interviews are conducted, it is important to inform and ask for consent before the study is done, during the study risks should be avoided and design issues should be addressed and afterwards aspects such as publication, retention and archiving of the material should be considered (Swedish Research Council, 2017).

When conducting interviews, it is important to take ethical considerations into account. Some ethical considerations to consider when doing interviews is to fully inform the participant about the purpose and methods of the research, the confidentiality of the material and the respondent must be respected, the same with the anonymity of the interviewee. The participants must also be protected and harming the participant must be avoided, both physical and psychological harm (Farthing, 2016). An important reminder is to be consensual with the participants and clear with what is happening, The Swedish research council (2017) says that law and morals are important when conducting research. You should both know the moral codes but also the actual laws, reminding yourself about the handling of personal information and laws like GDPR is therefore important. In this thesis, interviews were conducted, and personal data was handled. Therefore, a consent form about personal data was sent out to the interviewees beforehand. The consent form informed the participants about how their personal data were going to be handled. It mentioned that the interviews were going to be recorded and later transcribed. It also informed the participant about their right to withdraw their consent at any time. Communication with the participants were done via mail and if the participants wanted to add something or get in contact, it was done over email.
5.6 Limitations

Dimitrios and Antigoni (2019) describes that the limitation of a study concerns potential weaknesses that the researcher cannot always control and that are usually in close relation to the chosen research design. Some of the limitations of this study will be addressed in this section.

Time and resources are common limitations that many studies suffer from. This study would have benefited from more time and resources as it could have enabled deeper analysis of both the concept of health and densification and their relationship. With more time and resources, it would also have been possible to conduct more interviews and investigate more Swedish municipalities and thus obtain a deeper result.

The sample of interviewees could be a possible limitation. By just interviewing urban planners there is a risk of missing perspectives in health that may be important for the outcome. Therefore, it might have been good to also interview public health officials who can provide a deeper perspective on health or external planners who might be more critical of the current approach. At the same time, urban planners were chosen because they are the ones who mainly work with densification and have an overview of the planning process. If more time and resources had been available, other interviewees than just urban planners would have been considered.

A limitation of this study is also its breadth. Health and densification are two big concepts that are not easy to boil down to concrete examples. The study could have focused on one health aspect such as green areas or noise, which would probably have given a more concrete result. However, the breadth of the study is also its strength. By not going into detail on a particular health aspect in the context of densification, it is possible to gain a broader understanding of how the municipalities understand their mission and what the prioritization between different health aspects and other interests looks like. This would not have been possible if the study had focused on only one health aspect.

Another limitation is that much of the material has had to be translated into English from Swedish, which may result in inaccuracies. This is something that Xian (2008) also points out. Translations are not without value and sometimes the exact words, terms or expressions needed to translate certain words or sentences one hundred percent correctly, are not available (Xian, 2008). When quotes or text have been translated, this has been done with the knowledge that these situations may arise. Hence, translations have tried to be as value-free and as accurate as possible.
6. Result and Analysis

This part of the thesis presents the result and analysis. It presents the collected and thematized material from the municipalities’ comprehensive plans and from the interviews. The result is divided according to the themes and sub-themes found during the thematization of the material. The main themes that divide this section are motives for densification, densification and health dilemmas and actions and strategies. Motives for densification reviews the motives and reasons why the different municipalities use densification as a planning strategy. The theme ‘Densification and health dilemmas’ explains the various dilemmas that densification entails, especially when it comes to the health aspects of planning. Lastly, actions and strategies then look at what the planners and municipalities are doing in order to safeguard or promote certain health aspects in the planning and densification processes and what they think could be improved.

6.1 Motives for Densification

The theme ‘motives for densification’ emerged from the documents and interviews, with many different reasons given for why densification is implemented and used as a planning strategy. As an example, different municipalities and interviewees gave different perspectives on what densification is and how it is defined. This theme will bring up what the material says about densification, what it is, how it is used and the motives for why it is used as a planning strategy.

6.1.1 Defining Densification

All of the municipalities studied mention the concept of densification in their comprehensive plan. In fact, the concept of densification together with related terms such as dense, density, compact, etc. permeate large parts of the comprehensive plans. Since densification occupies such a large part of the comprehensive plans, the word is also defined in different ways and sometimes through other terms. As explained in the literature review, Pelczynski and Tomkowicz (2019) mention that in simple terms, densification can be described as a way of being space-efficient and using the city’s buildings, rooms and places in a more effective way, for example by building on free spaces between buildings, building extra floors, and demolishing existing buildings and build new ones. However, Malmö, Gothenburg and Jönköping do not always use the word “densification”. The municipality of Gothenburg (2022) uses terms such as mixed-use, areas for complementation and transformation areas. These terms are described and used interchangeably with the concept of densification. Gothenburg’s comprehensive plan (2022) also describes that the concept of density can be used in many different ways and measure different things. For example, Gothenburg (2022) say that density is not only about buildings but also about the number of land users and various flows of people in the city. The comprehensive plan of Malmö (2018) also mentions areas for complementation and transformation areas. The comprehensive plan for Jönköping (2016) divides the term densification areas and transformation areas, densification areas are here described as areas of undeveloped land that can be used for development. Transformation areas, on the other hand, are described as already built-up areas where the land is proposed to be used for other purposes. While Pelczynski and Tomkowicz (2019) make no distinction between densification and transformation areas for example, municipalities do. What all the municipalities jointly mention in their comprehensive plans regarding densification is that areas should be built with a high degree of exploitation and be made physically denser.
All interviewees explain that densification, according to them, means some form of new development or the addition of new buildings to existing areas. Interviewee J1 explains how in Jönköping they divide the concepts of densification areas and transformation areas, but that both are still about building in existing environments and in a way that makes the city as a whole denser. Interviewee M1 also says that densification is about making the city denser and building the city inwards. Interviewee M2 draws links between densification and that it relates to the dense and compact city. The planners from all of the municipalities provide a similar picture of what densification is and how it is used in their municipality. However, interviewees G1 and G3 both mention that they prefer to avoid using the term "densification" as they believe it has a certain negative connotation. Instead, they prefer to use complementation of buildings. Interviewee G1 says:

I say complement with buildings, because that's what we often do, and when we complement, we create things that needs to be in the area” (Interviewee G1, 9th of March 2023).

Interviewee G3 adds that densification is not such a problematic term but says that it has been discussed before whether it should be used or not. Interviewee G3 says that in the previous comprehensive plan they made, they talked about complementary development instead of densification, because of the bad connotation. Interviewee G3 explains that densification can be both large and small but that in some cases it is more logical to talk about transformation as this is what happens in some areas. Areas are transformed from one function to another, from industry to residential areas, for example. At the same time, G3 mentions that, in a broader perspective, if you zoom out and look at the whole of Gothenburg, it leads to a form of densification as the city is linked together. Interviewee G3 says that when they use the term densification, the interviewee primarily refers to building density and population density.

6.1.2 Current Densification Goals and Strategies

All the studied municipalities work with densification in one way or another and they all have it as a type of strategy or as an ideal or goal to strive for. Malmö municipality (2018) mentions in their comprehensive plan that the city of Malmö should be a socially, environmentally and economically sustainable city to live and work in. Malmö municipality (2018) explain that the three sustainability perspectives work together and are interdependent. Malmö municipality (2018) mentions the importance of being able to grow while doing so in a sustainable way. Here, densification is an important factor for Malmö in achieving the goals it has set.

An overall priority is that Malmö should primarily grow inwards, within the Outer Ring Road. Resources will be saved by building the city more densely. Malmö is a city that can be "close" from several different perspectives. The dense city should be flexible and space-efficient (Malmö comprehensive plan, 2018, pp.14).

Like Malmö, Gothenburg municipality (2022) mentions in their comprehensive plan that when the city grows, it should do so in a coherent way through densification and complementation of areas both in the inner city but also in the middle part of the city and the outer parts of Gothenburg, this is to reduce sprawl and increase accessibility. Interviewee G3 describes the densification of the city as an overall strategy, which in turn influences the implementation and direction of subsequent plans. Gothenburg municipality (2022) mentions that it wants to be a model for sustainable growth and that one goal is to be a sustainable city in social, economic and environmental terms.
Like the other municipalities, Jönköping municipality (2016) also writes that it will work to be a sustainable city. Jönköping (2016) says that the municipality should manage its resources and do so by prioritizing densification and transformation of already built-up areas. The densification and transformation should also take place through a high degree of exploitation.

6.1.3 Reasons and Arguments for Densifying

All the studied municipalities gave many reasons why they use densification as a strategy and planning ideal. The first, as mentioned earlier, is that municipalities want to build cities inwards. This means that instead of expanding and exploiting new land, already used land should be built on to counteract urban sprawl. By tackling sprawl, municipalities argue they can achieve several things. First, all the municipalities studied mention that densification of the city makes it more sustainable as it conserves resources. This is also pointed out by Pelczynski & Tomkowicz, (2019), that using existing spaces can promote resource conservation. Further, reasons and motives that the municipalities use will be explained and divided under ecological, economic and social aspects.

Environment

Many reasons why densification is used as a strategy are related to environmental factors. Malmö explains that:

Good spatial planning means that the city’s environmental impact, climate impact and use of resources can be controlled to a large extent. Building a denser city makes it more resource and energy efficient than a sparse and sprawling one (Malmö comprehensive plan, 2018, pp.14).

Malmö municipality (2018) also points out that the denser city has better conditions for creating a more resource-efficient transport system, with more people choosing to walk, cycle and use public transport which will reduce carbon emissions. Like Malmö, Jönköping municipality (2016) also argues that one of the main reasons for densification is to avoid taking up new land as this has a major environmental impact. Interviewee J1 explains that in Jönköping a few years ago it was decided to be very restrictive in building on new land, especially on agricultural land that is protected by law and forest land. Interviewee J1 says that forest area’s function both as recreational areas and provide several ecosystem services that are good for the environment. Jönköping municipality (2016) is also trying to reduce car use in the city and reduce transport emissions. Interviewee J1 explains that a certain density is required to make this possible. J1 explains that a denser city creates opportunities for people to choose other means of transport such as public transport or cycling. J1 emphasizes that it also requires a certain density to make it possible to have enough departures to make it worthwhile to run buses. If there are too few people travelling, departure times will also be worse, making public transport less attractive. Gothenburg municipality (2022) mentions that it will be easier for people to move around in a dense city without the car, transportation trips can also be shortened in a denser city, and this can also reduce emissions. Interviewee G2 points out that the focus is on using existing systems such as roads, sewers and other technical systems, which reduces the use of resources and thus the impact on the climate.

Economic

Economic aspects are also a reason why municipalities use densification. The need and demand for housing has increased in all the studied municipalities. The Gothenburg comprehensive plan (2022) mentions that there is a pressure for central Gothenburg to accommodate more homes and workplaces. Interviewee J1 says that there is also a high pressure for new residential in
Jönköping and that they need to build around 1000 new homes per year. Malmö municipality (2018) also states in its comprehensive plan that there will be a large increase in population that requires, among other things, a lot of new housing. This high demand forces the municipalities to act, and Malmö municipality (2018) argue in their comprehensive plan that densification is a stable strategy to cope with continued population growth and is therefore desirable. Malmö municipality (2018) also states that building inwards or densifying is a robust strategy as construction can be adapted to the needs, for example, construction can stop or decrease without any major complications, unlike if a city expands and uses new land. Jönköping comprehensive plan (2016) explains that densification increases proximity to services and work, which in turn makes the city more attractive. It also means that shops have a larger base with more customers. Gothenburg’s comprehensive plan (2022) states that:

Effective and sustainable spatial planning contributes to the right activity in the right place. Densification with mixed content in the already built-up city strengthens Gothenburg as the region's growth engine (Gothenburg comprehensive plan, 2022, pp 24-25).

All municipalities argue that densification and a mixed use of the city leads to increased attractiveness, which in turn also leads to the growth of the municipalities. Densification is partly used as an economic growth tool for the municipalities. Ståhle (2008) discusses that a denser city will be more robust and economically competitive in the future. Cities suffering from urban sprawl will have to struggle more with for example transportation costs than more compact cities and to be competitive is important for the growth of the city (Ståhle, 2008). Interviewee G1 adds that it is also not possible to create small urban environments of 3-4 floors per building, but higher buildings and denser neighbourhoods are needed to make the economy work.

Social
In addition to economic and environmental reasons why municipalities choose to densify, there are also social aspects to why municipalities want to densify. In their comprehensive plan, Gothenburg municipality (2022) talks about how there are clear physical barriers in the city. The physical barriers also make the social barriers much clearer and more difficult to combat. Gothenburg municipality (2022) says that with densification, it is possible to connect neighborhoods in a completely different way and combat social barriers. In particular, Gothenburg municipality (2022) hope to counteract residential segregation by linking neighborhoods both physically and mentally. Malmö municipality (2018) also talks in their comprehensive plan about physical and mental barriers that can be avoided with the help of densification. For example, Malmö municipality (2018) says that planning for a more socially sustainable Malmö is a high priority and that this will be done by creating more movement patterns in the city, more and better meeting places, breaking barriers and strengthening paths and junctions in the city. Malmö municipality (2018) also says that at an overall level, the strategy for a denser city coincides with the objective of achieving a safer and more equal city. Jönköping municipality (2016) also explains in their comprehensive plan that densification and mixed development can create a more socially sustainable city, but unlike Gothenburg and Malmö, Jönköping (2016) mentions that there are risks with densification and economic growth because it can increase social problems such as homelessness, poverty and addiction. As it comes to social aspects of densification the literature is diverse and Burton (2000) and Cavicchia (2021) both say that densification has been identified as a way to address and solve social inequalities and deliver social benefits. However, these arguments tend to simplify and embellish the effects of densification on social factors. While the municipalities have a quite clear picture of densification being a solution to social problems, the literature is divided and sceptical. When looking at what the municipalities say they are optimistic on densification
being able to solve social issues. Jönköping municipality (2016) however problematizes densification and economic growth in its comprehensive plan, stating that it can lead to the opposite effects of the intended outcomes and that in cities with economic growth, social problems tend to increase.

When it comes to more concrete health aspects, there are some arguments that the municipalities use regarding densification, but health aspects take up less space in the reasoning for why densification is carried out. Densification does not take place primarily to improve health, but some arguments that the municipalities mention, is that densification can lead to increased proximity which in turn might increase people’s movement in the form of walking and cycling. Malmö municipality (2018) states in their comprehensive plan that opportunities to cycle, walk and exercise more promote better public health. A denser city that is adapted for this also increases people's opportunities to exercise. Interviewee G1 mentions that it is important to manage their everyday lives, and this is partly why Gothenburg is densifying, to make it easier for people to manage by being closer to services and work. In accordance with what Malmö, Gothenburg and Jönköping are saying, Wasfi and Kestens (2021) also states that dense cities can promote walking and cycling in a better way which might lead to less obesity related health problems. All the studied municipalities also say that it is important to create natural meeting places to increase people's well-being through social interaction, and densification might make this easier.

**The motives**

What can be discerned from all the municipalities' motives for densification is that they have a new urbanism approach where the focus is on densifying cities with mixed use buildings, where they want to achieve a form of diversity through common areas and break physical barriers through densification. Talen (2014) explains that the new urbanism concept is based on a compact city that is both pedestrian and bicycle friendly. The focus is on reducing the impact of cities on the environment and encouraging diversity and the possibility of meetings between people, which in turn is considered to lead to sustainable development. The municipalities' arguments and reasons for why densification should be carried out correspond well with parts of the new urbanist planning ideal. At the same time, there are elements of new urbanism that are said to be contradictory, examples of which can be seen in the case of densification. Ståhle (2000) explains, if cities want to be able to compete economically and be able to develop somewhat sustainably, densification of Swedish cities are a necessity in the future. Like Ståhle (2000), the municipalities see densification as necessary in order to grow as sustainably as possible and this is also the motive to why densification is happening. This will be further analyzed in the next theme.

6.2 Densification and Health Dilemmas

The theme Densification and health dilemmas will address the dilemmas of municipal densification and how health aspects can be affected. The theme arose in connection with the interviews and comprehensive plans, where several challenges and difficult trade-offs related to densification and health were described.

6.2.1 Defining Health

The concept of health is mentioned in various forms in the municipalities' comprehensive plans. It is also used in several different contexts but is not explained in concrete terms. The municipalities’ comprehensive plans talk about health and well-being in the context of making a healthy city, but do not provide a clear picture of what health is. What can be clearly seen
from Gothenburg, Malmö and Jönköping’s comprehensive plans is that mental health does not have as great a focus as physical health. As previously mentioned, health is a complex concept with many layers and can therefore be difficult to define. The comprehensive plans are also mainly municipal planning documents and thus do not explain all the terms used, but to get a grip on what the municipalities mean by health and what is included in the concept of health when the word is mentioned, the planners’ interpretations are of importance here.

When the planners were asked how they define health, most of them had to stop and think. All the interviewed planners had slightly different answers on what health is in relation to urban planning. While there are many similarities in their answers, it is interesting how health is a difficult concept to pin down. Interviewee G3 explained health as explained in this paper, that planning originates from health. G3 says that in planning there are some obvious aspects that come up when talking about health, which are noise, air quality and environmental questions, which are quite directly linked to urban planning and are aspects that directly affect people's physical health. Interviewee G3 also says that it is possible to broaden the concept of health and talk about public health where the focus is more about how it is possible to promote people's health through, for example, green areas and recreational opportunities. G3 says that they sometimes find it difficult to distinguish the different health concepts from each other when talking about them. Interviewee G3 mentions that health could be anything, and explains that everything you plan, you do to create a better city where people feel better. Interviewee G2 also says like G3 that health is a part of everything, and it is the big picture:

In a way, the issue of health is part of the big complex issue of how we create a good city, so to speak (Interviewee G2, 10th of March).

Interviewee G2 however continues to say that in the planning process you tend to speak more about the physical aspects of health like noise, air quality, daylight, walkability and bikeability and so on than maybe mental health aspects. Both Interviewee G2, M1 and M2 say that health is something they see as personal and as something people can influence themselves. They say that your living environment should enable you to make healthy life choices. Interviewee M1 explains that:

It's about being able to feel good and feel good both mentally and physically, I think, and that you should be able to influence your well-being as well. You should feel that you have some kind of ability to make healthy life choices and then the surrounding environment should make it easier to live in a healthy way (Interviewee M1, 19th of March 2023).

Interviewee J1 explains that:

Oh, I don't know if we have any definition of what health is. In the comprehensive plan, for example, we look at what is stated in the public health policy objectives and so on. And pick out what's relevant for us, and then it is about opportunities for everyday movement, proximity to greenery, air and environmental issues, for example (Interviewee J1, 11th of April 2023).

When the interviewees answer what health is, several of them talk about well-being. Interviewee G1 says that they prefer to talk about well-being as they believe that planning can affect our environment, which in turn affects our well-being. G1 also says that physical health is of course affected by factors such as air, noise and pollution, but claims that the design of areas can affect our well-being, especially if renovations and investments are made in areas that might not normally be invested in. Interviewee M2 also talks about well-being and that it is
tricky to measure the concept of well-being as it is personal and up to the individual to know whether they feel good or not. Both G1 and M2 link well-being to mental health. Several of the interviewees mention mental health and that it is an important part of the concept of health as well as the physical health. However, Interviewee G3 say that well-being is up for discussion in the planning process but not so much mental illness and mental health.

To summarize the municipalities and planners' definition of health, it can be said that none of them have a fixed definition of what it is. Most say that health consists of both physical and mental health aspects, but it is mostly physical health that is in focus. All interviewees also feel, to a greater or lesser extent, that it is difficult to determine where the boundaries are for what is included in the concepts of health and what distinguishes them. The planners mention that aspects such as noise, daylight, environmental pollution, air quality and green areas etc. affect people's physical health and are the most commonly encountered in urban planning. On the other hand, there are many aspects that affect human health, but they may not all be equally affected by urban planning, or they may be more difficult to measure and therefore not mentioned as much or as clearly.

6.2.2 Views on the Impact of Planning and Densification on Health

As mentioned in the previous section, all interviewees mention that planning and urban environments affect human health in different ways. The main effects on health related to planning and design that are most often talked about are noise, air quality and daylight factors. Interviewee G1 explains that there are national guideline values and laws that must be followed when it comes to noise, air quality and daylight levels. Hence, these have a natural place in the planning process. Jackson (2003) also points out the importance of noise levels, daylight and air pollution in planning and their impact on people's physical health. These are factors that planning and urban design can greatly influence (Jackson, 2003). The municipalities also talk a lot of the importance of green areas for people’s health. Interviewee M1 explains that green areas have a very important role to play for people’s health, especially mental health. Interviewee J1 mentions green areas importance for mental health:

We have highlighted the importance of green for mental health, because we know that it affects our mental health, not only to move around in green areas, but also to see green through the window (Interviewee J1, 11th of April 2023).

Jönköping comprehensive plan (2016) also says that green areas in the city are needed for people’s mental health and well-being as it gives the inhabitants an opportunity for recreation and for meeting people and do social activities. Malmö’s comprehensive plan (2018) states that:

A diverse range of meeting places, green urban spaces and parks, nature and recreation areas, leisure and sports facilities - providing opportunities for recreation, sport and play for all ages and groups in society - provides the conditions for good health and well-being (Malmö comprehensive plan, 2018. pp. 17)

Gothenburg, like Malmö and Jönköping, points out in its comprehensive plan that:

Having access to good quality parks and natural areas for recreation in one's local environment promotes public health and contributes to the identity and character of the local area (Gothenburg comprehensive plan, 2022. pp. 182).

Gothenburg municipality (2022) also says that having direct access to a green space in the local environment is particularly important for children’s health, and the design and size of residential
Courtyards and school playgrounds are particularly important for children's development. What the municipalities are saying about green spaces is also in accordance with Liu et al. (2022) that states the importance of green areas and how they have a major impact on human health, especially mental health. Green spaces act as good restorative function that can reduce stress (Liu et al. 2022). As interviewee J1 but also G2 says, seeing green, like trees and bushes, through your window may have an important role for your health. Han et al. (2022) say that seeing hard surfaces can lead to an increase in stress levels while urban greenery can reduce stress levels.

Gothenburg municipality (2022) writes in their comprehensive plan that there are risks associated with densification. Some of the examples given are that densification can lead to gentrification of areas, that important meeting places disappear, that green areas are reduced and that densification in environments with a lot of car traffic can lead to increased air pollution and noise. Gothenburg municipality (2022) states that:

By referring to UN-habitat's recommendations, there is a risk that urban development is steered towards a uniform ideal of urban development with dense and highly developed areas, where large parts of the already built may lose much of its qualities and values. Such values include, for example well-designed and balanced green common areas between buildings, placement of buildings with regard to topography and light, traffic separation for children's safe play and traffic environments and a density that provides space for generous outdoor environments and bright homes (Gothenburg comprehensive plan, 2022. pp. 251).

Gothenburg municipality (2022) continues by writing that:

There is also a risk that the density will be so high that many existing qualities and experience values are negatively affected. Greenery and open spaces have become more important as people spend more time in the local environment. There is a risk that very dense and highly developed areas will have major shortcomings in qualities that are valued, not least by families with children (Gothenburg comprehensive plan, 2022. pp. 252).

Interviewee G1 brings up the local identity spectrum of health as G1 says people value their neighborhoods and feel a connection to the place they live. Interviewee G1 says that there are examples of investment and construction in some areas in Gothenburg with award-winning buildings that have increased residents' pride of their neighborhood. At the same time, G1 says that there are examples of the opposite, where areas have been changed and densified to the extent that some people choose to move because they feel bad that 'their' neighborhood has changed too much. This is also what Skrede and Andersen (2022) argues. Changing areas can affect people's emotions and place identity, which in turn can lead to poorer but also better health. On the other hand, when people voluntarily choose to move because of these changes, they feel so bad about the change that they judge that it is better to move (Skrede & Andersen, 2022).

All planners agree that many of the factors mentioned here affect people’s health and can also be influenced and improved through planning. However, when it comes to whether these health values and health aspects are negatively affected by densification, there are varied answers from the interviewees. Berghauser Pont et al. (2021) argues that most health aspects of planning are generally negatively affected by densification, especially people's mental health. What is positively affected is mostly related to physical aspects, such as making it easier to walk and cycle (Berghauser Pont et al. 2021). None of the planners are actively against densification. On the contrary, many think that it is good and that it can benefit health aspects through better
mobility, proximity and equality in the city. Interviewee G3 says that densification in itself does not have negative health effects by definition, but that there are aspects of densification that can be problematic. These aspects or dilemmas are exemplified by several municipalities and interviewees and will be analyzed in the next section.

6.2.3 Challenges and Dilemmas

The municipalities and planners provide examples of when densification can create dilemmas, especially in terms of health aspects. One thing that all interviewees point out is that when densification takes place there is a risk that green areas or green spaces, that are important for people’s health, are lost and built on. Interviewee M1 says that important green spaces are sometimes lost during densification processes and that these need to be supplemented elsewhere. M1 also says that there are practical complications, especially when you get down to the detailed planning level where, for example, trees need to be removed because roots are in the way of pipes for example. Gothenburg’s comprehensive plan (2022) states that there is a lack of qualitative green areas and says that:

In the dense city, parks, riverside areas, school playgrounds and sports fields have often been prioritized for development, parking and traffic structures (Gothenburg comprehensive plan, 2022. pp. 44).

Interviewee J1 explains that Jönköping has guidelines for how close your nearest green area should be and how big the green areas should be. J1 says that it is quite rare that green areas of high quality are built away due to densification in Jönköping, but what happens is that the edges of green areas are gnawed at or built on. Interviewee G3 says as J1 that green areas are gnawed at in Gothenburg as well. G3 says that discussions can arise between comprehensive planning and detailed planning where, for example, the comprehensive plan identifies which green areas are to be protected and which are not to be built on, yet the edges of some of the green areas are sometimes exploited during the detailed planning phase.

But even though we have just made a new comprehensive plan, we see that when we get to the detailed planning stage, it still happens that, yes, but we probably have to go in there a bit in this green area, even though you have just said that it was important. So yes. There are some discussions between the different planning stages, absolutely (Interviewee G3, 5th of April 2023).

Interviewee G3 thinks that health issues are probably not easily downgraded at the detailed plan level but says that situations often arise where trade-offs and choices must be made. G3 says that like everything else, health issues are put in relation to something else. Interviewee G3 continues by saying:

We often talk a lot about the cumulative effects of the whole thing. That it may be easy when you're sitting in your individual detailed plan and don't think that, yes, this is probably okay, we can take this small little part and go into this green area a little bit. But when you zoom out and can see that all five of your friends did it too. So now it's becoming a problem. Like that single thing might not have been a problem, but when we put them together it's a problem (Interviewee G3, 5th of April 2023).

Interviewee G3 says that according to the strategies and according to the comprehensive plan for Gothenburg municipality (2022), there is a focus on how densification can take place, but at the same time it must be ensured that green spaces are not lost. On the other hand, G3 mentions that there are several examples in Gothenburg that have been planned and built that
can be problematized, where areas have been built a little too densely and a little too high based on the housing qualities and living environments they want to strive for. Interviewee G3 points out that values such as daylight, air quality and noise have strict guidelines, but mentions an area in central Gothenburg where they are trying to push through housing, but the area has bad air quality for residents and noise levels are high. Interviewee G3 thinks that they could have waited to try to build there until they had succeeded in reducing car traffic. Interviewee G3 says that there are cases where the prioritization of health aspects does not come first. Instead, it is the economic aspects that control and are weighed against, where it can be argued that it is more important to get an extra floor than to provide daylight, for example. Interviewee G1 states that economy always win. G1 also states that in some scenarios it is not possible to achieve the desired livelihood because it is not economically feasible. G1 says that it may be the case that you have to make a choice between exploiting parkland or proximity. Interviewee J1 explains that in Jönköping it can sometimes be the case that densification in inner-city environments can be very expensive to implement due to high land prices, or that the land may have had to be remediated beforehand, which means that you need to build more densely or higher in order to be economically viable.

While green spaces are at risk from densification, there is also a discussion about the existing guidelines and fixed values on noise, air quality and daylight. Interviewee G2 says that there can be a bit of a paradox when densification takes place in terms of health. G2 explains that in many cases where densification takes place, the plan may be to reduce the use of cars and increase walkability and bikeability, therefore, buildings are built much closer to roads than previously. G2 says that this can then lead to the new homes having worse noise and air quality values than the older buildings that were further from the road before. Interviewee G2 says that the focus is very much on meeting the limit values and not on building better than the limit values. G2 says that it is very difficult to enforce in a planning process that plans should be better than the limit values if there is no political basis for it. Interviewee J1 thinks that, for example, noise limit values can cause people to get stuck solely in those values instead of aiming to create the best possible sound environments.

Sometimes I think it's kind of like, you just stick to the limit value in both directions. Once we've reached it, we don't need to do anything else to make it better (Interviewee J1, 11th of April 2023).

Interviewee J1 and M2 both say that there can be many different conflicts of interest in densification processes that must be considered. Interviewee J1 explains that courtyards are also something that is planned for in Jönköping. Where the courtyards should be a certain size to be able to have greenery and open up for meetings between residents and to let children play which in turn has a positive impact on people's health. Interviewee J1 says that in many cases Jönköping does not achieve the area of residential courtyards that they are aiming for. Similarly, interviewee M2 says that:

We talk about the size of courtyards, for example. This is also something that is tricky. There are many things that need to be included. Bicycle parking, recycling houses, and all of a sudden more and more and more space disappear. And there are also these discussions that you constantly have to make between different types of values that you have to weigh against each other. Sometimes it's about economics and sometimes it's about other things, pure space, like how everything should actually fit on the site. Then I think it's also important to keep in mind that conflicts of interests occur all the time, and in the even more dense city if you're obvious that there will be even more conflicts of interests (Interviewee M2, 19th of March 2023).
Interviewee M2 points out that being more innovative will be required in a denser city in order to be able to find solutions and to co-use urban spaces and reduce conflicts of interest. Several interviewees mention that one of these challenges about space that they face is the construction of preschools and preschool playgrounds. Interviewee G1 explains that there is currently research showing how much space a child needs in their outdoor environments to develop in a healthy way. Interviewee G1 says that in Gothenburg the guidelines are 35 square meters per child outdoors, but the Swedish National Board of Housing, Building and Planning's recommendations are 40 square meters per child. G1 says that these guidelines are basically impossible to follow in Gothenburg as there is simply no space, especially in the inner city. Interviewee G1 notes that in many places they are far below the guideline values, with a maximum of 15-20 square metres per child or even less. As a result, several places have begun to place preschools in close proximity to green areas in order to jointly utilize the green areas and thus count it as the school yard. Interviewee M2 and J1 says that there are discussions if it will be possible to use rooftops as courtyards for preschools in order to solve the issue with space. Interviewee J1 also says that there have been discussions in Jönköping about being able to build artificial parks on water in order to increase the number of green areas needed when the targets set for the amount of green space cannot be met. One problem in the dense city is space. How to fit everything in while still being able to deliver the existing services is a dilemma. Arnberger (2012) describes that in the case of green spaces, the densification of their surroundings becomes a concern, as the use of green spaces can increase to the point where people eventually avoid them, with major negative consequences for people's physical and mental health (Arnberger, 2012). It is also possible to bring in the sometimes-contradictory ideas of new urbanism. Talen (2014) explains precisely how the idea of creating a dense, diverse and healthy city can clash. In this example, it is possible to see how this particular way of thinking can create a dilemma where, as in the case of Gothenburg, there is initially a lack of qualitative green spaces. At the same time, construction is taking place on the edges of some green areas, and the increased use that the densification brings can lead to even greater stress on the city's green spaces and, in turn, on people's health.

Even when there are policies in the form of the comprehensive plan that provide directives and identify green areas to be protected, these are not always followed. Saldert (2021) says that there is a gap between policy and practice and when policies and strategies are implemented, they change. Saldert (2021) explains that many strategies change through organizational complexity and thus clash with statutory planning. Saldert (2021) mentions several overarching challenges with policies in practice and one of them is how long-term goals collide with a short-term budget which does not support the planning for long term goals. This might be the case in the examples given where economic interests cause the original plans to change. As interviewee J1 mentions, costs can also arise in the densification processes such as land remediation and high land prices, which means that they need to be compensated in some way, for example through increased physical density, more housing and more floors. According to interviewee G1, economic arguments are one reason why many areas in Gothenburg are built densely and high. G1 also says that creating a cozy environment where people walk around and enjoy the area is not guaranteed when areas are built very densely.

What the interviewees also talk about as a challenge in creating a dense and healthy city are organizational issues. Here the interviewees bring up a few different things that they think dilemmas can arise from. Interviewee J1 explains that much is about balancing different interests and that as a planner you work to produce the best possible data to support decision-makers. In the end, however, it is always the politicians who make the crucial decisions and
there is not always agreement. Interviewee J1 also says that organizationally, detailed planning is often exposed to interests in a different way than comprehensive planning is. J1 says that detailed planning is more exposed to the crass economic reality than comprehensive planning. J1 emphasizes that comprehensive planning is the big words and it’s a bit easier to stand for them, but when it comes to detailed planning, it’s economics and practical issues that matter. Interviewee G3 states that comprehensive planning is not legally binding and thus does not always have to be followed in detailed planning. However, G3 says that it should serve as an advisory and guiding document for the municipality as a whole. Interviewee G3 also says that Gothenburg can be bad at using the health perspective as an argument to make certain things go through, such as the daylight issue. Interviewee G2 says that one of the organizational challenges is to implement the overall strategies in the comprehensive plans to the detailed plans, as detailed planning is very much about local context. G2 says that abstract strategies in the comprehensive plans are difficult to transfer to detailed plans.

Interviewee M1 explains that communication is important within the municipality to ensure that everyone’s perspective is heard in the planning process. M1 also says that in Malmö those who have worked with somewhat “softer” and not so technical issues in planning, such as health, have found it difficult to be included in somewhat technical and city-wide contexts. Interviewee M1 points out that things are now starting to get better, with social issues being given a larger place, but that they have had to fight their way in from time to time.

Saldert (2021) explains that two challenges in policy and practice are how unclear or abstract strategies can make it difficult for practice to carry them out. The second is how complex organizational structures can create unclear messages and internal conflicts, which means that planners need to be able to manage conflicts and be proactive in solving the problems that arise (Saldert, 2021). Interviewee G2 says that they experience a difficulty in transferring comprehensive plan strategies and ideas to the detailed plan level, which is the more practical level of planning. This might be, as Saldert (2021) mention, because of the institutional complexity and barriers. As M1’s example in Malmö, where some planners working with “soft” values being left out or not considered as valuable as other departments could be a sign of problems of communication or lack of knowledge amongst the organization. Problems like this means that important perspectives like health, risk being missed in the planning process which could be detrimental for the planning outcomes.

Mayo and Johnson (2011) point out that planners can influence planning outcomes, but planners also need to take an active role in order to make an impact. In the role of a planner, Mayo and Johnson (2011) say that you are faced with many challenges such as the role dilemmas that challenge planners in different ways. As M1 says, they sometimes had to fight their way through in order to make their points heard. The scenario M1 explains in Malmö is partly consistent with role dissonance. Mayo and Johnson (2011) say that role dissonance is about how planners know that a task is important but feel constrained in performing it. As M1 explains in the situation of who has influence in the process, other parts of the municipality can limit one’s work based on possible ignorance or poor communication. By taking place and improving communication, however, this can be solved as M1 explains. Interviewee G2 explains the example on how difficult it is to implement comprehensive strategies in detailed planning. G2 can be said to face a type of role overload which Mayo and Johnson (2021) describes as where many expectations from different parties force the planner to make trade-offs and difficult choices. Depending on how planners choose to act, health aspects can be affected. If M1 and G2 completely exclude health aspects where they conflict with other interests, health issues will automatically become less important in the planning process, which will have a negative impact on people’s health. On the other hand, if they choose to consider health aspects and fight for
their place in the planning process, health aspects will also become more important. As J1 says, planners have an important job in producing information and documentation for politicians. This shows the importance of planners' actions when they have the chance to influence.

6.3 Actions and Strategies

The theme of actions and strategies emerged from the measures that the municipalities mention that they work with to safeguard health aspects in planning, but also from aspects that the municipalities say can be improved. This theme will focus on what the municipalities say they are doing to protect health aspects, especially in the context of densification, and things that they themselves think can be improved or things that are considered problematic in relation to health and densification.

6.3.1 Measures to Safeguard Health Aspects in Planning

All interviewees say in one way or another that the health perspective is always included in the planning process. Interviewee G3 says that urban planning has its origins in health issues from the dirty 19th century city. G3 says that all planning is linked to health as planning seeks to create attractive cities where people thrive and feel good. Interviewee G2 explains, like G1, that the purpose of planning is to create pleasant living environments and therein lies the health value. However, G2 points out that it is not a case of saying that we are going to talk about health for two hours, but instead it is about aspects such as noise, distance to areas or other factors that affect health. Interviewee J1 thinks that the green issues linked to the public health perspective have begun to be discussed much more and have been given more space in the planning process. At the same time, J1 says that there is a constant struggle against other interests. Interviewee M2 says that if you look back 10 years, you can see the development of social issues in planning and thus also health issues. M2 says that 10 years ago the social aspect of planning was not given the same place in the process as it is today. At the same time, M2 mentions that there is much that can be done better.

The municipalities studied mention that health is part of planning and give examples of how health aspects are safeguarded. As mentioned earlier in the results, all interviewees mention that there are guideline values and laws to follow when it comes to noise levels, air levels, daylight and pollution in general. These "harder" values that can be concretely measured must be followed. However, when it comes to more "soft" values in planning, such as green areas, design and layout and place identity, there are no direct laws or regulations. Gothenburg, Malmö and Jönköping work here in other ways. One way for the municipalities to work on this is through social impact assessments and child impact assessments.

Interviewee G2 explains that the social impact assessment has been developed in Gothenburg and that before each detailed planning process, an evaluation of the potential social consequences of the plan must be carried out. G2 says that there are four different levels of complexity where level 1 is the lowest level where the social factors are not considered to be very complex, this is most often in smaller areas that are being planned. Complexity level 4 is the highest level of complexity, where G2 says that this level applies to many of the new areas where a lot of new residential buildings are built and densification takes place, which then requires collaboration and the involvement of more parties in the process. Interviewees M1 and M2 also talk about the social impact assessment and that it is carried out in connection with all detailed plans. M1 says that Malmö has looked at how Gothenburg has worked with the social impact assessment and has been inspired by them. M1 also explains that the social impact assessment looks at health aspects linked to the plan, such as the loss of green spaces, and that
this must be discussed and compensated for in some way. Interviewee M1 also says that Malmö has recently started to work with social situation analyses, which will look more closely at the current state of social aspects in areas in Malmö and how these can be improved. Interviewee M2 says that it is important that the municipality and its politicians receive good information from the planners among others so that they can make good decisions accordingly. And that both the positive and negative aspects of a possibly decision will be presented.

Ultimately, it is also about having politicians who have the right decision-making basis and understand that this plan or this densification, if we are talking about this type of densification. It will mean yes, but so many more homes, community services, perhaps labor market opportunities, a new school, preschool, very positive things. But it will also mean this and then we will have to make other types of efforts and then we propose that ... etc. (Interviewee M2, 19th of March 2023).

Interviewee G2 thinks that the child perspective is something that Gothenburg has come a long way with, where children's well-being is something that is given extra importance, with the child impact assessment. Interviewee G3 also points out that Gothenburg has come a long way in ensuring children's well-being and health. However, G3 points out that the concept of health is not included as an aspect in the social impact assessment, but it is in the child impact assessment. In addition to impact assessments, the municipalities work with guideline values and limits for what is considered acceptable. Interviewee J1 talks about guideline values and that Jönköping has limits for the distance that people should have from their homes to green areas. J1 also problematizes the values and says that even if the values are generally accepted in the municipality as values that must be respected, they still meet resistance:

So, we have still set these up here that we should have green areas within 300 meters, a larger green area within 500 meters and it feels like it's pretty well established or that it's kind of been accepted, so it's almost like a noise guideline then, you could say. But, then there may be these questions that are more like, as I mentioned before, you are nibbling at the edges of a green area, for example. What does it matter if it is 2 hectares less if it is a large area? So these types of questions are perhaps more difficult to quantify and actually more difficult to answer as well. It's difficult to say that this is exactly where the limit is for the value of this green area? Both from social and ecological aspects. So these types of questions may be more difficult to answer (Interviewee J1, 11th of April 2023).

Malmö municipality (2018) and Gothenburg municipality (2022) also mention in their comprehensive plans that there should be a restrictive approach to building on green areas. Malmö municipality (2018) states that great restriction should apply when it comes to claiming green and blue environments. Malmö municipality (2018) also says that the urban environment should become greener and that impervious surfaces should be reduced. Malmö municipality (2018) explains in their comprehensive plan that they work according to a balancing principle with four steps: avoid, minimize, compensate and replace. This means that development should take place in places where it has the least negative impact. If negative impacts cannot be avoided, the damage should be minimized and compensated. Malmö municipality (2018) believes that the urban environment should also be designed to protect and contribute to the identity of the place. Gothenburg municipality (2022) mentions in its comprehensive plan that outside the designated transformation areas, a restrictive densification should take place and that the character values of the places should be protected. Like Jönköping, Gothenburg mentions that green areas should be available in the local area and that they should be within walking distance.
Jönköping’s comprehensive plan (2016) explains, which stands out from Malmö and Gothenburg, that they work with layout in the urban environment to minimize the risks or possibilities for suicide. Jönköping municipality (2016) writes that through physical planning it is possible to minimize the tendencies that make people feel unsafe and that affect our choices and habits. Jönköping municipality (2016) writes that conscious design can increase safety and reduce the risk or possibility of committing suicide by making it difficult to enter railways, building in ways that minimize the risk of falls, water accidents and preventing people from reaching risk areas.

6.3.2 Improvements

Gothenburg, Malmö and Jönköping all say that they protect health aspects as much as possible, but also mention that there are things that can be done to improve health values in planning and densification.

Interviewees G1, G2 and G3 all mention that they think it would be positive for Gothenburg if health and health aspects were used more as a concept in the planning processes and that more research was done on health, which can provide a better basis for planning and for making decisions. Interviewee G1 says that the best possible efforts are currently being made in Gothenburg to safeguard health aspects in planning, but says that it would not be wrong if more research were carried out on health aspects, especially on aspects relating to experiential well-being and more on the definition of the diffuse concept of health. G1 says that more research would probably simplify planners’ work as there will be more guidance and arguments to protect people’s health and well-being. Interviewee G2 says, like G1, that it would have been good to have clearer goals and requirements for what must be present in an area, e.g. sports areas, in relation to how many people live there for the inhabitants well-being. G2 also emphasizes that in Gothenburg there is a fairly large focus on children’s health through, for example, the child impact assessment, but says that there should also be more focus on adults’ health. Interviewee G3 also points out that health is not mentioned in the social impact assessment as a term while it is in the child impact assessment. G3 says that in Gothenburg, health and mental health are perhaps not generally discussed in the planning context. Instead, these terms are included in the overall social issues. G3 says that there are reasons to renew their thinking and raise the health perspective more, even though Gothenburg works with it indirectly in many issues. Interviewee G3 also says that follow-up of plans and the general plan is important in order to be able to see how the plans and the strategies set up are followed.

In parallel, we are also developing methods and models to follow up our comprehensive plan and then a little more on the effects of it all. For the past three years, we have been far too much out and about outside the areas where we actually said we would build. Now we may have to adjust our strategies in some way. [...] No, because it is important. It’s important to follow (Interviewee G3, 5th of April 2023).

In Malmö, both interviewee M1 and M2 talk about how cooperation can generally be improved between different departments within the municipality. Especially between the parts that work with “hard” and “soft” issues. M1 explains that those who have generally worked with soft issues, such as health issues, have not really been able to get into all contexts. M1 says that broad knowledge alliances are needed between internal departments, research, business and civil society and that health issues could perhaps be given greater priority. Malmö municipality (2018) states in their comprehensive plan that it is important for the municipality to adopt an approach to each issue that focuses on the long-term development of the municipality in order to better achieve Malmö’s overall goals. Malmö’s comprehensive plan (2018) emphasizes
increased collaboration in order to solve complex societal problems. Interviewee M2 believes that Malmö can step up the work on health and safeguard health aspects in planning more. M2 says that through better collaboration and communication within the organization, it is possible to map how Malmö residents feel, which in turn can lead to a better understanding of what efforts need to be made in certain areas or when densification takes place, for example. M2 notes that a more holistic perspective and approach within the organization is needed to achieve this. Interviewee M1 says that it is important for Malmö to become better at evaluating the plans that are made in order to see the effects of the plans but also in order to see what can be done better:

And what my department has talked about quite a lot. It is that we would like to be better at, although it's a bit difficult sometimes, with our decisions and our comprehensive plans and in-depth comprehensive plans and things that we work with the effect of being able to evaluate. But now we made this plan and how did it turn out? (Interviewee M1, 19th of March 2023).

M1 also says that in addition to becoming better at evaluating plans, it is also necessary for the social perspectives to be introduced earlier in the planning process in order to become a larger and more natural part of the planning process.

Jönköping does not directly mention specific things that need to be improved but interviewee J1 says, like the other interviewees, that communication can always be improved. J1 compares with smaller municipalities that in many cases it may be easier for smaller municipalities to communicate between the different departments, where natural informal meetings take place more consistently compared to bigger municipalities, which can simplify the work of including several different perspectives in the planning process.
7. Discussion and Conclusion

7.1 Discussion

The main results show that the studied municipalities Gothenburg, Malmö and Jönköping all work with health aspects in urban planning. Perhaps not always in relation to densification, but on a general level, health aspects are safeguarded and promoted in planning. On the other hand, the densification of municipalities raises several dilemmas where health aspects are often neglected.

Gothenburg, Malmö and Jönköping all use densification as a kind of planning strategy or ideal to aim for when planning and building in new or existing areas. Similarities can be found between the municipalities' densification strategies and new urbanism. Like Talen (2014), the municipalities argue that by reducing urban sprawl and instead densify, it is possible to create more sustainable cities and reduce their climate footprint. This is also in line with what Pelczynski and Tomkowicz (2019) say. Urban densification is a way to be more sustainable by being space efficient, using already built infrastructure, conserving resources and reducing transport and private travel with car (Pelczynski & Tomkowicz, 2019). Environmental and economic aspects are two decisive factors as to why the municipalities choose to densify. Economically, densification might lead to, as Gothenburg (2022) mention, increased attractiveness and growth. Densification might also be a response to the high demand for housing in the municipalities. Gothenburg (2022) says that there is great pressure to densify, especially in the inner city. The municipalities mention that through densification it is possible to mash areas together and create a mix of people, thus reducing segregation. The mixture of people and diversity is something new urbanism also calls for (Talen, 2014). However, the literature is divided on how whether social issues like segregation, crime and social inequalities is affected by densification and whether it really works as a solution. Both Burton (2000) and Cavicchia (2021) note that densification is often seen as a way to address social inequalities and deliver social benefits. Burton (2000) and Cavicchia (2021) argue that these arguments simplify and embellish the effects of densification. Burton (2000) describes that densification might in some cases lead to an improvement in the case of social issues, but it might as well lead to the opposite. When it comes to health aspects, which the social aspects are an indirect part of, it is not used as a main argument for why densification is carried out. Instead, emphasis is put on the economic and environmental aspects.

When it comes to health and health aspects in planning, there are some factors that both the municipalities and the literature identify as important when densification occurs. Both Gothenburg, Jönköping and Malmö's comprehensive plans and the interviewees from each municipality mention that factors such as noise, air quality, daylight, open space and green areas all have a big impact on people’s health. This is also in accordance with the literature, that argue that these values have a big impact on people’s physical and mental health (Jackson, 2003; Wasfi & Kestens, 2021; Berghauser Pont et al, 2021). These factors, air quality, noise, daylight, green areas and open space have a connection to densification. When cities are built denser these values might be negatively affected which in turn can lead to a decrease in people’s health. However, this need not be self-evident, which is important to point out. As Berghauser Pont and Haupt (2009) explain, density per se is usually not the problem; instead, it is often a question of how density is used. Depending on how cities are designed, it is possible to achieve a high density while still protecting health values. However, density can become a problem when the physical density exceeds a certain limit, and the buildings are standing so close together that the health values such as daylight etc. are negatively affected. Berghauser Pont and Haupt
(2009) argue that when the density is used to prescribe or to force planners and designers to build according to prescribed density values, it leads to density being put first, which can create problems as density sets the standard for all other values. Berghauser Pont and Haupt (2009) instead point out that density should be used to set flexible density guidelines, which gives the planner and designers room to create pleasant dense environments. What can be seen from the results and from what the interviewees say is that in many cases economic interests force planners to perhaps add a floor, make the area a little denser than intended, take up some of the green space or build in areas that are not optimal for development. As a result, even though there are strategies for how to build in a sustainable way - economically, environmentally and socially - health aspects are given less priority and economic interests take precedence. Even when there are plans that point out these risks and mark areas that should not be built on, such as the Gothenburg comprehensive plan (2022) do, it still happens in some cases. This then risks becoming a major problem. If health aspects continue to be de-prioritized in densification processes, there is a risk of creating environments that ultimately make people unwell and unhealthy. But what are the reasons why these situations arise when municipalities are aware of the risks and the importance of protecting health aspects in planning?

First, Gothenburg, Malmö and Jönköping are under pressure to expand and grow. They all need to build new housing and there is a high demand for land in the cities. As urban sprawl is not an option, densification is the sustainable planning ideal they seek. Due to the high demand, municipalities also end up in situations where economic interests force them to add a floor despite the reduced daylight penetration, to build a little more densely as land prices are more expensive in the city center and construction companies must make ends meet, or to use and build on green areas as there is a shortage of space. While this is understandable, it can have major negative consequences for human health, especially if it happens a lot and over an extended period, especially since both Gothenburg, Jönköping and Malmö mention that there is already a lack of space and a lack of green areas.

Second, Interviewee G3 problematizes densification and claims that it can lead to negative health consequences, but it is important to put it all in perspective. G3 explains that when the whole thing is put into perspective, it may be that it is necessary to build a little more densely or build a little in a green area in order to ultimately be economically and environmentally sustainable. What G3 says is interesting because urban planning is always about weighing interests for and against. In this case, in order to make a climate transition of the cities, it may be that some health aspects will be sacrificed. At the same time, it can be argued that, overall, cities should be developed in a way where people feel comfortable and want to live. If cities develop in such a way that people eventually do not feel good about living in those environments, there is a possibility that people will choose to move, which would be counterproductive.

Another possible reason for lower priority given to health is that health is a large and complicated concept. Interviewee G3 explains that Gothenburg can be bad at using health as an argument for why they should or should not do things, like why they should be restrictive about building in certain areas. As mentioned by several interviewees, the concept of health is not always used as it is large, complex and fuzzy. Consequently, municipalities often break it down into physical and mental health aspects or well-being, but where the physical health aspects most often are in focus and are also safeguarded to a larger extent, like noise and air quality. However, not discussing health or only focusing on the physical health aspect can create problems. McCay et al. (2017) describe that mental health specifically is often overlooked in planning due to various reasons such as stigma, fear of complexity, ignorance, lack of
knowledge or not seeing it as a problem. McCay et al (2017) claim that in order for mental
health to become part of planning like physical health, it needs to be mentioned and given a
place in planning, otherwise it will never be given the same priority. This is something that the
interviewees talk about. Aspects that affect people’s mental health, such as green areas, identity
or urban design are perceived as difficult to use as arguments in planning processes when health
is pitted against other interests, as issues of well-being cannot be measured in a concrete way,
like noise. Several of the interviewees also call for more research into the concept of health, so
that it is possible to show in a concrete way what is needed in terms of planning to make people
healthier and feeling better, especially mentally. This discussion is interesting, since mental
health and the softer values of planning are perceived by planners as difficult to use as an
argument for not implementing things that may have a negative impact on people’s living
environment, it might mean that people do not value the mental health perspective as much as
the physical perspective, or that the mental health perspective is too complex or not seen as a
problem like McCay et al. (2017) argue. It might also be that it can be difficult to distinguish
which aspects affect what. Noise can be an aspect that negatively affects people both physically
and psychologically. In this way, physical and mental health are not entirely separate, which
really shows the vagueness and multiple layers of the concept of health.

When it comes to the interviewed planners most of them are aware of the possible risks that
densification might have on health aspects. While the planners see the problems and mention
instances where health aspects are given low priority in densification, there is still a mindset
that this is the way it is and that it is to be expected. On the other hand, it can be argued that the
planners are fighting to include social aspects in the planning process, for example in Malmö,
where the planners have had to fight in order to put social issues on the agenda. As Mayo and
Johnson (2011) explain, the planners there have experienced role dilemmas such as role
dissonance, where the planners understand the importance of an issue but feel constrained in
implementing solutions. This can also often be the case, that the planners know how important
certain issues are, but for politicians and other decision-makers there may be other interests that
are more important, which means that role dissonance can arise. The planners have a very
important role, the interviewees themselves mention that producing the best possible basis for
decision-making for the decision-makers is important as this is where they can show what
happens with, for example, health aspects when certain decisions are made. In the end, however,
it is the politicians who make the big decisions, but being active as a planner and raising the
health issues and dilemmas that exist is vital for the issue to begin to be seen and heard.
Interviewees from Gothenburg mention, among other things, that they can be bad at using health
as an argument in planning discussions, which is an aspect that could be improved, and which
might increase the status of health issues as McCay et al. (2017) also argues. Saldert (2021)
says that many decisions in the strategic planning process end up in the hands of practitioners.
Therefore, the politicians cannot be solely blamed for being in charge, if planners do not raise
issues, they do not reach the political level. Therefore, it is crucial that planners address health
issues during densification processes if they are to have a chance to be seen and heard.

To sum up, Gothenburg, Malmö and Jönköping are doing a lot to safeguard health aspects in
planning. But the planners themselves also struggle in many cases, as they did in Malmö, to
highlight social issues. However, more can be done to ensure that health issues are given greater
weight in planning and are not downgraded in densification projects, which can lead to the
creation of unhealthy environments. However, the major dilemma identified in the paper is not
densification per se. Rather, it is when economic and political interests come in and change the
existing plans that problems arise.
7.2 Conclusion

Originating from the public discussions on the trend of densification of Swedish cities, this thesis has aimed to investigate and understand if and how Gothenburg, Malmö and Jönköping find any health-related risks with densification and if they work with health and health aspects when they densify. The paper has also focused on the perspective of planners and their role in promoting and safeguarding health aspects in densification processes. By investigating and answering these questions, this thesis can contribute to a better understanding of the relationship between health and densification in practice, which Berghasuer Pont and Haupt (2009) mention as areas where more research and information is needed. This thesis hopefully raises the issue of health in planning and densification processes.

Through interviews with urban planners from each of the studied municipality and through a thematic analysis of the municipalities' comprehensive plans, it is possible to answer the first and second research question. It appears that Gothenburg, Malmö and Jönköping are all working with health issues in planning and safeguarding health aspects when new development is carried out. Health aspects are protected or promoted through e.g., local policies such as the distance to the nearest green space, through national laws and guideline values but also through different assessments like social and child impact assessments. However, this happens at a more general level and perhaps not always because of densification processes.

All studied municipalities see health related risks with densification, but also benefits. They mention that both good and bad things come out of densifying the city, but factors that have positive health aspects are at risk of deteriorating due to densification. Examples mentioned include the risk of losing important green spaces, the fact that areas are built too densely which might lead to change or disappearance of important meeting places or deterioration of daylight, noise and air pollution. It may also be that the identity of areas is changing, causing people to feel worse and move away. However, the interviewees and the municipalities are keen to point out that densification can have positive health effects, for example by encouraging more movement in the form of walking and cycling. The municipalities also say that densification is an important part of combating residential segregation and increasing equality and access to the city. The major dilemma with densification that was found is that even though municipalities are aware of the risks and have strategies and plans to protect health aspects, economic or political interests sometimes change these plans and strategies to the detriment of health. For example, by having to build physically denser, higher and exploit green spaces. Even though planners are aware of what needs to be done to consider health aspects in planning, their ideas and plans may change when economic and political interests come into play.

To answer the third research question, planners have an important role to play in safeguarding and promoting health in urban planning. The interviewees explain that their biggest task is to provide politicians with a good basis for decision-making, and here the concept of health needs to be given a clear place, especially mental health, which takes up less space and, according to the planners, is also more difficult to protect and promote. The planners mention that this is the case because of ambiguities in the concept and a potential lack of research showing what can be done to create better environments for mental health. Another reason why mental health is not given the same place as physical health can be due to stigma, ignorance or the fact that mental health is not seen as important or a priority amongst all the other issues that exist.

So, are the public right to be concerned that densification can lead to the loss of valuable and healthy environments? Partly yes, but municipalities are also showing awareness of health
issues in urban planning. However, it is worrying if health policies and regulations are not followed and continue to be de-prioritized.

7.2.1 Further research

As both Berghauser Pont and Haupt (2009) and the interviewees say, more research related to health and urban planning processes and densification processes is needed. Health and especially mental health are vital questions. Possible further research could focus more on the term health, how to make it clearer for planners and decision makers what health in urban planning is and how health values can be promoted and safeguarded in densification processes.

A second suggestion for further research on health in urban planning could be to study the relation between mental health and urban environments. How is mental health affected by urban environments and what is needed in a city in order to promote good mental health? By studying the relationship, it is possible to identify clearer patterns, which in turn can help planners and decision-makers to promote and protect mental health aspects in urban planning.
8. Reference List

8.1 Books and e-Books


8.2 Journal Articles


### 8.3 Dissertations and Reports


### 8.4 Webpages

WHO (World Health Organization). (Retrieved 2023-02-07a). *WHO remains firmly committed to the principles set out in the preamble to the Constitution*. https://www.who.int/about/governance/constitution


8.5 Laws


8.6 Primary sources


Malmö municipality (2018). Comprehensive plan for Malmö. https://malmo.se/download/18.4f363e7d1766a784af162af/1610100094509/%C3%96VERS IKTSPLAN%20F%C3%96R%20MALM%C3%96_antagen_31maj2018.1%C3%A5g.webb.pdf
9. Appendix

9.1 Interview Guide

Introduction
Thank you for agreeing to an interview. My name is Hugo Runberger, and I am writing my master's thesis with the aim of investigating how cities and urban planners work with densification and health issues. Sweden has urbanized rapidly in recent years and Swedish cities are growing. With a larger expected population, housing and public services adapted to the new population are also needed. Densification has become something of a planning trend in Sweden, but at the same time it has also stirred up discussions about how densification should be carried out in order to create pleasant and healthy living environments.

Starting question
• Please tell us a bit about who you are and what you do? What is your mission as a urban planner?

Questions on densification and health
• How would you define densification?
• How does urban and neighbourhood densification play a role in your municipality right now? Is densification an important issue for you?
• How would you define health? What does health mean to you?
  - Is mental health addressed in urban planning when densification takes place?
  - How is the work on health and planning coordinated? Is there a plan to protect or promote health values in densification?
• Have you implemented health measures in previous projects and if so, what effects have you seen from them? Have you seen any positive or negative effects from them?
  - Do you have any documents or policies on densification and health?

Frågor om deras roll som planerare

• What role do health issues play in your work as a planner?
  - If health and densification are not addressed at an urban planning level, where do these issues end up?
  - What is your role as a planner when it comes to densification and health? What is your task?
  - What influence do you have when it comes to densification?
  - What influence do you have when it comes to health?
• What is the role of research and studies on densification and health in deciding on planning strategies and approaches?
• Are there any barriers or challenges to integrating health aspects when densifying? Such as administrative problems, communication problems, organizational ambiguities such as who is responsible, political decisions or lack of scientific evidence?
• Do you see a need for measures to better promote the health perspective in the densification process?
  - What measures do you consider necessary to strengthen the health perspective in the densification process?
  - Why? Is enough being done already? Not a priority?
• As a final question, I just wonder if you have anything else you would like to add? Thank you for participating in this interview!