

Safety in pedestrian tunnels

An interview study of elderly women and urban planners



Author: Louise Ringeby

Supervisor: Ana Gil Solá

Master thesis in Geography with a major in Human Geography

Department of Economy and Society

Unit for Human Geography

School of Business, Economics and Law at

University of Gothenburg



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Student essay: 30hp
Course: GEO230
Level: Master
Semester/year: VT2022
Supervisor: Ana Gil Solá
Examinator: Eva Thulin
Key words: safety, fear of crime, pedestrian tunnels, elderly, urban planning,
walking interviews, vulnerable areas
Cover photo: Louise Ringeby

Unit for Human Geography, Department of Economy and Society
School of Business, Economics and Law at the University of Gothenburg
Viktoriagatan 13, PO Box 625, 405 30 Gothenburg, Sweden
+46 31 786 00 00
es.handels.gu.se

Abstract

As safety in urban planning is getting more attention (Sandberg et al., 2017), it is important to conduct safety studies to better understand the population's needs. Sweden faces an aging population in the future, making elderly people of interest to study. Urban planning focuses mainly on changing the physical environment, but as it is impossible to make a city 100% safe, the underlying factors behind perceived safety should be deeply investigated. This thesis investigates what makes pedestrian tunnels safe and unsafe by interviewing elderly women in so-called vulnerable areas in Gothenburg. Pedestrian tunnels symbolize unsafe environments, and with inspiration from the gåtur method (de Laval & Svensk byggtjänst, 2014), walking interviews were conducted with 12 elderly women in Biskopsgården and Tynnered, two areas on the outskirts of Gothenburg. The interviews were held at four different tunnels with four groups of elderly women. The thesis also aimed to investigate what urban planners and safety coordinators have to say about tunnels' safety-related problems. By putting the answers of the urban planners and safety coordinators against the elderly woman's answers, it is intended to study how their answers align with each other. It is found that elderly women limit their use of the urban environment to a large extent during the dark hours of the day and that avoidance, therefore, influences their use of tunnels. The elderly women want tunnels to be bright, broad, and clean for them to feel safe. Social factors like meeting wrong people, such as young people, greatly impacted their perceived safety in the tunnels. The results of the elderly interview point to broader societal issues, such as power structures, mistrust in peers, and ageism. The findings from the interviews with urban planners and safety coordinators revealed that they work mainly on improving the physical environment, such as improving lighting and planning art installations in tunnels. Ways of improving safety that is not only in the physical environment are to conduct safety walks, which some safety coordinators and urban planners work with. The complexity of tunnels, such as being traffic secure, but perceived as unsafe, needs to be met with more dialogue with residents and look at every unique tunnel to argue for a tunnel to be removed.

Acknowledgements

To the elderly from Biskopsgården and Tynnered, thank you for your participation in the walking interviews, I enjoyed interviewing all of you. Also thanks to those working in the background, making it possible for me to reach out to the elderly, such as the staff at the senior meeting places, and the local enthusiast in Biskopsgården.

To the urban planners and safety coordinators who participated in the interviews with your approaches to safety, thank you. I have learned a lot about the urban planning field thanks to you.

I want to express my gratitude to my supervisor Ana Gil Solá at the University of Gothenburg. You have helped me throughout the journey with your support and valuable feedback.

As the thesis is a collaboration with the Urban Transport Administration (Trafikkontoret) in Gothenburg, I would like to thank Moa Lipschütz for your supervision, to help me get started on this journey in January. All the feedback I got from people at the Urban Transport Administration has been so helpful, and it has helped me to stay motivated.

Last but not least, I want to say a big thank you to my partner, family, and friends for being there for me throughout the writing process.

Table of contents

Abstract	3
Acknowledgements	4
1. Introduction.....	8
1.1 Background	8
1.2 Problem description.....	9
1.3 Aim and research questions.....	9
1.4 Delimitations	10
1.5 Disposition of the thesis	11
2. Theoretical framework.....	12
2.1 SAFETY, FEAR OF CRIME AND VULNERABILITY	12
2.2 PUBLIC SPACE AND SAFETY	14
Broken Windows Theory	15
2.3 INTERSECTIONALITY, FUNCTIONALITY AND AGEISM	16
3. Literature review	17
3.1 STUDYING SAFETY AND FEAR OF CRIME	17
3.2 PLACES OF FEAR: THE PEDESTRIAN TUNNEL.....	18
3.3 PLANNING FOR SAFE CITIES.....	19
Physical environment	20
Art and design project	21
Safety walks.....	22
3.4 SAFETY OF ELDERLY.....	23
3.5 VULNERABLE AREAS	25
3.6 Chapter summary	26
4. Method	27
4.1 Research design.....	27
4.2 Data collection.....	28
4.2.1 Interviews with urban planners and safety coordinators from Gothenburg City	28
4.2.2 Respondent interviews with elderly.....	30
4.3 Data analysis.....	36
4.4 Ethical considerations.....	38
4.5 Methodological discussion	39
4.5.1 Bias	39
4.5.2. Research quality	40
4.5.3. Other methods	40
5. Results	42
5.1 Results from the elderly interviews.....	42

5.1.1. Perceived safety in and around the tunnels.....	42
5.1.2. The threatful youths.....	50
5.1.3. The influence of age	53
5.1.4. A less safe society	58
5.2 Results from interviews with planners	61
5.2.1. How they work with safety.....	61
5.2.2. How tunnels affect people’s use of the city’s infrastructure	63
5.2.3. Ways to increase safety in tunnels.....	65
5.2.4. Special needs for elderly	67
6. Analysis.....	71
6.1 Respondent interviews with the elderly	71
6.2 Respondent interviews with planners	76
7. Discussions and conclusions.....	81
7.1. How is the elderly women’s perceived safety in and around the tunnel affected by physical and social factors?.....	81
7.2. In what ways does the approach of urban planners and safety coordinators to safety problems related to tunnels align with the elderly’s perceived safety?.....	82
7.3. Future research and final conclusions	84
Reference list.....	86
Appendix 2. Invitation letter for elderly in Tynnered	94
Appendix 3 Interview guide, safety coordinators	95
Appendix 4 Interview guide, elderly people	96
Appendix 5 Interview guide, urban planners and safety coordinators.....	97

List of Figures

- Figure 1: The theoretical model by Foster and Giles-Corti (2008) that illustrates the relationships between neighborhood safety and outdoor physical activity..... 15
- Figure 2: Map showing the four locations of the walking interviews in Gothenburg. Biskopsgården is located in the North of Gothenburg, while Tynnered is located in the Southwest (Google, 2022)..... 32

List of Images

- Image 1: Tunnel with mosaic art at Eketräsgatan tram stop. Photo: Louise Ringeby. 22
- Image 2: Tunnel below Yrvädersgatan, daytime and nighttime. Photo: Louise Ringeby 33
- Image 3: Tunnel at Södra Fjädermolnsgatan, daytime and nighttime. Photo: Louise Ringeby 33
- Image 4: Tunnel at Femvägsskälet, daytime and nighttime. Photo: Louise Ringeby 34
- Image 5: Tunnel at Briljantgatan, daytime and nighttime. Photo: Louise Ringeby 34
- Image 6: Photo taken from the opening of the tunnel at Södra Fjädermolnsgatan by night. Notice that some of the street lights on the sidewalk to the right are broken, creating a darker part of the sidewalk. Photo: Louise Ringeby 43
- Image 7: Tunnel below Yrvädersgatan and connecting to Blidvädersgatan in Biskopsgården, by night. 44
- Image 8: View of the tram stop Briljantgatan, and the sloping pathway to the tunnels “More eyes”. Photo: Louise Ringeby. 45
- Image 9: Painting on the asphalt at Femvägsskälet. However, the painting ends before the tunnel opening, and starts again on the other side of the tunnel..... 49
- Image 10: Photo taken in May from inside the tunnel at Briljantgatan. Photo: Louise Ringeby 57
- Image 11: Photo taken in May from inside the tunnel at Södra Fjädermolnsgatan showing limited natural surveillance due to tree cover during the summer months. Photo: Louise Ringeby 57

List of Tables

- Table 1: Initial informant interviews with safety coordinators. 29
- Table 2: Respondent interviews with safety coordinators and urban planners. 30
- Table 3: Respondent interviews with elderly. 36
- Table 4: Themes and sub themes for the elderly interviews. 37
- Table 5: Themes and sub themes for the planner interviews. 38

1. Introduction

1.1 Background

To feel safe in the urban space is a democratic and human right (Boverket, 2012), and according to the Agenda 2030, cities should be made safe, resilient, sustainable and inclusive (UN-United Nations, 2019). Looking into Listerborn's (2000) findings, creating a safe urban space is a complex dilemma. A safe urban space is not only created by lighting, order, or cutting down bushes; neither is the police, guards, or surveillance a guarantee for safety. If people are attracted to a city and want to spend time there, it means that people feel safe in that city (Listerborn, *ibid*). Geographically limited areas, called vulnerable areas, are characterized by different social challenges (Rostami & Eriksson, 2022). The definition of the term socially vulnerable areas can often be unclear; however, the usage of the term is increasing. The definition of socially vulnerable areas can also differ between areas of application (Brottsförebyggande rådet, 2018). During 1965-1975 the building project, the million programs (Miljonprogrammet), was built and resulted in one million apartments in Sweden to solve the overcrowding, high unemployment, and housing shortage. The apartment houses were built on the outskirts of cities to build small societies and solve housing problems (Söderqvist, 1999). 35% of the apartments coming from the million program were produced in Stockholm, Gothenburg, and Malmö (Hall & Viden, 2005). Furthermore, the areas built up during the million programs in the larger cities are often referred to as socioeconomic vulnerable (Ericsson et al., 2002). However, it is the police that decides which areas are considered vulnerable areas. There are three categories: vulnerable area, risk area, and specific vulnerable area, where the latter category belongs to the most problematic (Polisen, n.d.). A report on the development in socially vulnerable areas presented by the Crime Prevention Council showed a difference between the types of urban areas when it comes to safety (Brottsförebyggande rådet, 2018). Not feeling safe when being outside in one's neighborhood during the late evening is most common among women who live in vulnerable areas; in fact, they stood out against men in those areas and women and men in other urban areas (Brottsförebyggande rådet, *ibid*).

According to the National Board of Housing, Building, and Planning (Boverket), pedestrian tunnels were built during the 1960-70s based on the current urban planning ideal which was traffic separation in different levels (Boverket, 2020). Tunnels symbolize unsafe environments and can give people a claustrophobic experience. Hence they are a recurring problem since their

purpose is to protect people from traffic accidents, but they fail to protect people from assault (Listerborn, 2000). Tunnels are places that decrease the overview and control of space and therefore decrease safety (Listerborn, *ibid*). Many tunnels are still part of the infrastructure in vulnerable areas, making vulnerable areas of interest to collect respondents from. “Safe in Gothenburg” is a cooperation between the social administrations and the police to increase safety and reduce crimes at a more local level (Göteborgs Stad, n.d.). It is done through a joint analysis of each area and the development of local measures, such as safety walks and more police presence (Göteborgs Stad, *ibid*). With an aging population and increased urbanization trends, the World Health Organization has created a global network called Age-friendly Cities and Communities (AFCC) (Göteborgs Stad, 2021). In 2014, Gothenburg City applied for membership to AFCC to make the city better to age in. An action plan was published in 2021, focusing mainly on mobility, housing, and social participation and inclusion (Göteborgs Stad, 2021).

1.2 Problem description

Safe public spaces are central for residents' accessibility to the city, community participation, and welfare. The number of older people in Sweden will increase; by 2060 every fourth person will be over 65 years old (Heikkinen & Henriksson, 2013). The aging population is one of society's challenges, and Sweden's policies and laws must be adapted to the increasing older population. Even though it appears as older people have much in common, it should be remembered that they are a heterogenous age group with varying resident settings, income, lifestyles, health, and interest (Heikkinen & Henriksson, 2013). As the elderly population increases, it is necessary to make them represented and engaged in urban planning through citizen dialogue. The paradox of fear (Persson, 2013) claims that the elderly tend to express fear of crime more than other age groups; it is therefore expected that fear of crime in society can be a growing issue that needs to be met by safety measures. The knowledge gap that the thesis aims to address is the factors behind safety problems in pedestrian tunnels, with a focus on elderly women.

1.3 Aim and research questions

The aim of the thesis is to understand what makes pedestrian tunnels safe, and unsafe, through the perspective of elderly women. This will be studied based on perceived safety, and focus on both physical and social factors as influencing. The thesis also intends to investigate urban

planners and safety coordinators' approach to safety issues in pedestrian tunnels. Lastly, the thesis aims to put the two interview studies against each other to see how the planner's approaches align with the elderly women's perceived safety. These are the research questions:

1. How is the elderly women's perceived safety in and around the tunnel affected by physical and social factors?
2. In what ways does the approach of urban planners and safety coordinators to safety problems related to tunnels align with the elderly's perceived safety?

1.4 Delimitations

The study is limited to focusing on safety in urban planning. When safety is discussed, security is often brought up. There can be a difference between feeling safe in a place and the actual security of that place; however, security is not the focus of the study. Traffic security is also a perspective often discussed within the urban planning field; however, traffic security is intended to be outside the focus. Throughout the empirical material, aspects that revolve around traffic security will be brought up. However, without shifting the focus away from the safety perspective, traffic security will be mentioned as a safety factor.

There are limitations when it comes to the respondents of this study. The geographical limitation of the study is Gothenburg, and the study's empirical material can be divided into two parts. The first part focuses on elderly residents from the two areas, Biskopsgården and Tynnered, which are on the police's list of vulnerable areas (Polisen, 2021). For clarification, the names of these areas have several versions in Swedish and English; vulnerable areas will be used throughout the thesis. The respondent population for this part of the study is limited to respondents 65 years or older. This age group will be titled elderly people or elderly. Another limitation that should be mentioned is that all respondent interviews of the elderly were held at pedestrian tunnels, which can have several names like underpasses, pedestrian underpasses, and underpass tunnels. Further on, they will be mentioned as tunnels. The second part of the empirical material is limited to urban planners and safety coordinators working in the municipality of Gothenburg. This part of the study focuses more on safety-creating measures than crime-prevention measures; however, the study will not exclude crime-prevention measures.

When it comes to how much gender is given attention as a deciding factor for the safety of the elderly respondents, the attention is meant to be on the age and the age group elderly firsthand. Also, since the empirical material of the elderly respondents did not have an equal representation of men and women, conclusions about gender differences are avoided. The intention is to shine a light on elderly people, and the sample of the elderly turned out to be women in the majority. It should also be noted that in the sample of the elderly, there was one man and twelve women. The answers from the man about fear of crime deviated strongly from the women's answers, and including his answers was not going to make justice for the study. For his answers to be included, the respondent population would have needed to be more even to see a better variety of answers within the genders. The findings related to gender will be connected to other contributing factors of vulnerabilities.

1.5 Disposition of the thesis

The first chapter, Introduction, introduces the reader to the background of the thesis, including the knowledge gap. The aim, research questions, and delimitations have also been presented. The second chapter, Theoretical framework, presents the fundamental theory of the thesis, including safety, fear of crime, vulnerability, the Broken Windows Theory, and perspectives through intersectionality that are useful for studying the elderly. The third chapter gives the reader an extensive literature review on safety, fear of crime, urban planning, the pedestrian tunnel, elderly studies, and a short section focusing on the definition of vulnerable areas. Chapter four, Method, gives the reader an insight into how the whole study was conducted, including the choices of method and respondents, sampling, processing of data, and a method discussion. In chapter five, the Results from the interviews are presented in two sections, starting with the results from elderly interviews and ending with the planner interviews. The results from the two interview studies are presented in four themes each. Chapter six consists of the analysis of the results, including references to the theoretical framework and the literature review. In chapter seven, Discussion, the research questions will be answered, and future research and a conclusion will be presented.

2. Theoretical framework

2.1 SAFETY, FEAR OF CRIME AND VULNERABILITY

Safety

The definition of the concept of safety is somewhat complicated; the term is complex and is used slightly differently in Swedish and English. The Swedish language uses the word "trygghet" when referring to "safety" (Mellgren & Kronkvist, 2013), and this thesis aims to study safety concerning crime in the urban context. There are other contexts in which safety could be studied, for example, safety in economy, health, and upbringing conditions (Torstensson Levander, 2007). Both safety and fear are fluid terms (Panelli et al., 2004). Sandberg et al. (2017) distinguish the difference between safety and security, two terms that can be confused in public conversation (Rönblom et al., 2020). While safety refers to the experienced feeling of safety, security refers to actual security. Furthermore, when safety and security are separated, safety refers to the subjective and security to the objective. However, that simple separation can be contrasting; a place can be perceived as unsafe, while crime statistics claim that the place is more or less safe (Rönblom et al., *ibid*). Safety should not be misunderstood as something that can be increased by changing the physical environment alone. According to Sandberg & Rönblom (2014, p. 2667), "safety depends on the kinds of people using spaces, the kinds of activities they perform in them and when they perform them."

Perceived safety

This study will use Uittenbogaard et al.'s (2018, p. 60) definition of perceived safety as "an individual's experience of the risk of becoming a victim of crime and disturbance of public order." When conducting studies related to safety, it should be noted that fear of crime and perceived safety should be distinguished (Hinkle, 2014; Litzén, 2006). If not doing so, it can lead to reports of higher trends of feeling unsafe than trends of fear of crime (Hinkle, 2014). The word perception is defined by Ewing and Handy (2009, p. 67) as "the process of attaining awareness or understanding of sensory information." How a person perceives something is the outcome of when the interpretation of the perceived, culture, and experiences all interplay. Personal characteristics like income, age, social class, race, physical disability, and past victimization correlate with perceived safety (Pain, 2001). Ewing and Handy (2009) suggest that an individual's reaction and perception of a place could be studied through the individual's assessment of the place.

Fear and fear of crime

The opposite word of safety is "otrygghet" in Swedish, and "fear of crime" in English (Mellgren & Kronkvist, 2013) for the context of this thesis. Sometimes, when discussing a place that does not feel safe, the word "unsafe" can be suitable. A universally accepted definition of fear of crime does not exist, and for this the field has received critique (Mellgren & Kronkvist, *ibid*). The Oxford Dictionary of Human Geography (Castree et al., 2013, p. 149) states that fear is "a distressing emotional response to a real or perceived threat." As the definition explained, it can be a real threat or something people think is threatening. Individuals experience fear in various ways, and fear of crime is not a measurable entity (Mellgren & Kronkvist, 2013). However, many research methods are well-developed in measuring experiences. Fear of crime can be explained in the scope of feelings, reactions, and perceptions of risk that pose different meanings for various people, depending on where they are and who they are (Mellgren & Kronkvist, *ibid*). Another complexity is that people's fears are not only derived from situations and spaces; it is an idea or imagination that comes from power structures, personal relationships, rumors, and previous experiences (Listerborn, 2002). Furthermore, the creation of fear of crime could, according to a report from the Government's Official Investigations (SOU, 2006), be created by the polarization that the media contributes to. Media creates a national identity and performs structural discrimination through a "we and them" discourse. The report also states that the media contributes to segregation and inequality and says explicitly that the media has an active role in that (SOU, 2006). Fear can be conceptualized as situational fear of crime; during certain times of the day, places and surroundings in the city are seen as dangerous and unsafe (Listerborn, 2002). As fear is situational, it also shifts in both duration and intensity (Pain, 2000). Persson (2013, p. 76) explains the paradox of fear: "that women and the elderly are more fearful than men and young people even though their risk of falling victim is less." The factors behind it are vulnerability and a feeling of helplessness, which is called the rationalist paradigm (Persson, 2013).

Vulnerability

Vulnerability is central to mention when fear is discussed, as it has been regarded as a driver of fear in the literature on fear of crime (Johansson & Haandrikman, 2021). There is physical and social vulnerability, where physical means the weakness to escape risk or attack through physical ways, such as having lower strength or limited mobility (Johansson & Haandrikman,

ibid). Maxfield (1984) and Ward et al. (1990) state that physical vulnerability is more common among the elderly and women. Social vulnerability implies how the victimization of someone is caused by ethnicity, socioeconomic status, economic resilience if victimized, marital status, or education, and this affects women more than men (Franklin & Franklin, 2009).

2.2 PUBLIC SPACE AND SAFETY

In the book *(Un)safe?* the three authors, Rönnblom, Linander, and Sandberg (2020), introduced their thoughts on how the perception of fear has evolved. They claim that there are tendencies to negatively see today's societal development because of the "lost" safety. They mean that safety is seen as a dream we long for and a dream of something that *has* been (Rönnblom et al., ibid). However, it should be remembered that when discussing safety and researching it, researchers, respondents, and media, can have the intention to talk about decreased safety exaggeratedly. Rönnblom et al. (ibid) claim that we can see the effect of it in the media logic, crime statistics, and political proposals, which all become arguments in the debate of fear of crime and safety. Nevertheless, the cause, effect, and consequence should be questioned and not claimed easily. Rönnblom et al. (2020) push on the importance of the public space being a democratic arena, as it is one of the most important arguments when speaking about safety. Rönnblom et al. (2020) also state that public space should be available for all groups in society. The term modality can be raised when it comes to studying safety, which Sahlin and Borelius (2010) discusses. Modality can be subjective and objective, and while a subjective response can be "I feel safe to live here," an objective response can be "It is safe to live here." Sahlin and Borelius (ibid) states that a subjective modality response reveals how a person reflects on something, and an objective modality response shows knowledge and authority.

The theoretical model by Foster and Giles-Corti (2008), see figure 1, displays the different factors that affect a person's real and perceived safety. That influences a person's outdoor physical activity.

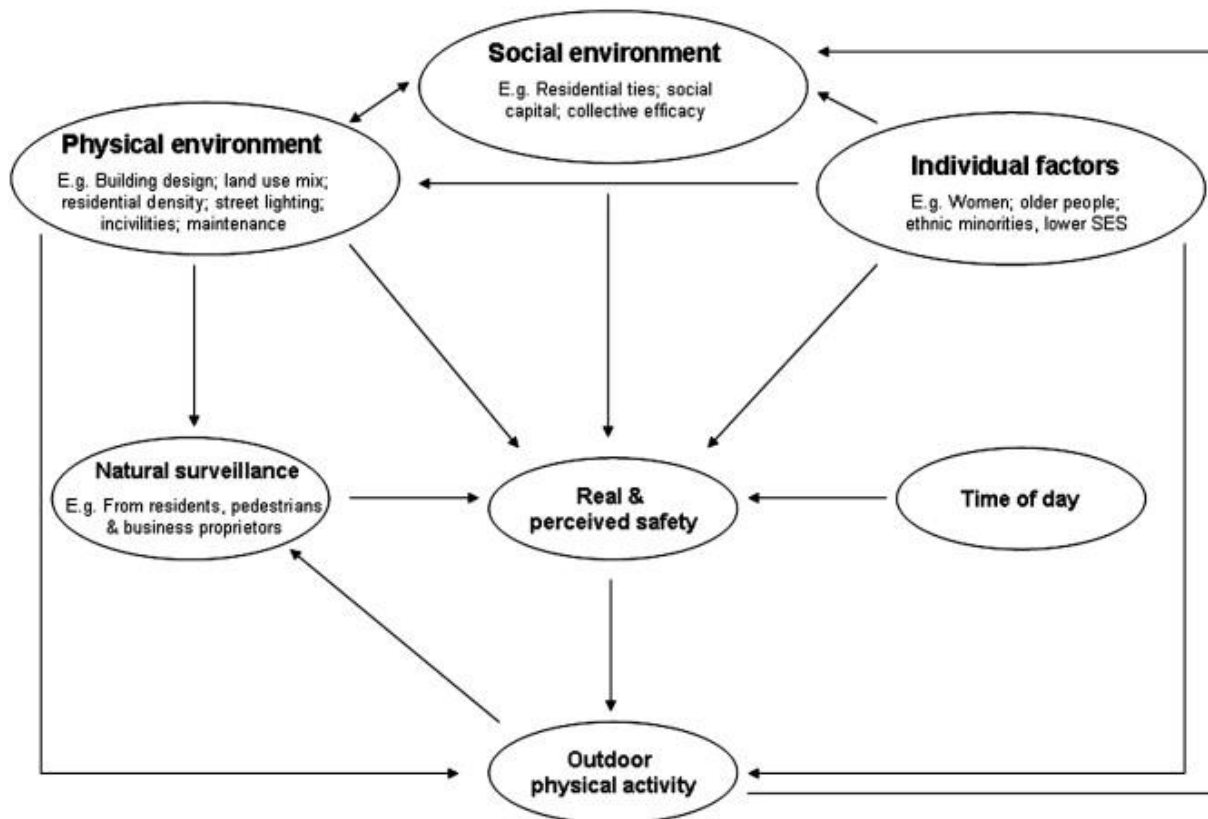


Figure 1: The theoretical model by Foster and Giles-Corti (2008) that illustrates the relationships between neighborhood safety and outdoor physical activity.

Broken Windows Theory

The Broken Windows Theory (BWT) was founded by James Wilson and George Kelling back in 1982, which proves that neighborhood disorder leads to more crime, and a possible decline in the area. “Broken windows” refers to the observation of a couple of broken windows on a building. The windows were not replaced for a period, which resulted in vandals breaking other windows of the building (Castree et al., 2013) since no one seemed to care about the first broken windows (Wilson & Kelling, 1982). A proper maintenance and repair rate maintains a reasonable level and social norm (Castree et al., 2013). Wilson and Kelling were the first to explain that crime is a consequence of neighborhood disorder (Gau & Pratt, 2010). Broken Windows is an explanatory model, implying that disturbances of order can be physical and social, and they contribute to fear of crime (Mellgren & Kronqvist, 2013). Examples of physical and social disturbances to the order are littering, graffiti, youth gangs, vandalism, and disturbing traffic. If these disturbances are present in an area, social control is low, no one cares about the area, and messy people commit serious crimes. Furthermore, areas with a high rate of disturbances of order are reported to have a higher fear of crime among the residents. In these

areas, there are also fewer “eyes on the street,” as Mellgren and Kronqvist (2013, p. 15) state, and the reason is because fear of crime has made people refrain from activities more often.

2.3 INTERSECTIONALITY, FUNCTIONALITY AND AGEISM

Intersectionality focus on the interaction between different identities of humans, which in turn are prone to discrimination and social oppression. Examples of identities are sex, age, race, sexuality, and disability. Therefore, intersectionality must be considered when studying discrimination since identities do not work separately (Castree et al., 2013). Intersectionality was first used in western gender research but has expanded to other parts of the world. The term itself means to cross or cut through and is also used in political contexts to describe how power relations or identities constantly interact (Lykke, 2003). Intersectionality, as well as gender, has shown to be valid feministic theories when studying societies underlying power structures (Friberg & Larsson, 2002; Boverket, 2020). The two theories can be distinguished in the way that intersectionality includes more aspects than gender (Gemzøe, 2014; Listerborn, 2002). Norms can affect a person in different ways depending on the situation, and to understand a person’s resources or power, one needs to look at more than its gender (Boverket, 2010).

Functionality is a category that tends to be interconnected with age; it is a norm that functionality will change with age. Nonetheless, young and middle-aged people expect to have normative functional bodies, and normative functionality takes its standpoint into having a strong, healthy, young body (Mattsson, 2021). When analyzing functionality from an intersectionality perspective, Mattson (ibid) claims that the focus should be on how inequality and power are created and maintained within and between groups. Mattsson (ibid) continues to argue that the focus should not only be on those who are marginalized and breaking the norm. Age can be understood culturally and socially as a biological process and a social phenomenon, and the consequence is that based on the context, aging and age are understood differently. For example, understanding the elderly as conservative and behind in society while seeing the elderly in need of help and as vulnerable (Mattsson, 2021). Krekula et al. (2005) state that age can be used to exercise power regarding segregation and social differentiation since power relations are founded on age.

Ageism focuses on the stereotypes and preconceptions related to someone's age. According to

Mattsson (2021, p. 128), ageism is a term that is "used to catch and define preconceptions and discriminations that are related to age." Examples can be seeing young people as rowdy, immature, dangerous, or independent, while seeing older people as weak, sick, or as a burden (Mattsson, 2021; Krekula et al., 2005). The term ageism is mainly used when discussing discrimination against the elderly (Mattsson, 2021). Krekula et al. (2005) mean that what separates ageism from, for example, racism and sexism is that people's age is changing, and changing skin color or sex is not as natural as the age is changing. Andersson (2007) and Jönsson (2009) are two researchers who argue that there is not enough attention to ageism in media, research, and the political debate. Age as an oppressive structure can sometimes end up in the background of other factors that can lead to discrimination, like skin color, class, or sex (Andersson, 2007). Class and ethnicity are many times stronger power structures than age itself, according to the sociologist Ken Blakemore (1989, p. 161), and aging will always stand in relation to other power structures.

3. Literature review

3.1 STUDYING SAFETY AND FEAR OF CRIME

"The National Safety Investigation" of the Crime Prevention Council is, as the name reveals, a yearly national investigation of people's relation to safety. It has four main areas that it investigates; people's experience of worry and fear of crime, victims of crime's experiences of contact with the justice system, people's vulnerability to crime, and confidence in the judiciary (Brottsförebyggande rådet (2018). A report by Eriksson and Brottsförebyggande rådet (2009) on fear of crime and segregation revealed that the level of fear of crime differs depending on the area, whether it is a low-, middle-, or high-income area. The levels of fear of crime were higher in the low-income area compared to the middle- and high-income areas. The fear of crime levels and worry of being exposed to crime in specific vulnerable areas are higher than in low-income, middle, and high-income areas. Another result of Eriksson and Brottsförebyggande rådet (2009) is that vulnerability strongly correlates with fear of crime.

Furthermore, it showed that an area's crime levels do not necessarily correlate with the fact that inhabitants are more prone to crime. Eriksson and Brottsförebyggande rådet (2009) found that people can apply strategies to minimize and deal with their fear of crime. These strategies can be taking a transport mode or path that is seen as safer. Another strategy is to avoid participating

in an activity. People can apply these strategies differently depending on several factors, for instance, which area they live in - if it is a vulnerable area, a low or middle-income area, a resourceful area, or a high-income area. The investigation discovered that the number of people who apply the strategies mentioned previously is low in high-income areas. Applying the strategies is more common in vulnerable and low and middle-income areas. Avoiding participation in activities because of fear of crime showed more differences depending on which area it is, compared to the previous question about applying strategies. People who live in vulnerable areas tend to avoid activities more than those in high-income and resourceful areas (Eriksson & Brottsförebyggande rådet, 2009). Other studies like Kawachi et al. (1999) and Kennedy et al. (1998) confirm the correlation with fear of crime in vulnerable areas. Hale (1996) presented three groups of vulnerable people: the elderly, women, and the economically disadvantaged. A British study conducted by Crime Reduction UK (2005) found that gender is not the primary indicator of fear of crime. Other identities, such as income, being a single parent, and living in areas that lack good physical maintenance, correlate significantly with the fear of crime.

In the Swedish dissertation "Urban Landscapes of Fear and Insecurity" by Sandstig (2010), which includes an extensive content analysis of several surveys conducted by the SOM institute, respondents suggested that physical and social factors contribute to fear of crime and lack of safety. Physical factors like messy and shady neighborhoods, bad lightning, and closed tunnels were mentioned to increase the fear of crime. Social factors like the fear of meeting the wrong people also increase people's fear of crime. The wrong people can be a group of teenagers, drug addicts, and filthy older men. Other social factors can be that the environment is unfamiliar, not many people are outside, and people are not good at helping if something happens. What is striking is that the study found that traffic can contribute to safety and be experienced as a threat (Sandstig, 2010). In Sandstigs's (2010) study, 42% of the respondents expressed fear of being outside in the dark, most of whom were women.

3.2 PLACES OF FEAR: THE PEDESTRIAN TUNNEL

Findings from Listerborn's (2000) "Safer city: Can you change places of fear?" show that tunnels, along with poor overview due to buildings or vegetation, and few travel routes, are examples of places and situations that can decrease safety. These examples make it more difficult for people to have an overview of the area and can also decrease people's control of

their travel routes (Listerborn, *ibid*). Studies have been performed on the significance of illumination in a safe public space and concluded the connection between low illumination and high fear of crime (Koskela & Pain, 2000). Painter (1996) conducted a before and after survey study in London, UK, which suggested that improved street lighting conditions lowered crime rates and more pedestrians dared to take walks after dark.

Sandstig (2010) mentioned tunnels several times; they are mentioned concerning fear of crime and how the character of the place is due to physical and social factors. Respondents of the study were asked what an unsafe place could be, and they mentioned tunnels, bridges, and suburbs (Sandstig, 2010). Threats and risks can appear as graffiti in tunnels, which is considered a deserted place. Sandstig (*ibid*) provides some support to say that fear of crime in the urban space is connected to the character of the place. This is concluded by respondents mentioning low resource city part Bergsjön and high resource city part Askim, along with tunnels and tram stops, as unsafe places, meaning that respondents interpreted the question if there are unsafe places broadly. Tunnels were also considered closed spaces and difficult to escape if threats occurred. To explain how different characteristics of places can all contribute to fear of crime, Sandstig (*ibid*, p. 163) claimed: “From a human geographical perspective, the place and the social context of the place itself form spaces, colored by both geography and social context.” Furthermore, fear of crime in the urban space can come from the combination of people’s economic and social status, which is about vulnerability (Sandstig, *ibid*).

Mushtana et al. (2022) conducted a mixed-methods study in the United Arab Emirates and investigated the effect of improved light linking to safety in pedestrian tunnels. They did quantitative surveys, field measurements and used DIALux lighting software for simulations. Their findings proved the hypothesis that people feel safer when lights are placed strategically and distributed widely in pedestrian tunnels. It also represses verbal harassment amongst the tunnel users and suppresses vandalism (Mushtana, *ibid*).

3.3 PLANNING FOR SAFE CITIES

Listerborn (2002) has distinguished two ways of planning for safety measures: the urban planning perspective and the criminological, or crime prevention, perspective. The latter focuses on crime prevention and making public space more secure; it aims to make more explicit boundaries between public and private spaces. The urban planning perspective focuses

on safety and aims to make places populated more hours of the day (Listerborn, *ibid*). However, there are other ways to separate ways of taking measures; a distinction should be made between safety measures and security measures. Targeting questions about power, well-being, influence, and democracy belongs within safety measures, while crime prevention measures are the focus of security work (Sandberg et al., 2017). In the Swedish context, there can be seen an increased effort for safety measures in municipalities today (Sandberg et al., 2017), and urban planners have taken a more practical approach to enhance safety and reduce fear (Whitzman, 2011). The initial motivation to promote safety is that it is a democratic and human right and a prerequisite for the individual to participate in society (Boverket, 2012). The literature shows different measures that planners take to achieve safety. Some focus on taking physical measures, and some focus on taking social measures, while some seem to combine. The best measure to take is by the literature given differently depending on what you read. The measures to be taken to promote and increase safety are performed in several fields of municipal operations, and these measures affect different groups in society (Sandberg et al., 2017). Rönnblom et al. (2020) state that safety work is being dealt with on a municipal level but problematize how it is done. Instead of going to the bottom of fear of crime and specific factors like racism or sexism, the focus can be on, for example, improving women's perceived safety in dark alleys. That means that the issues the society faces with power relations are not addressed. Instead, the focus is on building away places of fear, through short-term measures, like making the environment clean and nice and improving lighting (Rönnblom et al., *ibid*).

Physical environment

The physical environment means the buildings and the structure of the area (Whitzman, 2011), and solutions to the fear of crime in threatening and dark environments have focused on thinning bushes and increasing lightning (Sandberg & Rönnblom, 2014; Rönnblom et al. 2020). The improved safety measures in urban environments include, for instance, checklists and safety audits to check what resources are available for people in different groups. These measures are taken to secure peoples' safety and accessibility (Friberg & Larsson, 1997) no matter ethnicity, gender, age, sexual orientation, or degree of function a person has. Urban planners' efforts to create inclusive and attractive cities (Sandberg et al., 2017) go hand in hand with working for safe cities (Listerborn, 2002).

According to Listerborn (2000), a city's structure is difficult to change, and the structure has a significant influence on people's safety. How people move in the city is affected by the city's ability to connect spaces, and there are examples of how the city's road network affects the flow of people and traffic (Listerborn, 2000). If a city's road network is like a tree system, which many suburbs have, it can lead to fear of crime. There are separations from the city center, and the area can be drained of traffic since the cars often are led to a surrounding road, creating a desolate area. If a person needs to take a detour, she or he might not know how long that will take since the road structure is inconsistent, and the person lacks an overview. The opposite of a tree system is a grid, which is beneficial since the residents know how the road structure is. It can also increase the chance of meeting people and having natural surveillance; therefore, the place does not feel desolate (Listerborn, *ibid*). The condition for natural surveillance depends on the housing design, and there should be no obstacles that reduce the sight of the streets (Zelinka & Brennan, 2001). Studies have shown different findings on the extent to which pedestrians contribute to natural surveillance and increase safety in the street (Foster & Giles-Corti, 2008). Mayhew et al. (1979) concluded that the social composition of the space would determine safety more than having natural surveillance.

Art and design project

The cooperation organization Safe, Beautiful City, was active between 2005-2018, intending to make Gothenburg a more beautiful and safe city through changes in the physical environment. The cooperation was with the Urban Transport Administration, the urban planning office, park and nature management, and private actors and public companies. Within Safe, Beautiful City, attention was given to tunnels since residents had pointed them out as unsafe environments (Göteborgs Stad, n.d.), and the project Light Art Tunnels was initiated in 2014. Light Art Tunnels is connected to the international network Light Urban Community International, short LUCI, and Gothenburg Art Cultural Affairs Administration (Göteborg konst, 2015). Through dialogue with residents, the tunnels were improved aesthetically, and participation was thought to improve the feeling of belonging to a place (Göteborgs Stad, n.d.). An example of participation was to improve the tunnels that lead to the tram stop at Eketrägatan. Both young people and the elderly were participating, and they had raised the aspect of fear of crime at the tunnels. Through workshops, young people and the elderly made 250 square meters of mosaic art (Göteborgs Stad, n.d.).



Image 1: Tunnel with mosaic art at Ekeströmgatan tram stop. Photo: Louise Ringeby.

White Architects was the prominent consulting firm in the Light Art tunnels project, with citizen involvement and process management. The tunnels at the tram stop Briljantgatan were nominated as the most unsafe tunnel in Gothenburg by the citizens (White, n.d.). The tunnels at Briljantgatan underwent a change and were called “More Eyes” after that. White Architects stated that the intention of “More Eyes” tunnels was to make users of the tunnel feel more comprehensible and shorter. The responsible light designer Kajsa Sperling commented on the tunnel (White, n.d.) “Both children and adults walking through the tunnel stop and feel the stones. And when people stop, the tunnel becomes more populated, making even more people want to use it.”

Safety walks

"Safety walks" means gathering several actors in an area, including residents, property owners, municipal administrations, associations, and responsible for public transport (Brå et al., 2010), for a democratic dialogue about safety and accessibility (de Laval & Svensk byggtjänst, 2014). They have a mutual discussion and exchange ideas about how to make the walking area more pleasant and safe to live in (Brå et al., 2010). Participation and dialogue are most important for these walks, as local experiences of safety and crime are discussed (Brandén & Sandberg, 2021). When local actors, users, and residents gather to exchange perspectives and opinions, it

leads to disseminating information and people conversing with constructive ideas. A responsible organization leads the walk during the safety walk (Brå et al., 2010), and today safety walks are a widespread way of improving safety. In Sweden, the first municipality to be introduced to the concept of safety walk was Gothenburg. It was introduced by the local crime prevention council, Gothenburg City, and Region West (de Laval & Svensk byggtjänst, 2014) in 2001. Safety walks are a developed concept of the so-called gåtur method, which will be explained in the method chapter. Safety walks are almost synonymous with local planning practices that revolve around safety. After introducing safety walks, numerous strategies, guidelines, checklists, and manuals have evolved. The method is supposed to work in all parts of the country and all kinds of environments (Brå et al., 2010). Today, there is a link between crime prevention policy and safety walk. It brings police authorities, public representatives, and residents together for a deep democratic dialogue (Brandén & Sandberg, 2021). Li (2007) argues that the limitations of safety walks are that the problems of fear of crime can be limited to solutions to technical problems in the built environment. Social conditions are not discussed to give a broader interpretation of the safety issue; instead, the focus is on the physical environment and technical issues that are easy to solve (Rose, 1996). Social conditions that affect safety include segregation, drug dealing, rape, sexual assault, and violent attacks. However, Brandén and Sandberg (2021) found in their study that these issues could be indirectly minimized since increased light in the streets can make more people want to populate them, generating people to feel safe.

3.4 SAFETY OF ELDERLY

It can be argued that it is unnecessary to point out an age group of society that should be the most vulnerable and prone to crime; however, many studies show results that point to age having importance. Studies of elderly people's fear of crime have often denied or confirmed the paradox of fear (De Donder et al., 2005). Studies have also tried to explain the so-called irrational fear of the elderly, but calling it irrational could be wrong since it can be rooted in factors other than actual victimization (De Donder et al., *ibid*). De Donder et al. (2005) found three main reasons for fear of crime among the elderly, and the findings were based on interviews in Belgium. The study found three main determinants for fear of crime; first, sociodemographic factors, such as income, gender, loneliness, and physical vulnerability, significantly related to fear of crime. Secondly, neighborhood variables, such as commitment, organization, and participation, played a role in the creation of fear of crime. Thirdly, the study

found that watching the television increased the fear of crime while reading the newspaper decreased the fear of crime (De Donder et al., *ibid*).

Morgan and Mason (2014) concluded a study on the American National Crime Victimization Survey; they found that property crime and nonfatal violent crime happen more often to younger people than elderly people. Meanwhile, a British study on elderly victims of crime (Serfaty et al., 2015) found that violence, burglary, and robbery happen more to elderly people. The two studies do not prove and establish a generalizable theory that young people in the US are more prone to crime while old people in the UK are more prone to crime. The studies are mentioned as an introductory statement that there are different findings that conflict with this age group, making it of interest and importance to research the elderly as an age group.

Pain (2001) discusses the fear of crime and its relation to age, gender, fear in the city, and race. She argues that age has been the most debated topic within the research field regarding the use of public space, fear of crime, and social identity. Research has mainly focused on the elderly's fear of crime, but the focus has shifted to young people and the fact that they are the age group most in danger of being troubled by fear and victimization. Pain (2001) suggests that young and elderly people should be studied in parallel since they interact in society. The behavior, attitudes, and discourses around young people affect the elderly's use of space. At the same time, the younger people's use of space and experience of fear is related to parents and other caregivers. British and American crime surveys (*ibid*) found that despite younger people being significantly more at risk of victimization compared to older people, it was the elderly that were more afraid of crime than the young. In addition, women and the elderly suffer less risk in public spaces and more risk in private life (Pain, 2001). The actual crime is less of a problem than fear of crime among women and elderly people (60 years and older), based on a British crime study (Pain, 2001).

Another author that made interesting findings about age groups is Berglund-Snodgrass (2016), in her dissertation "Demanding Certainty - A Critical Examination of Swedish Spatial Planning for Safety." Berglund-Snodgrass looked into 127 project applications in a Swedish national policy called 'Safe and Gender Equal' from 2008-2010. When talking about the relationship between the elderly and young people, Berglund-Snodgrass (2016, p. 126) stated, "Young people are also constructed as particularly threatening to the elderly." Looking at the difference between young women and elderly women, it could be seen that young women may be more

fearful than elderly women. Young women apply avoidance behavior more significantly than elderly women since the latter age group initially avoids going out in the dark hours. Berglund-Snodgrass (ibid) argued that in society, the elderly are constructed as a vulnerable and fearful group, which should be considered in spatial planning. The study also found tendencies of women and the elderly to avoid places with poor lighting.

Ceccato and Bamzar (2016) conducted a study of elderly people to investigate the fear of crime in public space and victimization. The elderly lived in a senior home in Hässelby in Stockholm, and the study results showed that they had a higher fear of crime level than other elderly residents in Hässelby and Stockholm. The places where they felt the safest was close to the senior home, for example, next to the entrance, and the further they walked, the more fearful they became. This behavior and thinking is called the “distance-decay pattern”, which takes its starting point at the building. Interestingly, some of the entrances had poor illumination, which seemingly did not make the elderly less safe (Ceccato & Bamzar, 2016). This study proved that illumination is not the only, and not always the highest priority for elderly’s feelings of safety. Instead, it was the entrance door, the closeness to the safe home, that gave a sense of safety. Another finding of Ceccato and Bamzar (ibid) showed that elderly’s mobility was not hindered because of an area that was perceived as unsafe - rather, the elderly just took another route, and their mobility was not stopped completely, this is known as avoidance behaviour (Jackson & Gouseti, 2012). The most unsafe places for the elderly in Ceccato and Bamzar’s study were known for poor lighting, high rise buildings, and being far from the senior home. The factors of unsafe places for the elderly are not only dependent on physical matters. The population of this study stated that aspects in their lives affected the perceived safety in public space, like poor health, personal finances and anxiety. Also, indoor triggers like small living spaces that are not adapted to their needs do affect their overall perceived safety, and Ceccato & Bamzar (2016) claim that indoor and outdoor safety interplay.

3.5 VULNERABLE AREAS

A vulnerable area is a geographically limited area, and the definitions and characteristics of these kinds of areas vary (Ghazinour & Eriksson, 2022); hence several definitions will be presented. In 2004, the liberal party of Sweden (who back then was Folkpartiet and today is Liberalerna) wanted to define areas characterized by exclusion, high crime rate, and low employment (Folkpartiet, 2004). Being excluded was defined by Folkpartiet as

“a situation in which individuals or groups of individuals stand outside several central community arenas: labor market, association life, political organizations, cultural life, idea debate, etc. These different arenas form the core in those power relations that shape the society at large and give access to both resources and opportunities” (ibid, 2004, p. 8).

They wanted to put a name on limited areas that have a concentration of crimes. However, Rostami and Ghazinour (2022) state that what a vulnerable area consists of has no generally accepted definition. While in BRÅ's definition, socio-economic aspects of the living area are in focus (Brottsförebyggande rådet, 2017), the police authority, on the other hand, characterizes the area with high levels of fear of crime and high levels of crime (Polismyndigheten, 2017). The development of the vulnerable areas started during the 90s and is not unique to Sweden: urbanization, international economic interlacement, and migration contributed to a global change process (Gerell et al., 2020). These areas' name-giving has been through opinions of opinion leaders, politicians, researchers, or authorities to explain what makes them stand out from other areas. Examples of names for these areas have, during the last 50 years, been: newly built slums, concrete ghettos, million program areas, the suburbs, and now, areas of exclusion or vulnerable areas (Hallin, 2020). They can also be considered vulnerable neighborhoods and immigrant-dense areas (Ericsson et al., 2002).

Gerell et al. (2020) state that descriptions of these areas by the ones who inhabit them have been missing, but lately, that has changed since it is mainly the young people who describe their experiences through music, film, and poetry. Gerell et al. (ibid) also claim that research in vulnerable areas needs to be conducted and that there is a considerable knowledge gap. Gerell et al. (2020, p. 17) write, “in municipalities that have vulnerable areas, lobbying is carried out to remove them from “the list of Noa,” without really changing anything in the foundational socioeconomic prerequisite .” Unfortunately, vulnerable areas become a platform for symbol politics (Gerell et al., ibid). Ericsson et al. (2002) argue that media can tend to stigmatize these areas. Even though there are positive and negative things said about the area, it is clear that it is distinguished from the rest of society (Ericsson et al., ibid).

3.6 Chapter summary

The literature review has presented studies on fear of crime, safety, ways of planning for safety, tunnels, elderly, and vulnerable areas, and has come to show that the underlying factors for

people's perceived safety are more than the physical environment. There is a lack of studies made in vulnerable areas focusing on tunnels and how they are used. Lastly it can be concluded that there is a knowledge gap on qualitative studies focusing on elderly women's perceived safety in tunnels.

4. Method

This chapter reviews how the study was conducted and the reasons behind it. The text is presented through descriptions of the process and reflections, mixed with suiting literature to strengthen the choices made. It includes research design, data collection, data analysis, ethical considerations, and a methodological discussion. As stated earlier, four tunnels were chosen in two areas of Gothenburg, two tunnels in Biskopsgården and two tunnels in Central Tynnered. Pictures of tunnels, and tables of interview informants and respondents will be presented throughout the chapter.

4.1 Research design

The study aims to provide new knowledge about the user's thinking and perception of safety in pedestrian tunnels without the intention of making generalizations. The interview material of the elderly will constitute the foundation of the study. The other part of the study focuses on urban planners and safety coordinators to draw parallels and conclusions between the users of tunnels and those who have some kind of control of these tunnels. Denscombe (2009, p. 184) states, "Method should be chosen based on what suits a specific essay"; therefore, qualitative methods were chosen, focusing on the respondents' perspectives and having open questions (Bryman & Nilsson, 2018). Dencombe (2018) states three purposes for which interviews will be beneficial: 1. When studying complex questions, 2. The researcher needs to understand how systems work, and 3. How factors are interlinked.

Furthermore, interviews are good when studying opinions, feelings, experiences, and conceptions. It is also beneficial when interviewing key persons in a specific field or organization since it contributes to privileged information (Dencombe, 2018). Literature like Koskela (1999) proposes interviews as suitable when studying fear of crime since fear is an emotional and complex phenomenon, and interviews give a better chance to explain that. In this study, the theory will be linked to empiricism through a deductive approach; this means that the thesis takes its starting point from the theory and previous research to approach the empirical

research and, after that, form an image of the studied respondents (Bryman & Nilsson, 2018). Previous research has already stated several theories and conclusions regarding safety, fear of crime, elderly and urban planning. The intention is not to change these foundational theories and understandings but to deepen them.

4.2 Data collection

The very general term qualitative interviews describe several ways of doing interviews, and for this study, semi-structured interviews will be the starting point for all data collection. Semi-structured interviews are characterized by not having complete structure and control of the interview (Denscombe, 2018). The interviewer has a set of questions or themes that should be answered, but flexibility is vital, and it can give the respondent a chance to develop their ideas or thoughts (Dencombe, *ibid*). Semi-structured interviews are characterized by a set of questions, follow-up questions, and sometimes a varied order of the questions. The questions are slightly more general than the structured interviews (Bryman & Nilsson, 2018). Gatekeeper sampling was a large part of finding the study's respondents, and according to Keesling (2008, p. 300) "gatekeeper is a person who stands between the data collector and a potential respondent." More explanations of how this took place will be described. All interviews were audio recorded on a phone, and permission was given for that by the informants and respondents before the recording started. Initial informant interviews were held with safety coordinators, and respondent interviews were held with groups of elderly and urban planners and safety coordinators.

4.2.1 Interviews with urban planners and safety coordinators from Gothenburg City

When it comes to the interviews with urban planners and safety coordinators, all of the informants and respondents, except one, were interviewed through a video call. The respondents received the questions in advance over email to prepare them for the interview.

4.2.1.1 Informant interviews with safety coordinators

In the early stage of the thesis writing, there was the idea of conducting pre-interviews with safety coordinators from the Social administration in Gothenburg at the unit City, welfare and leisure (Stadsområde, välfärd och fritid). The aim was to get more acquainted with planning for safety in a local context and what tunnels are perceived as unsafe in the chosen areas. These

interviews came to serve as informant interviews since they were done in a preparative state of the thesis. They were also completed later on to have them as respondent interviews. An introductory mail was sent to the City, welfare, and leisure unit managers in both the Social administration Hisingen and the Social administration Southwest. The unit managers then started recommending people of interest to interview; it was a so-called gatekeeper sampling. After that, one safety coordinator was chosen from City, welfare, and leisure in Southwest, and one for that unit in Hisingen. The safety coordinator from Hisingen was working specifically with Biskopsgården with the concept "Bo-Bra i Biskopsgården" (Live well in Biskopsgården). It is a cooperation between property owners, property companies, incorporated companies, and the Social administration of Hisingen to create a more attractive Biskopsgården (Göteborgs Stad, n.d.). The Social administration in Southwest has a cooperation called Trygg-i Sydväst, which means Safe in Southwest. It cooperates with the police to increase trust in society, reduce crimes and increase safety (Göteborgs Stad, n.d.). An additional safety coordinator from Southwest participated in the interview. Safe in Southwest is what the two safety coordinators work with. The interview guide for the informant interviews can be seen in Appendix 3. In table 1, an overview of the interviews can be found, along with some information about the informants. In the results and analysis, the safety coordinator from Biskopsgården will be referred to as SC Biskop, and the two safety coordinators from Tynnered/ Southwest will be referred to as SC Tynnered 1 and SC Tynnered 2.

Table 1: Initial informant interviews with safety coordinators.

Profession (title in text)	Working place	Date	Type of interview and length
Safety coordinator Live-well-in Biskopsgården (SC Biskop)	Social administration - Hisingen	2022-02-15	Video call - 1 hour
Safety coordinator (SC Tynnered 1, SC Tynnered 2)	Social administration - Southwest	2022-02-17	Video call - 1 hour

4.2.1.2 Respondent interviews with urban planners and safety coordinators

For the respondents' interviews with urban planners and safety coordinators, the sampling was conducted based on their profession and what they focus on in their work. Gatekeeper sampling and direct contact were ways of contacting the respondents. The reason why the safety coordinators were interviewed through respondents interviews was because all the respondents

got the same questions, and the respondent interviews had a more precise focus, compared to the informant interviews. The interview guide for the respondent interviews can be seen in Appendix 5, and in table 2, an overview of the interviews can be found. The way the interviews was that the respondent interviews should be the main material. Since the safety coordinators from Southwest could only provide their interview through mail conversation, their informant interview had passages where they were answering the questions in a more descriptive way. Therefore, a few parts of the informant interview with them were used.

The planning leader for safety was of interest to interview because of her work with safety, for example she works with art in tunnels. The head of city lighting was of interest because of the central role light has in tunnels, and since he has been involved in light art projects in tunnels. The development manager for urban development was interviewed because of her perspective on elderly, which seemed to be of importance to include.

Table 2: Respondent interviews with safety coordinators and urban planners.

Profession (title)	Working place	Date	Type of interview and length
Safety coordinator Live-well-in Biskopsgården (<i>SC Biskop</i>)	Social administration - Hisingen	2022-04-22	Video call - 30 min
Safety coordinator (<i>SC Tynnered 1, SC Tynnered 2</i>)	Social administration - Southwest	2022-04-19	Mail conversation
Planning leader for safety (<i>Safety planner</i>)	Urban Transport Administration	2022-04-12	Video call - 30 min
Development Manager Urban Development (<i>Development Manager</i>)	Administration for the elderly, nursing and care	2022-04-25	Video call - 50 min
Head of city lighting (<i>Head of city lighting</i>)	Urban Transport Administration	2022-04-27	In person - 30 min

4.2.2 Respondent interviews with elderly

4.2.2.1. Interview method

Interviews have, compared to questionnaires, a greater chance of interaction between respondent and researcher. Interviews are also beneficial when the researcher wants to grasp the human lifeworlds, and it can be about something that the researcher does not know (Esaiasson et al., 2017). The aim of respondent interviews is not to collect some people's conceptions and then say whether they are accurate or inaccurate; it is to dive into their thought worlds. The four interviews were conducted using a combination of different methods: semi-structured interviews, group interviews, walking interviews, and the gåtur method. The interviews took place outside, at four different tunnels, with four groups of elderly. The number of participants ranged from two to four, and the interview duration ranged from 15 to 30 minutes. The motivation to do group interviews instead of individual interviews is because group interviews are beneficial since they form a group character (Denscombe, 2018) which in this study is a group of elderly women not very mixed ages. The gåtur method has inspired the interview structure, and the gåtur method is a way of evaluating and having a dialogue about an environment while in that environment (de Laval & Svensk byggtjänst, 2014). Safety and accessibility are often evaluated during the gåtur methods; in this case, safety was the central aspect. The interview guide for the walking interviews can be found in appendix 4.

4.2.2.2. Locations of walking interviews



Figure 2: Map of in Gothenburg. The yellow stars represent the four locations of the walking interviews. Biskopsgården is located in the North of Gothenburg, while Tynnered is located in the Southwest (Google, 2022).

Each tunnel was chosen for the walking interview based on different aspects and sources of information. The intention was to choose two tunnels from each city part, where one has gone through safety improvement projects, and one has not. Four tunnels were chosen to have one group walking interview at each tunnel with different respondents. The tunnels in Biskopsgården were chosen based on a document retrieved from the safety coordinator at Biskopsgården, an informant and respondent in this study. The document was internal material and consisted of notes from safety walks in Biskopsgården. It pointed out five tunnels in Biskopsgården, and each tunnel was commented on from a safety point of view and potential physical measures that could be taken. There was an idea of choosing tunnels in Biskopsgården, where one is in the southern part and one in the north. The motivation is to have a representative respondent population from a wide geographical range and avoid choosing tunnels next to each other. Two tunnels were chosen with visits to the tunnels and the internal document from safety walks. One tunnel is below Södra Fjädermolnsgatan, and has gone through improvements such as mosaic art. The other tunnel is below Yrvädersgatan, and connects to Blidvädersgatan. That tunnel has not undergone any improvements and is characterized by gray concrete walls.



Image 2: Tunnel below Yrvädersgatan, daytime and nighttime. Photo: Louise Ringeby



Image 3: Tunnel at Södra Fjädermolsngatan, daytime and nighttime. Photo: Louise Ringeby

The safety coordinators from Southwest / Tynnered had no internal material except an evaluation document of the light art in tunnels during 2014-2015 in Gothenburg. The tunnel project “More eyes” was described in the evaluation document. With the evaluation document, physical visits to Tynnered, and informant interviews with safety coordinators, the decision landed on two tunnels in Tynnered. One tunnel has gone through improvements, the “More eyes” tunnel at the Brilljantgatan tram stop. The other has not undergone improvements and is situated on the street Femvägsskälet, under the highly trafficked road Västerleden. Choosing tunnels in Tynnered that were not located too close was also a goal.



Image 5: Tunnel at Briljantgatan, daytime and nighttime. Photo: Louise Ringeby

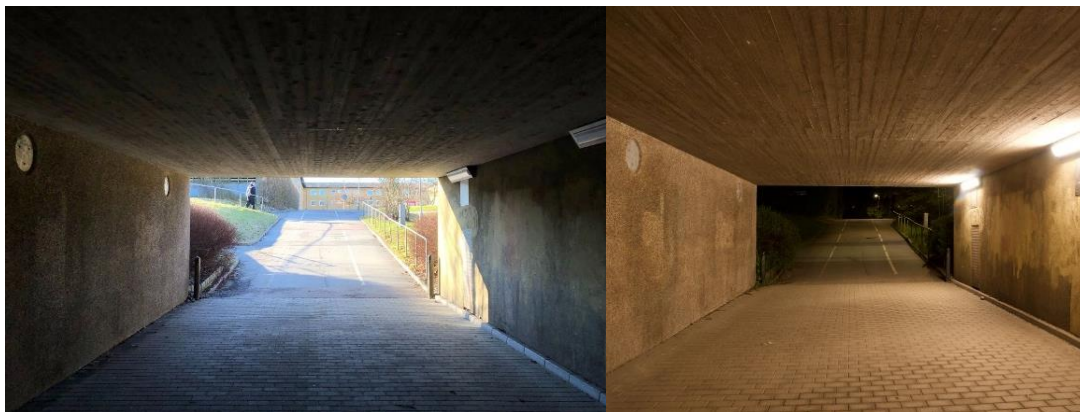


Image 4: Tunnel at Femvägsskälet, daytime and nighttime. Photo: Louise Ringeby

4.2.2.3. Choice of age group

When reflecting on who will be the respondents of this study, several age groups came across as attractive to study, like young adults and adults aged 30-65. However, aspects like being too close in age as the respondents, and parents potentially vocalizing their fear of crime on their children's behalf, pointed the decision to another age group. It was also essential to consider what age group would want to take the time to participate in a research study. It can be imagined that the elderly have more time to spare to be a part of the research, and some of them might have lived in their area for a long time, contributing to deep local knowledge. In the literature review, it could be stated that the age group elderly was one of the groups in society that stood out regarding levels of fear of crime (Berglund-Snodgrass, 2016). Considering the paradox of fear, the elderly can be expected to fear crime more than others (Persson, 2013). Studying the elderly is argued to be important since they are an increasing age group (Heikkinen & Henriksson, 2013). The elderly were thereon chosen as the target group. McCracken (1988) suggests three pieces of advice for sampling for interviews. There should not be too many respondents since theoretical saturation can be achieved as long as the respondents are

representative of the population of the study. Respondents should be strangers since there needs to be a scientific distance between the researcher and the respondent. Lastly, McCracken (ibid) suggests that the respondents should not be “subjective” experts, meaning that interviewing someone who has a high position or chairman will miss out on experiences from “normal people” that are of interest to the study.

4.2.2.4. Sampling process

Multiple ways of approaching and recruiting respondents were tested. The spontaneous recruiting strategy was tested in Biskopsgården, with poor results. However, two test interviews were conducted with two men at the chosen tunnels in Biskopsgården. The lesson learned was that this strategy would not work, and limitations like little interest to partake in an interview, or short answers to the questions, were discovered. The next step was to contact meeting places for elderly to collect respondents, and communication with staff that worked at two different senior meeting places in Biskopsgården was initiated. An informative invitation letter (see appendix 1) was written and emailed to the two staff people. The staff informed the elderly to participate in the study and distributed the invitation letters to the ones present at the two meeting places. After that, communication with staff at two different meeting places in Central Tynnered started, and decisions were made to visit those to invite the elderly face to face in Central Tynnered. When visiting the meeting places, a short introduction was held for the elderly, and they were handed out the invitation letter, see appendix 2. This recruiting strategy resulted in a positive outcome, with seven elderly from Central Tynnered who wanted to participate in the walking interviews.

Meanwhile, there was no response from the elderly at the meeting places in Biskopsgården. Contact was made with an enthusiast in Biskopsgården who has a strong local interest and is engaged in associations. This person was informed about the study and the walking interviews through email and worked as a gatekeeper. In turn, the gatekeeper provided the contacts to four elderly who were interested in participating; one was a male and will not be included in the final results. The elderly were informed about the walking interview through phone calls, and a date, time, and place were decided. The recruiting of the second walking interview in Biskopsgården was made with a visit to a seniors meeting in the Swedish church. There, two elderly were recruited for the walking interview. Out of three visits to meeting places (one in Biskopsgården and two in Tynnered), most groups said no. Those who said no had several

reasons for it, which could be about having restrained physical mobility, not wanting to participate, or not using tunnels. In Biskopsgården, respondents were derived from Södra Biskopsgården and Svartedalen. The whole Biskopsgården is considered a specific vulnerable area. In Tynnered, respondents were derived from Grevegården and Guldringen, where Grevegården is considered a risk area (Polisen, 2021).

Table 3: Respondent interviews with elderly.

Fictional name and age	Tunnel	Walking interview	Geographical area	Date of interview
Ella, 78 Stina, 75 Karin, 83	Femvägsskälet	1	Central Tynnered	2022-03-21
Gunilla, 71 Iris, 76 Marita, 88 Tyra, 67	Briljantgatan	2	Central Tynnered	2022-03-23
Doris, 88 Solbritt, 75 Märta, 74	Södra Fjädermolnsgatan	3	Biskopsgården	2022-03-30
Sigrid, 81 Helga, 80	Yrvädersgatan	4	Biskopsgården	2022-04-01

4.3 Data analysis

For the data analysis, thematic analysis was used, which is a known method when dealing with qualitative data (Bryman & Nilsson, 2018). The thematic analysis consists of six steps (Braun & Clarke, 2006), and as the steps are presented the process of the data analysis will also be presented. The empirical material can be divided into two interview sets; the respondent interviews with the elderly, and the respondent interviews with the planners. Each set of interviews were analyzed through a thematic analysis, since the intention is to present the elderly interviews and the planner interviews separately. In the first step, the interviews were transcribed, and read through multiple times while taking notes. The second step was to find the initial codes, and the obtained codes were written down on post it notes. Coding determines an aspect of the data which may be of interest for the researcher (Braun & Clarke, 2006), and the codes partly relied on the themes being either theory-driven or data-driven. In the thematic analysis of the elderly interviews, the themes were data-driven, and for the planner interviews, the themes were theory-driven. When step two was done, the post-it notes with codes were

spread out on a table, ready to be put in a theme pile. In the third step, themes and sub-themes started to form, and it was done by categorizing the codes into themes, more practically the post-it notes went to different theme piles. When searching for themes in the transcribed interview material, inspiration was taken from Ryan and Bernard's (2003) suggestions, such as examining for differences and similarities, repetitions, missing data, language connections, et cetera. At this step it was asked how the codes were related to each other, if some code should become a theme, sub-theme, or be dismissed (Braun & Clarke, 2006). Step four included going over the set of themes again, and seeing if there are data extracts within the theme that do not belong. Furthermore, the themes were revised to see how they present the data. During step five, the themes and subthemes were given names. The sixth, and last step meant to start writing the report. The themes and sub-themes for the elderly interviews and the planner interviews can be found in table 4 and 5.

Table 4: Themes and sub themes for the elderly interviews.

Thematic analysis for the elderly interviews	
THEME	Sub Themes
1. Perceived safety in and around the tunnel	1. Physical aspects of the tunnel 2. Their use of the tunnel 3. Difference between day and night 4. Bicycles passing without warning
2. The threatful youths	1. Lack of trust to young people 2. Vulnerability 3. Avoidance to be close to young people
3. The influence of age	1. Something has changed 2. Resisting fear of crime 3. Victim of crime 4. Eyes that can see
4. A less safe society	1. Development of the area 2. Opinions on safety measures

Table 5: Themes and sub themes for the planner interviews.

Thematic analysis for the planner interviews	
THEME	Sub Themes
1. How they work with safety	<ol style="list-style-type: none"> 1. Target image 2. Physical environment 3. Dialogue with people 4. Challenges with working for safety
2. How tunnels affects people's use of the city's infrastructure	<ol style="list-style-type: none"> 1. Initial aim and benefits with tunnels 2. People avoid tunnels 3. The importance of strategically placed tunnels
3. Ways to increase safety in tunnels	<ol style="list-style-type: none"> 1. Design of tunnel and physical aspects 2. Safety walks and its effects 3. Art in tunnels 4. Social efforts and non-physical measures 5. Eyes that can see
4. Special needs for elderly	<ol style="list-style-type: none"> 1. Physical vulnerabilities 2. Planning the city for all ages 3. Have clarity in the physical environment around the tunnel 4. Challenges when it comes to planning for elderly

4.4 Ethical considerations

Before the interviews were conducted, informants and respondents were informed on the aim of the thesis and the purpose of their participation in the interviews. Confidentiality was especially important for the elderly respondents, so they could not be identified in the results; therefore, they were given aliases. The intention with the elderly interviews was not to make intrusion but to give space to them to decide how much they wanted to share on each interview question. They were aware of their anonymity and that their participation should be voluntary. When it comes to the confidentiality of the interviewed urban planners and safety coordinators,

they have a more official contribution to the study and represent their workplace. The decision was taken to also hold them anonymous. The quotes and summaries that were going to be used in the final results were sent to the planners for approval. As society slowly transitioned back to normal life after the covid-19 pandemic during the middle of spring 2022, a flexible hybrid approach was taken during data collection. However, face-to-face interviews with the elderly were crucial, and the risks were considered. The elderly interviews were done at the end of March and the beginning of April, when societal distancing was taken less severely.

4.5 Methodological discussion

4.5.1 Bias

It is vital to have a critical approach to how the data will be collected, how it will be processed, and how it will be presented when conducting a qualitative study. The researcher's central role in how the reality studied will be represented (McDowell, 2010). Dencombe (2018) talks about three interview effects: personal identity, self-representation, and personal engagement. The interview effect is something that can affect the outcome of the interview. Age, gender, and ethnic origin are the three main aspects of the researcher's personal identity that might affect the respondents and what they want to say in interviews (Dencombe, 2018). These aspects may affect the respondent's answer, primarily if the topics of the interviews revolve around sensitive ones; therefore, they should all be considered and reflected upon. The aspects within the personal identity that could affect the respondent's answers is the age difference between me as a young researcher and the elderly respondents. Speaking about safety could be considered as a sensitive and charged topic. The ways of avoiding the personal identity to influence the respondents have been to; be clear and transparent in informing the respondents about the study, ensuring their anonymity, as well as asking follow up questions with caution. Self-representation means that the researcher remains calm and neutral throughout the interview. It is about forgetting the "I" and listening and learning. The researcher should stay calm and not try to provoke any frustration or defensiveness in the respondent (Dencombe, 2018). This was made by doing the interviews fully focused on the respondent's attitudes and conditions. It was also made by listening to the frustrations without any intention to develop them. Personal engagement means a researcher should be engaged in the interview (Dencombe, 2018). Not taking notes and instead only holding the microphone to the audio recording eased the situation and made it more natural to be engaged.

4.5.2. Research quality

The research quality of the chosen method for this thesis will be examined to claim that the method is credible and accurate. Starting with credibility, which relates to internal validity, it examines how likely the results are to what the people studied said and meant (Bryman & Nilsson, 2018). To ensure the credibility of the elderly respondents, they were guaranteed anonymity, which might have made it easier for them to share more vulnerable information (Bryman & Bell, 2019). Regarding the planner interviews, they were not guaranteed anonymity before the interviews; however, since they were representing their workplace, they were not sharing as personal and gripping information as the elderly. Transferability means to what level the results or the research design can be transferred to similar contexts (Bryman & Bell, 2019). To what extent a similar set of respondents, elderly and planners, may have resulted in the same conclusions is challenging to state. Since the sample was small in both interview studies, their subjective and personal perceptions may be unique, and therefore, it would be tough to imitate this study. Dependability means if it is possible to attain the same result from a study, but at another time, it means if the study can be repeated (Bryman & Nilsson, 2018). A researcher should provide proper documentation throughout the process and provide material that can be investigated to ensure the study's dependability. With field visits to the tunnels, note taking on motivations of respondent choices, transcribing interviews, the dependability has been taken into consideration (Bryman & Nilsson, 2018). Confirmability relates to whether the researcher has had a neutral approach and control over its values. Before conducting the interviews with the elderly, visits to each tunnel were made to plan for the walking interviews. Also, to be familiar with the environment next to the tunnel. However, there were no detailed pre-evaluations of the environment of the tunnels through field studies which might have affected the perceptions of the tunnel locations. The preconceptions of the areas where the interviews were held were handled with a neutral approach; the questions asked were meant to focus on the tunnel and not the area. Consistent reflections on neutrality as a researcher has aimed for a good confirmability.

4.5.3. Other methods

Performing observation as a method for this study could have been a valid option since it would have given a broader perspective on the flow of people that use a tunnel and during what hours the tunnels are used and not used. It could be studying the behaviors of the people that enter the tunnel, if they seem to be extra observant, like looking behind the shoulder, if they speed up

their past, or if the tunnel seems to be a neutral space. However, observation is time-demanding and the presence of observing other people will eventually lead to changed behavior in the people being observed. If a questionnaire had been the choice of method for this study, it could have had the purpose of looking at the frequency of how often elderly avoid using a tunnel because of fear of crime. Alternatively, how often do elderly use the tunnel, and what time? Instead, interviews were chosen, allowing the elderly to answer the three questions mentioned and how this phenomenon of fear of crime takes shape in the public space and in their lives.

5. Results

The results of the two interview studies will be presented through the themes and sub themes that came out of the thematic analysis. The results from the elderly interviews will start, and after follows the results from the planner interviews. For clarification: during the interviews with the elderly, there were sometimes follow-up questions, which will have an “L” before the follow-up question.

5.1 Results from the elderly interviews

5.1.1. Perceived safety in and around the tunnels

Initially observed from the group interviews was the general trend that respondents felt safe around and inside the tunnel during the daytime. However, the elderly at Briljantgatan did not wholly feel safe even during the daytime. Their requirement of feeling safe was that it had to be daytime and in a group. The reason behind this was mainly because of the lack of safety.

“I don’t think it was so bad when they built the tunnel, I think it was to move the safety down, --- so that one didn’t walk on the street and got hit by a car. --- Now you would rather be hit by a car than beaten down.” - Gunilla, 71, Briljantgatan

The elderly from Briljantgatan gave their thoughts on the tunnel where the interview was held. One elderly said that the tunnel did not seem to be safe, and she acknowledged the fact that there were stairs in the middle of the tunnel but rejected that with them not being able to run very fast. The environment and surroundings look differently depending on which side of a tunnel one stands at, which was no exception for these tunnels. In some of the cases of the group interviews, the different sides of the tunnel showed an impact on safety, mainly how the elderly talked about it. At Södra Fjädermolnsgatan, positive comments were expressed when coming out of the tunnel on the East side of the tunnel:

“This side [is] very safe. You have a small view.“ - Solbritt, 75, Södra Fjädermolnsgatan

“To be able to see a bit, yes exactly.” - Doris, 88, Södra Fjädermolnsgatan

The place has a view of Svartedalen (a valley). The walking path has two options when coming out of the tunnel, the left leads to a school, and the right goes downhill into a green area, see image 6. The elderly from Yrvädersgatan also talked more positively of safety on the other side, the side towards the green area, see image 7.

“If something would happen there is always someone who sees since it is always traffic” - Sigrid, 81, Yrvädersgatan



Image 6: Photo taken from the opening of the tunnel at Södra Fjädermolnsgatan by night. Notice that some of the street lights on the sidewalk to the right are broken, creating a darker part of the sidewalk. Photo: Louise Ringeby

Physical aspects of the tunnel that is bad

Physical aspects of the tunnel that were seen as negative by the elderly were that tunnels in general and, some of those that the interviews were held at, are narrow, dark, gloomy and long. For the elderly at Yrvädersgatan, their response to if they feel safe outside the tunnel was met with requirements of the physical environment:

“Yes, as long as there are not so many trees in the way because that is the most important thing I think, that they remove lots of bushes and trees and such. Also, the lighting in the tunnel, that it should be.” - Helga, 80, Yrvädersgatan



Image 7: Tunnel below Yrvädersgatan and connecting to Blidvädersgatan in Biskopsgården, by night. Photo: Louise Ringeby

A definite trend among the elderly's thoughts of the tunnel was that it needs more lightning. During the interviews, lightning frequently came up as something that had to be improved. Lightning was also mentioned many times as something that makes them safe. When it is dark outside and dark in the tunnels are reasons that are mentioned multiple times as something that stops them from going out and using the tunnel. One elderly from Femvägsskälet said she does not know if she has ever used the tunnel during the dark hours and did not know if the lightning was good or bad during that time. That was met by another elderly who answered that lightning in the tunnel is not good in the evening. Other comments raised the question of the tunnel being shady and dirty, and installing longer and stronger lamps. When the question was asked what they think about other tunnels, lightning was again brought up as something another tunnel lacked, or the other tunnel had better lighting than the one they were interviewed at. Two elderly talked about another tunnel, one at Friskvåderstorget in Biskopsgården. They used adjectives such as nice, lighter, fresher, more open, and broader to describe it. They were positive about the painting on the ground that separated pedestrians and bikers from each other in that tunnel.

Opinions on the negative physical aspects of the tunnel were not only on the inside; one elderly from Brilljantgatan commented that the sloping pathway down to the tunnel is dangerous during wintertime and that the railing is insufficient, see image 8.



Image 8: View of the tram stop Briljantgatan, and the sloping pathway to the tunnels “More eyes”. Photo: Louise Ringeby.

Their use of the tunnel

Trends could be found in the use of the tunnel, which several factors could explain; convenience, placement of the tunnel, general attitudes on fear of crime, and the safety the elderly felt in and around the tunnel. Convenience means how effective it is to take the road through the tunnel, and placement of the tunnel refers to if the tunnel is in the outskirts of an area, if houses are near and so on. That can have an effect referring to if eyes can see (natural surveillance). The elderly in Briljantgatan were barely familiar with the tunnel in focus. At the beginning of the interview, it seemed like none of the elderly used the tunnel in their daily life, nor had they used it anytime near the present. Later on, it came out that one of the elderly use it once a month. Conversation about other tunnels was a quick solution since it contributed to similar material of experiences and thoughts as the initial aim of the chosen tunnels. Gunilla from Briljantgatan had talked previously about a tunnel near the Pentacostal church in Central Tynnered, therefore, a follow-up question about that tunnel was asked:

L: But if you think about other tunnels that you might use daily, are there any around here?

“We don’t use any during the days!” - Gunilla, 71, Briljantgatan

“No one actually.” - Tyra, 67, Briljantgatan

L: No one? Except you, who uses the one at the Pentecostal church?

“Yes, but I do, I don’t do it anymore! No. I am terrified to walk there.” - Gunilla, 71,
Briljantgatan

Furthermore, the elderly at Södra Fjädermolnsgatan used the tunnel quite rarely. One of the three elderly used it more regularly, yet she had only used the tunnel three times this year, and that was during the daytime. Another elderly used the tunnel quite rarely, and if she did, it was during the morning. The third elderly did not need to use it, nor did she take another path to avoid the tunnel. The tunnel at Femvägsskälet was one of the most used tunnels among the elderly who participated in the interviews. It also showed that the tunnel was the most efficient route in that urban context since it works as a shortcut when walking from parts of Central Tynnered to Frölunda Torg. It is mainly used by all three elderly when walking to Frölunda Torg, and it would be a longer route to avoid the tunnel for all three elderly. The number of times they used it per month varied from three days weekly to every 14th day. Among the elderly at Femvägsskälet, it was a trend to take the bus back home, from Frölunda Torg, out of comfort, and get off at the next bus stop (Beryllgatan), where they do not need to use a tunnel, and also where more people get off the bus stop. If a person that lives in Central Tynnered takes the bus from Frölunda Torg to home and gets off at the bus stop next to the tunnel (Bergkristallsgatan), that person has to go through the tunnel, which the elderly expressed was a concern:

“I don’t walk here when it’s dark. And it’s a bit tricky if you come from that bus stop.” – Stina, 75, Femvägsskälet

The two elderly at Yrvädersgatan talked about the tunnel, safety, and their attitudes in a way that stood out somewhat from the other respondents. One of the elderly used the tunnel once or twice a week, and the other used it once a week, which is quite regular compared to some of the other elderly’s answers. Both elderly from Yrvädersgatan used the tunnel in the middle of the day and seemed to be individuals who like to take walks. None of them avoids the tunnel. One of the elderly used it to walk to the forest on the East side of the tunnel; it is the only way to reach the closest green area for her. The other one said the tunnel is practical when she does her walking route and passes a specific grocery store.

Difference between day and night

A frequently stated comment among the elderly was that they feel safe during daytime or daylight. Some said it is because the tunnel is light, and you can see through it what or who is inside the tunnel and if someone is on the other side.

“You can see around, and often there are more people in a flow during the day. So, during the daytime, there is no problem.” - Stina, 75, Femvägsskälet

Several elderly claimed they do not go around and feel scared when outside and using the tunnel during the day. Many said that during the day, they feel safe, but during the dark hours, they do not feel safe. It contrasts for some elderly, like night and day, with how they feel about safety. Some elderly motivate their reason for not going out in the dark with the vulnerability of elderly in today's society.

“You feel insecure when it is dark because so much is happening today, especially with the elderly as well.” – Solbritt, 75, Södra Fjädermolnsgatan

“There has been a lot like this that has happened around here.” - Doris, 88, Södra Fjädermolnsgatan

“You really avoid going out when it's dark. You do not feel really safe.” - Märta, 74, Södra Fjädermolnsgatan

As stated earlier in the thesis, a male elderly participated at Södra Fjädermolnsgatan. His answers strongly deviated from his group respondents' answers when it came to if they use the tunnel during the evening and dark hours. One aspect that should be mentioned is what the female elderly said as a result of the male elderly's answers. Södra Fjädermolnsgatan was the only group interview that had a gendered discussion:

“I think there is a bit of a difference between men and women, can't it be?” - Solbritt, 75, Södra Fjädermolnsgatan

“Exactly what I was going to say.” - Doris, 88, Södra Fjädermolnsgatan

“It could probably be so.” - Märta, 74, Södra Fjädermolnsgatan

“Yes, if a man is walking they can, but if we come then they can jump on you! And beat you down, they can do that... and it has happened.” - Doris, 88, Södra Fjädermolnsgatan

As the previous quotes witnessed, the female elderly recognized the gender difference. However, not more than this was said during the interview about the potential consequences of being a woman versus a man. One elderly had a solution to her increased fear during the dark hours and talked about asking for help:

“You come with the bus and it is dark, then you look to see if there is someone I can have company with home. I screamed at my neighbor, a guy that lives below me: ‘oh you, it is so good that you are here! Can I accompany you home?’ “ – Solbritt, 75, Södra Fjädermolnsgatan

That was something that made her feel somewhat safer since she decided to trust this person. The age of the “guy” is unsure, and if this happened more than once is unknown. One elderly from Yrvädersgatan mentioned that the dark seasons have an impact on the perceived safety:

“Yes, when it's daylight and such, but sometimes when you have to go out in the dark season then it's a little creepy to go here I must say. When walking alone.” – Sigrid, 81, Yrvädersgatan

The same elderly mentioned that she does not use the tunnel in the evenings or during dark hours but can be in other places in the evening. She gave an example: when she parks her car in a garage after being out on an activity, she has to walk home.

Bicycles passing without warning

During the interviews, the presence of bikers was brought up, mainly because the bikers can instantly enter the tunnel space, sometimes fast and sometimes without signaling. The elderly at Femvägsskälet mentioned that bikers could affect safety negatively with their instant presence:

“Then the bikes come pretty fast, because it's downhill here.” - Stina, 75, Femvägsskälet

L: Does it feel like a threat? With the bikes.

“Yes, it can be, because there are many who drive very fast.” - Stina, 75, Femvägsskälet

“No one is calling, not signaling.” - Karin, 83, Femvägsskälet



Image 9: Painting on the asphalt at Femvägsskälet. However, the painting end before the tunnel opening, and starts again on the other side of the tunnel.

When asked what makes it scary to be in the tunnel in the dark seasons, one elderly in Yrvädersgatan responded that a lot of pedestrians and bikers can have a negative impact on perceived safety because there is a slight fear that something could happen. When the elderly from Yrvädersgatan were asked *what is safety for you* bikers were mentioned:

“Yes, just when it comes to the tunnel, it's probably that it would be lighting, and then it could have been marked a bit where to go because they drive so carelessly.” - Sigrid, 81, Yrvädersgatan

“Well, with these fast bikes, it would be nice to have a walkway and bike path separately as well. As it is on the other side.” - Helga, 80, Yrvädersgatan

“You do not hear electric bikes and stuff like that.” - Sigrid, 81, Yrvädersgatan

Furthermore, the elderly from Yrvädersgatan said that cars can drive in the tunnel, and when asked if the cars drive calmly an elderly answered that it is different depending on who drives. Mopeds can also drive through the tunnel, but how that impacts safety was not mentioned.

5.1.2. The threatful youths

The number of times the elderly mentioned a particular age group, young people, varied across the interviews. When young people were mentioned, they were mainly related to negatively affecting the elderly's perceived safety and being a threat. The way the elderly talked about people in a certain age group did not bring clarity on the exact age range, but they mentioned them as *youths*, *youth gangs*, *young people*, *gangs of guys*, *young guys*, *guys*, *boys* and *girls*. Patterns and effects on the elderly's behaviors could be understood in how they spoke about young people. When the elderly talked about young people, guys or girls as one big age group that is threatful, there were more times that they said "young guys" than "young girls." When they expressed fear of "young people," they did not specify the genders of the young people. There was only one time during all interviews that "girls" specifically were mentioned as threatful:

“Today I'm also afraid of girls, it's not just boys. They have a nonchalant attitude, girls, they can be too awful, both in the mouth and other things.” Iris, 76, Briljantgatan

Lack of trust to young people

In all interviews, elderly mentioned young people, but how often they mentioned that age group varied. How they talked about young people also varied: some only talked negatively, and some talked negatively and positively.

“I think it can be a little unsafe, sometimes there are those youth gangs and, they don't have to be, I mean they can trigger each other. -- An old lady and yes, we can joke with her.” – Sigrid, 81, Yrvädersgatan

Furthermore, an elderly from Briljantgatan talked about the low trust in young people when she replied to the question of why she does not use tunnels anymore:

“It's because it is unsafe there. It gathers young people there. And maybe it can happen that they are nice and friendly, but we don't know that.” – Gunilla, 71, Briljantgatan

The fear that the elderly have for young people can be created by things that are observed from the home-environment, and it can contribute to a lack of trust. One elderly at Södra Fjädermolnsgatan mentioned that there had been a case of young people throwing rocks into first-floor apartments and feared that something similar could happen to her:

“What if someone threw something inside, yes, it can start a fire. You don’t know what they might come up with, and you hear what kinds of young people pass by (the apartment).” – Doris, 88, Södra Fjädermolnsgatan

Another elderly, who had a more easy view towards youths, mentioned young people when she talked about the perceived safety in Central Tynnered. She goes out with her dog late in the evenings.

“It would be if there is a youth gang that you happen to meet, but it is not often that happens; also, I don’t think that they would do something towards someone with a dog since the dog can make a scene.” – Ella, 78, Femvägsskälet

Whether or not the elderly lack trust in the youth, it is a trend to see youths as potential threats during the dark hours. Even though a young person behaves the same during daylight and dark hours of the day, other factors intervene, like darkness, and fewer people outside during the evenings; therefore, the elderly choose to stay inside for the sake of their safety.

“You don’t go out in the evenings.” - Gunilla, 71, Briljantgatan

“No, you really don’t want to because you don’t want to be beaten down.” - Iris, 76, Briljantgatan

Vulnerability

Individual safety measures for the elderly, like a “safety alarm,” is, according to one respondent, not something that increases the feeling of safety. If there is a situation when she is in danger, she does not think that the safety alarm will help her. The vulnerability seen in many responses among the elderly was mainly present when they were alone and during dark hours. Another dominating factor for feeling vulnerable was the lack of physical strength to defend oneself. When answering the question “What is safety for you?” all the elderly did not give a complete

definition or explanation; instead, the answers took turns to other aspects and topics of the interview, and some of the elderly agreed with what others said.

“To be able to go out and feel that you, that you could feel, that these people I meet, they are nice and friendly, but if you meet, would you go here for example (in the tunnel), and it's a bunch of young people, especially then guys, yes, what do you do? Well, I've done it sometime, not in this tunnel, but the one at the Pentecostal church, I've tried to toughen up myself, and walked, pretending to act like, ‘I ignore you, huh’. But I have not been like that inside, no, I have been very scared.” Gunilla, 71, Briljantgatan

There was a trend that some elderly talked about how they would want it to be to feel safe and mentioned the fear of young people.

“That I dare to go out without nothing happening to me, both that you will be jumped upon or that it will be something in the way that you trip on and fall” – Stina, 75, Femvägsskälet

An elderly from another interview said that safety for her is to meet her friends during the daylight hours. Another elderly said having a safe residence is what safety is for her, and a third one agrees. Also, having your phone in the pocket and lightning in the tunnel were answers from two other elderly. As several quotes have shown, the fear of young people among elderly is notable. However, elderly from Södra Fjädermolnsgatan said that if they encounter young people, or young guys in the middle of the day, in or around the tunnel, they would probably not be afraid and feel unsafe:

“If people came, let's say two or three, we can say guys, they come from the school, should you think ‘oh’? Yeah, I don't know what I should...” - Doris, 88, Södra Fjädermolnsgatan

“I wouldn't react.” - Solbritt, 75, Södra Fjädermolnsgatan

“No.” - Märta, 74, Södra Fjädermolnsgatan

“You become a bit like...” - Doris, 88, Södra Fjädermolnsgatan

“No, I would never react if I walked here and met three guys in the daylight” - Solbritt, 75, Södra Fjädermolnsgatan

Avoidance to be close to young people

The fear of young people that some elderly expressed showed to influence the way some of them think and act. Trends were seen among the elderly to select another way of walking and enforce avoidance behavior because of their fear of crime connected to youths.

“---Youth gang, if you see (them) you rather not walk past them, you take another route if it’s possible.” – Karin, 83, Femvägsskälet

Another example of talking about adapting to threatful youths was said by an elderly in Briljantgatan.

“If they (young people) are in flocks, you do not have a chance. If there were 16 guys in there (in the tunnel) I would never, I would have skipped that way (go across the road instead), I would never have gone through there.” Tyra, 67, Briljantgatan

“We do not have a chance to run either!” - Gunilla, 71, Briljantgatan

“Not having eye contact or anything, I do not dare.” - Tyra, 67, Briljantgatan

Here the two elderly talked about their physical vulnerability and their lacking functionality; it can also be noted that the worst imagination for one of the elderly was to have many guys in a small space that she needed to cross.

5.1.3. The influence of age

This theme talks about how the elderly refer to their age and a changing society, and it brings up those elderly who resist their fear of crime. The theme also concerns whether or not they have been exposed to a crime or feared victimization in or around the tunnel. Eyes that can see or natural surveillance is also presented in this theme.

Something has changed

Distance from home and tunnel can affect how much a person uses a tunnel, along with other aspects that can interfere with deciding to use a tunnel or not. At Briljantgatan an elderly spoke about why she no longer use the tunnel:

“Before when I used to live around here I walked here a lot, but not now when I’m older. But they don’t want an old hag, or what do you think?” - Iris, 76, Briljantgatan

“It is easiest to beat us down.” - Gunilla, 71, Briljantgatan

It was of interest to know how she felt previously when she used to live in the area; she was asked if she felt safe back then when she used to use the tunnel:

“Yes, I thought, because then I had no thoughts of anything. Not like today, you have to be more careful.” - Iris, 76, Briljantgatan

“Yes, so much that happens here, yes.” Marita, 88, Briljantgatan

“It was another mentality, back then.” - Gunilla, 71, Briljantgatan

When the tunnel is bright it gives the elderly a feeling of safety, compared to if they were in the tunnel when it is dark. For the elderly at Femvägsskälet it was apparent that they felt safe in the tunnel because it is bright. On the contrary, if the tunnel is dark due to the day ending and there is no sunlight, they do not feel safe, which was a strong trend among all elderly participating in the interviews. When asked to confirm that the reason for their safety was the tunnel being bright, one elderly answered:

“That it is bright, yes. I have not felt that way before, but it is only because you have grown older. You can not run in the same way, and you no longer cycle. But you should still move if you can.” – Karin, 83, Femvägsskälet

Resisting fear of crime

Some elderly said that they have a car, and for car owners, it is not always that they have a car garage just next to their home. There was an example from the interviews where one elderly has her car garage quite far from her home. She expressed that it can be scary for her if she comes home late in the evening and has to park the car and walk a distance. However, it is something she still does, even though she expressed that she would not like to use the tunnel during dark evenings because it does not feel safe. Another example of ownership that could make an elderly person needing to resist their fear of crime is to have a dog. An elderly spoke about how she walks her dog around 11.00 - 11.30 pm outside her home. In theme 2 *The threatful youth* there is a quote by her saying that if she meets some threatful youths she does not think they will attack her since the dog can make a scene. Furthermore, the elderly at Yrvädersgatan expressed that they will continue to use the tunnel and does not let fear stop them:

“As long as you do what you have to do, you don’t let anything stop you.” – Sigrid,
81, Yrvädersgatan

“No, life starts at 100, as Dagny says¹” – Helga, 80, Yrvädersgatan

Victim of crime

There were tendencies that the elderly spoke about threats and ways of adapting when they were outside because of fear of crime. When being asked the question *Have you ever been afraid to be exposed to a crime in or around this tunnel?* there was no trend among the elderly to have fear of victimization in or around the tunnel. Nor had they experienced a crime elsewhere in the public space.

“It’s not like I’m walking around and being scared, I don’t do that. But it’s a bit uncomfortable when you hear that it happens a lot in the Tynnered area.” – Karin,
83, Femvägsskälet

However, two elderly were an exception; they did express they had had a fear of being exposed to a crime:

“Yes, actually once at the (tunnel at the) Pentecostal church, when there have been gangs of guys. And I stopped going there.” – Gunilla, 71, Briljantgatan

“They once stopped me there and asked if I had cigarettes, a few years ago.” – Marita,
88, Briljantgatan

Eyes that can see

The concept of "eyes that can see", which in academic terms is natural surveillance, says something about how the elderly view their peers; if they see them as kind, helpful neighbors or threatful people. It also says something about the elderly’s vulnerability, if they acknowledge it or do not make a big deal about it. "Eyes that can see" may be from nearby buildings, a bus stop, or a road. When introducing the concept of eyes that can see, it could be noted that the elderly at Yrvädersgatan had not even reflected on that. Safety-wise, they did not care if there were houses around the tunnel; one of them referred to what she said before (fewer bushes and

¹ Dagny refers to Dagny Carlsson, who was seen as the world’s oldest blogger and wrote the book *Life begins at 100* together with Helén Bjurberg (svt.se, 2022)

increased lightning). The other said she is used to not having houses close since she lived in the forest for many years. The tunnel at Femvägsskälet, Tynnered, connects the bus stop Bergkristallsgatan that has a stop on both sides of the road. It takes around 30 seconds to one minute from each of the bus stops to arrive at the tunnel, and the tunnel is one among other tunnels that goes under the highly trafficked road Västerleden. Since the tunnel connects the two areas on each side of the barrier Västerleden, it works as an efficient way of bridging two areas for pedestrians and bikers. But whether or not more people at a place brings safety seem to differ among the elderly:

“People come here, but if something would happen it is not sure that anyone would help and intervene. --- But people are probably pretty scared too. They see a human lying hurt or something, and that there are young guys or older it can also be, they don’t dare to approach. I wouldn’t dare to.” – Karin, 83, Femvägsskälet

The elderly at Briljantgatan made a slight difference in the aspect of eyes that can see depending on which side of the tunnel they are. The direction towards the uphill slope has some houses far away.

“It is not certain that everyone is sitting in the window either. I might be able to see a lot, if I just picked up the blinds, but I do not because people go and look inside. And it's not that fun either.” Gunilla, 71, Briljantgatan

“On the other hand, in the summer, people are more on the balconies and so on, then you could have felt that there is always someone sitting there having coffee or whatever they are doing.” Tyra, 67, Briljantgatan

At the other side of the tunnel at Briljantgatan, facing a big apartment complex, the elderly expressed a bit more trust in eyes that can see. There is no slope or trees that block the view in the time when the interview was held (March).



Image 10: Photo taken in May from inside the tunnel at Brilljantgatan. Photo: Louise Ringeby

Notably, an elderly at Södra Fjädermolnsgatan discussed “eyes that can see” and problematized the changing tree cover. The sight will be blocked during the summer when there are leaves on the trees. However, when there are no leaves on the trees, eyes might be able to see through the branches. The other elderly at Södra Fjädermolnsgatan do not think there are enough eyes that can see when you are inside or just outside the tunnel.



Image 11: Photo taken in May from inside the tunnel at Södra Fjädermolnsgatan showing limited natural surveillance due to tree cover during the summer months. Photo: Louise Ringeby

5.1.4. A less safe society

Many elderly relate their safety decrease to how society has developed in the wrong direction; at the same time, some elderly mention their age as making them limited and vulnerable. This theme describes their feeling of safety in society and their thoughts on safety measures. Safety measures can be taken in the physical environment, like removing tunnels and doing art installations in tunnels. They can also be non-physical, like more police presence and safety hosts in the area.

Development of the area

From being in public spaces and in their homes, the elderly seem to shape an opinion about threatful people, specifically the age group of young people. After that, they implement avoidance behavior, so they do not meet threatful people. Observations by the elderly from their residence, in their “safe” environment, contribute to their opinions on threatful people.

“There are many who walk around in Tynnered, last night outside where I live, ---, there came a bunch of eight guys dressed in dark, shouting and yelling and, then you get a little scared. You do not dare to go out right then.” – Karin, 83, Femvägsskälet

Furthermore, the same elderly said that her safety experience in Central Tynnered has been worse, making her worried and nervous, and it was calmer in the area some years ago. She points to the young people as to why it has worsened. Even though she did not come across anything, she stays away from places. One elderly at Femvägsskälet said that there had been many shootings in the area in the last few years, and the effect for her is that it feels uncomfortable but it has not made her go out less. Some elderly said they feel unsafe when it is dark since so much happens in society today, especially with the elderly. Another elderly brought up the event of murder in the area that happened many years ago, and it changed her perception of safety:

“Then, after that, one has not felt safe at all. It's such a scary feeling.” – Märta, 74, Södra Fjädermolnsgatan

Safety in the area where Södra Fjädermolnsgatan interview was held is described as “not that good” and “quite good”, and one elderly mentioned that there is talking about drugs in the area,

but since they are not in those circles they do not see anything of it. The contributing factor to fear of crime in and around the tunnel is “society”, according to two elderly in Briljantgatan.

“There is so much going on, you both hear and read about it.” – Marita, 88, Briljantgatan.

When it comes to crimes such as shootings, some elderly expressed that even though there have been shootings they are not afraid for it because they are not involved, however they expressed concerns that it has happened in their area:

“It is not so nice that they shoot behind our backs” – Helga, 80, Yrvädersgatan
“What can you say? I have never felt scared, even though they are shooting close, yes, two shootings during the last six years I lived here. As I said, I do what I’m supposed to do.” – Sigrid, 81, Yrvädersgatan

Opinions on safety measures

For the untrained eye and someone not involved with safety measures in Gothenburg City, people may walk through a tunnel without paying much attention to whether or not it is a tunnel that has gone through a transformation, a physical measure. Either the tunnel's appearance has changed with exchanged lighting and art installations covering the walls, or the tunnel has had a minor art installation or been fixed. At the tunnel at Södra Fjädermolnsgatan mosaic art has been installed and there were positive expressions about the art:

“This is much better.” – Doris, 88, Södra Fjädermolnsgatan
“You feel happier when you see something like this” – Solbritt, 75, Södra Fjädermolnsgatan

Since there was a question in the interview guide concerning their thoughts about other tunnels, these were also naturally talked about. For example, if the elderly felt safe when using the others and their thoughts of the physical aspects of the tunnels. The tunnel at the Pentecostal church in Tynnered came up several times during the interview at Briljantgatan, also at Femvägsskälet it was mentioned. In the interview at Femvägsskälet, some elderly said that the tunnel where the interview was held, felt more safe than the tunnel at the Pentecostal church. Elderly at

Briljantgatan said that the tunnel is long and lies in a curve. Comments were made on an attempt to improve the tunnel:

“It is scary, yet they tried to paint it a couple of years ago, because it was very gray and boring before.” - Gunilla, 71, Briljantgatan

“Yes, it was” - Marita, 88, Briljantgatan

“But then they painted it, and it didn’t help.” - Gunilla, 71, Briljantgatan

Elderly at Yrvädersgatan mentioned painting the walls of the tunnel white, but was quickly met with the thought of graffiti risk. Another physical measure, is that tunnels can be removed and at Briljantgatan, an elderly mentioned that there was a tunnel at Smaragdsgatan, Tynnered, that was removed some years ago. She had used it every morning at 5.30 AM to get to work, which she did not like; therefore, she was happy that it was removed.

“As soon as it was removed it became completely open, you see exactly who, if you are alone or... much, much better.” - Tyra, 67, Briljantgatan

“It became safer then, yes.” - Marita, 88, Briljantgatan

“So that, I think this should go away. Tunnels have nothing to do in this society anymore.” - Gunilla, 71, Briljantgatan

Tunnels that had been removed, or the suggestion of removing a tunnel, were also talked about at Södra Fjädermolnsgatan. According to the elderly, a tunnel at Länsmanstorget, Biskopsgården, is not very used and is superfluous in that space. They also said that the tunnel gathers garbage when it is windy and that the tunnel should be removed.

Measures of crime prevention that were discussed in the interviews were police presence and safety hosts. Overall, police presence in the study areas has increased, and there is a strong tendency among the elderly to think that this is a good thing. It is because it increases the safety in the area, as most of the elderly expressed, and some elderly see the police patrol daily. The safety hosts are also seen as something positive, and one elderly praised their work in her area:

“They start at 4 in the afternoon, finish at 2 in the night, and then shift. I think they are worth more than gold, I have to say.” – Tyra, 67, Briljantgatan

Other elderly that commented on the presence of safety hosts were at Yrvädersgatan, as they mentioned that they see the safety hosts often in the public square. The elderly were optimistic about them and thought that it increased safety.

5.2 Results from interviews with planners

5.2.1. How they work with safety

Target image

The Development manager said that safety should always be present in urban planning and that it is essential to have local knowledge about an area when in the planning process. Some planners talked about the importance of places being attractive and aesthetically pleasing; otherwise, it can affect safety negatively, and people might have a generally negative perception of that place. The way that the Safety planner works is to plan safe and attractive environments, and she also mentioned that traffic security is implemented in their definition of safety. Other planners mentioned traffic security as something that they work with. SC Biskop, SC Tynnered 1, and SC Tynnered 2 all work or have worked as safety coordinators, and the way they describe their primary mission is to work with the physical and social dimensions of safety.

Physical environment

Multiple ways of improvements in the physical environment were mentioned during the interviews, and ways they do the safety work is very broad. The Head of city lighting who works with city lighting handles errands, and in one year, there are a couple of thousands of errands. Their strategy is to prioritize the largest needs, and also, there are technical needs that need to be met, for example when things are too old. The Safety planner talked about how she bases her plans for improvements from the perceived safety in the physical environment:

“In some places, people can feel unsafe even though there are no crimes committed in that place, and then we work with different parts of the physical environment that we think affect people’s perceived safety.” - Safety planner

Regarding vulnerable areas, some planners said they do that little extra in those areas where there is a so-called “social unsafety.” Moreover, the errands that come to the Urban Transport Administration, like a broken lamp, are given more attention if they are in these vulnerable areas. The Safety planner said they can not build away all fear of crime, but art projects are one

way of building safer tunnels. Moreover, the Development manager mentioned that if a person visits a place they are unfamiliar with and has aesthetic flaws, it can increase their fear of crime. The way the safety coordinators, SC Tynnered 1 and SC Tynnered 2 from Social Administration Southwest, work to improve physical safety is through different forums. One of the forums is called the forum for the outdoor physical environment, a collaboration with private property owners, the police, those responsible for physical management in the area, and different administrations from Gothenburg City. This forum is not focused primarily on safety and crimes; it is broader and focuses on making the area attractive, pleasant, safe, and for a functioning daily life. Another forum they participate in is called effective coordination for safety and is focused on safety on a concrete level. In this forum, tunnels have sometimes been discussed, but not significantly.

Dialogue with people

To know how people's perceived safety is in an area, planners can turn to safety investigations, but the Development manager argued that safety investigations are insufficient. Gaining local knowledge about an area that will go through a change or a project was something that the Development manager saw as essential. She also said that time should be taken by doing check-offs, such as small dialogues at the place of interest, talking to people, and seeing how people behave. This was something that SC Biskop also mentioned by having "the ear next to the ground" that gives valuable input on the physical environment. Some planners do that through safety walks, which SC Biskop and the Head of city lighting discussed. During the last fall of 2021, SC Biskop did five safety walks in Biskopsgården with the police, the Urban Transport Administration, park and nature administration, safety coordinators, property owners, traders, population guides, and residents. SC Biskop and the Head of city lighting talked positively about safety walks as a form of receiving information and thoughts from the residents. The Head of city lighting participated in safety walks in different parts of the city and said that the engagement from residents varies, which he points out as a warning sign.

Challenges with working for safety

The Safety planner said that tunnels are an example of when there can be an opposition between what is safe and what is traffic security. A tunnel can for example be dark and create fear of crime, but the tunnel is necessary and creates a traffic secure passage since it is too dangerous to cross the road that the tunnel goes under. The safety in places can be perceived differently,

for example depending on if you are a resident or a visitor to that place. The Development manager gave the example of a tram stop in Gothenburg, which many people that do not live in that area perceive as unsafe. However, not many people she talked to who live in that area experience fear of crime, and the reason for that is that they know that environment and are room competent. She also talked about how it can be the opposite:

“Then there are other (public transport) stops where I know that visitors do not feel unsafe but where the population don’t dare to go there, because they know what has happened there.” - Development manager

5.2.2. How tunnels affect people’s use of the city’s infrastructure

Initial aim and benefits with tunnels

There were trends among the planners to talk positively and negatively about the tunnels. The planners brought up many positive aspects of having tunnels in the interviews. Moreover, the negative aspects were mentioned almost to the same extent. The main argument among the planners was the necessity of tunnels, and also to refer to the initial aim of building a tunnel. The Head of city lighting called the existence of tunnels under high-traffic roads a “necessary pain” and pointed towards how it was when the tunnels were built:

“My interpretation of it, in the 60s when most of the tunnels were built in these areas, and they are usually in Tynnered, Kortedala, Bergsjön, plan separation was very important, it was the cars that were dangerous, otherwise life was a little bit like ice cream and balloons and everyone was kind”. - Head of city lighting

The planners agree that tunnels are for protecting people from traffic, which refers to traffic security. Several planners who referred to the initial aim of tunnels explained that in the best-case scenario, tunnels that are in a safe environment that does not face challenges with high fear of crime would increase the safety of people. Most planners agreed on how the tunnels improves traffic security and how they contribute to a good traffic flow for pedestrians and bikers:

“The tunnel can also provide a good flow when, for example, people on bicycles arrive quickly, easily and safely, and therefore promoting bicycle mobility”. - SC Tynnered 1 and SC Tynnered 2

Some planners also spoke about how tunnels are good for children since it protects them from traffic:

“The pedestrian tunnels are appreciated precisely because they are very traffic secure, especially for children then, who might get an opportunity to move around, take themselves to school, because they don't have to cross a road”. - Safety planner

The Development manager talked positively about tunnels where people barely notice that they are walking in a tunnel, and she gave the example of the tunnel at Hjalmar Brantingsgatan. That tunnel is wide, and she mentioned that those who planned the tunnel worked a lot with the safety aspect. However, she said that she does not know the crime statistics at that tunnel. SC Biskop, who has experience in doing safety walks, said that residents talk both good and bad about tunnels, and those who are favorable to tunnels mention that it is the fastest way to take; it becomes a shortcut.

People avoid tunnels

It is important to question why people avoid tunnels, why there is fear of crime, and the Head of city lighting argued in his interview that it is natural if humans develop fear of crime for tunnels:

“I don't think you as a person really want to walk through a small tunnel because the whole concept of tunnel together with fear of crime is based on you being shoveled down into some kind of chute where you can sort of shut off both front and back.” - Head of city lighting

It means that tunnels can be seen as a place people are trapped, and if the tunnel is dark and small, it can be understood that people avoid them. Many planners lifted the issues with people who avoid tunnels; that can mean that people fear crime and find their detours, which can be seen in the grass next to tunnels. It is an issue connected to traffic security.

The importance of strategically placed tunnels

Many of the planners stressed how important it is that tunnels are strategically placed, that they are necessary, and contribute to good traffic security. As the Head of city lighting mentioned earlier, there are many tunnels in Gothenburg that are not central, and the Safety planner also

talked about it. She argued that the tunnels in those areas are often situated on the outskirts of the area, far from buildings. The Safety planner expressed that tunnels situated in the central parts of Gothenburg are more integrated with the surrounding buildings, and she thought there might be less fear of crime in those tunnels.

“I think you have to look at each tunnel separately when you have to judge whether they are really needed, whether they contribute to the city's infrastructure or whether they rather just create impractical walking paths”. - Safety planner

5.2.3. Ways to increase safety in tunnels

Design of tunnel and physical aspects

There were multiple suggestions from the planners on how to increase safety in tunnels through tunnel design and physical improvements. The Safety planner raised the issue about tunnels in a turn, where you can not see the end of the tunnel when you enter it; it can feel like you do not have any way to escape. This is about visibility and sight lines, connected to the tunnel's design. Another aspect is that the tunnel should be wide and that there should be no place for people to hide. A frequently stated argument among the planners was to have good lighting both day and night in the tunnel. Another argument for increasing safety through physical measures is tunnel maintenance; it should be taken care of. If there is graffiti, that should be taken care of quickly. SC Biskop mentioned that there is a tunnel that had problems being flooded when there was heavy rain, and it was because there was a malfunction; the water well was misplaced.

Safety walks and its effects

As stated earlier, SC Biskop talked positively about safety walks and their benefits. However, she argued that there must be an outcome from the safety walks. It is an opportunity for residents to say their opinions to the city about their area. If the residents bring up complaints or suggestions and nothing happens, the trust can break. SC Biskop gave other examples of suggestions that could come in during the safety walks, like cutting down branches, which can seem easy, but that means that it will be a continuous maintenance of the bush and a running cost.

“Sometimes I can experience that there was a frustration among residents who joined, who felt that not enough things were being done and I think it is important to create

the understanding that we listen and we take in but we will not be able to do something about everything”. - SC Biskop

What is being said about tunnels on those walks was mainly that tunnels need improved lighting and maintenance. Nevertheless, when it came to the social aspects of safety, and the participants in the safety walk expressed unique opinions, it could be complicated to satisfy everyone. SC Biskop continued by saying that for some people, having a flow of people increases safety, and for others, it must be the “right” people on the streets.

Art in tunnels

The issue of fear of crime connected to tunnels is, according to the planners, partly solved by improving the physical environment of the tunnel. The Safety planner talked about the art installations she has worked with. Art can be implemented in the tunnel by paintings or art on the walls or the pillars, and they also have tunnels that are partly covered in mosaic. The very reason for installing art in tunnels is because colors affect people's mood, which the Safety planner argued, and putting attention on art when walking in a tunnel has positive effects:

“I think lightening it up with colors and different motifs make people happy and maybe make you feel safer and focus on something else”. - Safety planner

Social efforts and non-physical measures

When it comes to the measures that can be taken for social safety, it was fewer suggestions among the planners, but one example was mentioned by SC Tynnered 1 and SC Tynnered 2:

“Work against the type of criminality that can occur in tunnels (robbery, pickpocketing, molestation)”. - SC Tynnered 1, SC Tynnered 2

Having safety hosts is a way of increasing the safety in an area, without changing the physical environment, and SC Biskop said that those who employ the safety hosts in Biskopsgården are housing companies. She does not know the statistics on whether the hosts have increased safety, but from what she has heard, they have positively affected safety.

“It increases the presence of adults but also that they form good close contact with residents in the area so that you know who to turn to and that they are there and

visible, so what I have heard it has been positive and that has also increased the perceived safety”. - SC Biskop

SC Tynnered 2 from Southwest also talked about the safety hosts in Tynnered and Frölunda, which housing companies have put resources into.

“That also makes a big difference, we're pretty sure. People in clearly marked clothing walking around the area and also interfering in a different way, it's not as confrontational as the police can be, but more relationship building”. - SC Tynnered

2

Eyes that can see

There was a tendency among the planners to enforce the importance of having eyes that can see in places like tunnels. It means that there is a flow of people in the public space or buildings nearby that can increase the eyes on a place. If it is the opposite, a deserted place, for example, a tunnel far from buildings has no eyes, it can be easier for threatening people to commit a crime. SC Tynnered 1 and SC Tynnered 2 mentioned eyes that can see when they talked about a tunnel that was removed, the one at Smaragdsgatan in Tynnered, and their perception of why it was removed was that it was far away from eyes that can see, and it was a tunnel that people really did not want to use.

5.2.4. Special needs for elderly

Physical vulnerabilities

There are multiple aspects to think about when planning cities and environments. Most planners said elderly have special needs, and the physical vulnerabilities that planners mentioned throughout the interviews could be connected to accessibility. The most mentioned vulnerabilities that planners mentioned were connected to poorer eyesight and worse hearing, two of the five senses that elderly can be impaired. The Head of city lighting exemplified that poorer eyesight can make you more sensitive to light changes; therefore, he argued that it is essential how light is applied in the city and not create strong contrasts. The Development manager said that elderly can easily be blinded by the light and have eye disease cataracts. She also expressed that it is crucial to work with the light and adapt to the environment when it comes to elderly since they can have physical disabilities. Other physical vulnerabilities mentioned were poorer balance, which can be dangerous if there are slopes to the tunnel that

are too steep, according to the Development manager. SC Biskop said that elderly are in greater need of places to sit in the public space. SC Tynnered 1 and SC Tynnered 2 mentioned the difficulty with physical vulnerability and wanting to avoid tunnels:

“People who move more slowly or are less confident find it more difficult to detour around or pass an unsafe tunnel or run quickly across a busy road without a crosswalk.” - SC Tynnered 1, SC Tynnered 2

Lastly, it was mentioned by the Development manager that elderly can have cognitive disabilities, which need to be met by portraying the urban environment in an aware and concrete way.

Planning the city for all ages

It could be seen a difference among the planners in their ways of seeing if it should be planned for the whole population or having age groups in mind. The Safety planner argued that the way she works is not specified on the safety of elderly:

“I would not say we work in a specific way with the safety for elderly because I think that environments that are well-lit, well taken care of, clean and nice, even if you can have different aesthetic preferences, I still think that the safety experience is the same for most groups”. - Safety planner

The Development manager compared the children and elderly and meant that elderly might move slower than children.

“It’s important that an environment works for both the older and younger. It is not always, but sometimes you say ‘What is good for children is also good for the older’ but it is not always like that”. - Development manager

The Head of city lighting explained that urban planning has to involve the children's perspective through so-called children's impact assessments. When asked if he thought an elderly impact assessment could have been necessary, he was optimistic about that idea.

Have clarity in the physical environment around the tunnel

A couple of planners mentioned that it is important to mark where pedestrians and bikes go in the tunnel to separate them and increase safety. The Development manager mentioned that collisions between people could be avoided by having clear boundaries. She continued by talking about how every tunnel must be analyzed from case to case to figure out how to make it better, and that is done through knowing the environment and those who use it.

“It is human that you always need to have control and if you have a physical disability you have so-to-say, the environment has to be adapted to that.” -
Development manager

Challenges when it comes to planning for elderly

Even though planners have knowledge about what age groups can be more prone to fear of crime, the Safety planner issued the fact that they do not go through evaluations after improvements have been made in the physical environments. Therefore they lack the knowledge of which effect it had on the people in that place, and also if it has affected different groups of society. The Safety planner claimed that overall, making follow-up studies is a challenge:

“If we were to make a safety survey before we do an improvement in a tunnel and then do one afterwards, it could also be difficult to know exactly what made the people feel safer there, or has something else happened, has there been an incident, maybe it has been a shooting recently that affects the attitudes to go up or down, it can be things happening in society.” - Safety planner

The Head of city lighting problematized that elderly are exposed to much heavy information about crimes and what is happening in today’s society, which can create fear. He explained that what can be done is taking physical measures, and those who work with urban planning can never lean back and say that the work is done.

“It will always change and it is a constant flow of changes that we have to keep up with, both in urban design but also in the maintenance of it.” - Head of city lighting

Furthermore, the Head of city lighting talked about how light in tunnels should be handled with the thought of biodiversity. During the nights, the light should be slightly lowered, and for

example, during the winter months, when insects and bats are not active, light can be increased since it is also then when humans need light the most.

A challenge connected to safety walks and elderly that SC Biskop mentioned was the difficulty of reaching out to the oldest elderly. Since the residents that participated in the safety walks that SC Biskop was active in were in the age ranges of 40 to 65, the elderly were not represented:

“Then we have those older ones that maybe have some troubles to get around - but then maybe you don’t attend a safety walk where we have a pretty high walking speed and it is not like we have a walker gang, that would have been interesting though”. -
SC Biskop

6. Analysis

6.1 Respondent interviews with the elderly

Sandstig (2010) found that physical and social factors contribute to the fear of crime and the character of a place is due to physical and social factors. When asked about the perceived safety in and around the tunnel, some elderly's answers were more focused on solvable measures or conditions the physical environment should be in for them to feel safe. Other mentioned aspects of social character, like threatful people affecting their perceived safety. As low illumination in public spaces is connected to fear of crime (Koskela & Pain, 2000; Ceccato & Bamzar, 2016), the importance of lighting in tunnels is quite obvious. From Mushtana et al. 's (2022) study, it could be concluded that improved lighting in the tunnel increased pedestrian's safety, and suppressed verbal harassment and vandalism among tunnel users. Among the elderly there was a trend to say that lighting in the tunnel is important for them to feel safe. The way lighting is discussed is deviating in the literature. Rönnblom et al. (2020), and Sandberg and Rönnblom (2014), were the two prominent sources that had a critical approach to public space made safe through physical measures such as improved lighting. They want municipalities to go to the bottom of the problems related to fear of crime in public space, which revolve around power relations, and problematize that the focus is on building away places of fear. Rönnblom et al. (2020) claims that these ways of making the environment safer, such as improved lighting and removing bushes, are short term (Rönnblom et al., 2020; Sandberg & Rönnblom (2014). One elderly said that a tunnel was being painted but that it did not help the issue with fear of crime. That pointed towards her not being satisfied with physical improvements in the tunnel as a safety measure. Other elderly said that society is the reason for them not using tunnels anymore, which means that safety measures that are taken in or around the tunnel, may not make them use the tunnel. The root of those elderly's fear of crime is related to social factors. There was a tendency that the elderly mentioned physical aspects such as removing bushes and the tunnels being clean for them to feel safe. That is connected to proper order, maintenance, and attractiveness of the tunnel. That could be related to the broken windows theory (Castree et al., 2013) and disturbance of order (Mellgren & Kronqvist, 2013).

The importance that other people play for the elderly to feel safe in tunnels differs, for example natural surveillance and how much they value other people's presence. One elderly said that she could be scared that something would happen since many people walk and bike in the

tunnel, while another felt safe in the tunnel during the daytime because there is a flow of people. That points to the elderly seeing their peers differently. Some elderly had a generally suspicious attitude towards strangers, maybe because of their physical vulnerability. In contrast, those who think having many people in the tunnel feels safe might be because then people can help each other if something happens, and the tunnel becomes less desolate. It can also be connected to Mayhew et al. (1979), who claim that the social composition in a place will determine safety more than having natural surveillance. When discussing natural surveillance, some elderly brought up the seasonal differences and how they influence them. For example, during the summer, people can sit on balconies that have a view over the tunnel, and during the winter, there are no leaves on the deciduous trees, which makes people able to see the tunnel from their windows if they live nearby.

There was a slight tendency among the elderly to point out bikers as threatening because of their instant presence. The way bikers were talked about sounded more like a risk of an accident than the risk of bikers attacking the elderly. A request from some of the elderly was to paint marks on the asphalt to separate pedestrians and bikers. As functionality decreases with age (Mattsson, 2021), people need to interact with the elderly consciously and keep in mind that the elderly might have, for example, poorer eyesight and worse hearing.

Social factors like meeting the “wrong people” that Sandstig (2010) discussed is a present argument among some of the elderly, and in this case, the wrong people are young. No other groups were mentioned as threatening to the same extent. For example, there was no mention of addicts or filthy older men, as Sandstig (2010) gave as examples of wrong people. As could be noted with one of the elderly at Södra Fjädermolnsgatan, expressing and putting words on how she thought she would have reacted if she met some guys in the tunnel during daytime was for her uncertain. It could point to the uncertainty among the elderly regarding navigating and how safe they “should” feel. According to Mellgren and Kronqvist (2013), the reasons behind the fear of crime are who you are and where you are, and safety depends on who populates a space (Sandberg & Rönnblom, 2014). In this case, the elderly are an age group with decreased functionality, making them vulnerable. They are in a narrow tunnel, symbolizing an unsafe environment (Listerborn, 2000). Young people are, therefore, in a power position because of their age. During the interviews, the elderly often mentioned young people being in groups, which adds another dimension to the young people being in a power position. Some elderly see themselves as easy targets of victimization since they can not defend themselves, which is

connected to physical vulnerability (Johansson & Haandrikman, 2021). The amount of attention the elderly put on young people as a threat varied; for example, those elderly who argued the most that young people are threatful were those at Briljantgatan. They were also those elderly that used tunnels the least. Among that group, there was a tendency to avoid tunnels completely. Then there were those elderly who expressed fear and distrust to young people, but not letting that stop them from moving around, and instead they used the tunnel when necessary. Looking back at the findings from Pain's (2001) study, she discussed young and elderly people and meant that they should be studied in parallel since they interact in society. Ageism means to have stereotypes and preconceptions about someone based on that person's age. Ageism is mainly related to discrimination against old people (Mattsson, 2021); however, discrimination against young people is also ageism. Whether or not the preconceptions that some of the elderly have towards young peers could be seen as ageism is not something that can be stated in this study. Nonetheless, practical ways of dealing with the fear of young people among the elderly are needed, and it is also needed considering the aging population that Sweden faces (Heikkinen & Henriksson, 2013).

Some elderly explained their perceived safety in tunnels through how society is today and what society has become. This could be linked to Rönnblom et al. (2020) and their discussion of how safety in society is being seen or talked about today; that safety is something that existed but now is lost. The attitudes on this varied among the elderly; even those who commented on shootings happening in their area said it affected them, but it did not stop them from using the tunnel and public space. Some said that young people and crimes have made society less safe. People's attitudes towards society can be influenced by, for example, the media; referring to DeDonder's (2005) findings, watching television increases people's fear of crime. The increased police presence was positively commented on since the elderly trust the police. Safety hosts were also seen as a good way of improving general safety in the neighborhood; however, they were not said to help the elderly's perceived safety in tunnels. Based on the elderly interviews, there was a trend of appreciating the safety measures, while others showed little appreciation for the safety measures. They meant that it does not matter what is being done; there will still be threatful people they could meet in the tunnel.

In the result, there can be found examples of elderly applying strategies to handle their fear of crime regarding their use of tunnels, but mainly regarding their use of public space. The example related to tunnels is about the elderly at Femvägsskälet who do not want to use the

tunnel later in the day. Instead of going off at their bus stop, which is connected to the tunnel, they go with the bus to the next bus stop, so they do not have to use any tunnel on their way home. That could be related to the findings of Ceccato and Bamzar (2016); the elderly took another route to avoid places they considered fearful, which means that the elderly did not ultimately limit their mobility. The elderly at Femvägsskälet chose to avoid the tunnel, depending on the time of the day, which can be referred to as avoidance behavior (Ceccato and Bamzar, 2016), and situational fear of crime (Listerborn, 2002). Another example of a strategy was the woman who said she had asked her neighbor to accompany her home from the bus stop. That was during the dark hours, and she did it in order for her to feel safe. That showed that during the dark hours, the woman was not convinced that she would be okay to walk home alone from the bus stop. Comparing it to daytime, she expressed no problems moving around in public spaces, tunnels included. Public space, therefore, becomes a place that is safe during the daytime but not safe during the dark hours, even though a person has not been exposed to a crime for their whole life. That goes against the intentions of public space, that it should be available for all groups in society (Rönblom et al., 2020).

Two examples of ownership could be seen in the results, which seemed to push the elderly to resist their fear of crime in public space and apply strategies. The first one is the woman who had her car parked far from home, which sometimes put her in a position where she had to walk home from the parking in the evening. She expressed that doing that is scary for her, but it also revealed that she could walk that distance during dark hours. As she mentioned, it would be scary for her to use the tunnel during dark hours, but walking home from the car garage is something that she does, meaning that some places in public spaces are seen as unsafe. Other places are considered safer, relating to situational fear of crime (Listerborn, 2002). The second example of strategies through ownership is the woman who walks her dog late in the evening, just outside her house, which goes against the trend that the elderly do not go outside during dark hours. This can be referred to as the distance-decay pattern, which implies that the closer you are to home, the safer you feel (Ceccato & Bamzar, 2016). It shows that even though the woman is in a public space, and there is the risk of unwanted encounters, she puts herself in that situation because, one, the dog has to be walked, and second, her feeling of safety is dependent on her being close to home. The result also revealed that since she has her dog, she feels somewhat protected since the dog can bark and make a scene if there would be any threatening people.

The problem with people who apply strategies, such as avoiding places during dark hours, results in deserted places, such as tunnels, during the dark hours. Eriksson and Brottsförebyggande rådet (2009) found that applying strategies is more common in vulnerable areas and low and middle-income areas. With fewer people on the street, there is less natural surveillance, leading to more disturbance of order, such as graffiti, youth gangs, and vandalism (Mellgren & Kronqvist, 2013). More disturbance of order leads to higher levels of fear of crime, which makes people refrain from activities and apply avoidance behavior. It could be seen as a negative spiral and a snowball effect. It could also be stated that choosing another route or transportation mode because of fear of crime does not guarantee a person to be protected from crime and threats.

The trend is that during the daytime, there are no problems using the tunnel for the elderly when they walk alone. Some elderly were an exception and did not want to use tunnels, not even during the daytime. Some tended to speak about public space as it is not guaranteed safe. These findings could be related to how places and surroundings are seen as dangerous and unsafe during certain times of the day (Listerborn, 2002). Those elderly that use the tunnel quite regularly might be as physically vulnerable as those elderly that never use a tunnel, but what can be seen is that the levels of fear they have are different. Referring to modality (Sahlin & Borelius, 2010) in the interviews and how the elderly talked about safety, some answers could be seen as more objective than subjective. There were tendencies among the elderly to use the Swedish word “*man*,” which translates to “*one*.” Instead of saying, “I do not feel safe here in the evenings,” they said, “One does not feel safe here in the evenings.” It could be witnessed as a method of distancing themselves from the statement and talking about their opinions more like arguments that should be added to the conversation. When looking at which tunnel was used the most by the elderly, it was the one at Femvägsskälet and the one at Yrvädersgatan. These tunnels have not gone through any safety measures, such as art or light installation. At first, it may have been concluded that safety measures did not make any difference. However, this is a small sample of respondents; they all have various distances to the tunnel they were interviewed at.

The way the elderly in this study talks about their perceived safety in the tunnels and public space shows that they tend to be fearful, apply avoidance behavior, and change their travel

routes. Their vulnerability will not be solved with improvements to the physical environment. Their safety issues are connected to power structures, discrimination such as ageism, and mistrust of peers. The alarming discovery is that the elderly avoid going out in public spaces during dark hours, and that limits their access to public space because of their fear of crime. The paradox of fear (Persson, 2013) is about the elderly and women being fearful, while they are the groups of society that are less prone to crime. The results point towards confirming that paradox; however, as the study only involves a small sample of women and elderly, making generalizations is avoided.

6.2 Respondent interviews with planners

A concrete challenge related to tunnels is that they can be perceived as unsafe but necessary for traffic security, meaning it would be too dangerous to cross the road above the tunnel. The necessity of having tunnels for traffic security seems to be a conflicting battle for planners, and the reason behind is how the street system is designed. Also, the tunnels were built when plan separation was the current urban planning ideal (Boverket, 2020), which was when the million programmes were built (Söderqvist, 1999). The Head of City Lighting said that when the tunnels were built it was the cars that were dangerous and people were kind. Tunnels are beneficial in the sense that pedestrians and bikers are protected from car traffic, but they are not protected from assault (Listerborn, 2000). Regarding traffic security for children, the Safety planner mentioned that tunnels benefit children. Removing tunnels requires cars to be more regulated with speed and perhaps more risks for accidents. For example, high-speed roads like Västerleden in Southern Gothenburg, where the tunnel at Femvägsskälet goes under, can not be fixed quickly. Building pedestrian and bike bridges are not necessarily more convenient and safer. Depending on the bridge's design, people might need to rely on elevators and stairs to access the bridge.

The planners argued that tunnels need to be strategically placed, not situated too desolate or far from eyes that can see. When tunnels are situated in the outskirts of, for example, vulnerable areas, they are far from buildings, which makes people more vulnerable using the tunnel since there are no eyes that can see. The Safety planner mentioned that those more centrally located and integrated tunnels to the city might be less unsafe. That can be connected to how the street system is structured, if it is a grid system or tree system (Listerborn, 2000), since it has an influence on natural surveillance. Biskopsgården is an example of a tree system, and the tunnel

at Yrvädersgatan is quite desolate. For an urban planner or safety coordinator, to deal with these tunnels in areas that lack natural surveillance, the focus should preferably be on making the tunnels more populated, as the urban planning perspective suggests (Listerborn, 2002). The challenge is however that the social composition of a place will influence safety (Mayhew et al., 1979), which make the urban planners incapable of creating a tunnel that is guaranteed to be perceived as safe. The Head of city lighting mentioned that tunnels could be a “necessary pain,” which is probably a good way of arguing for the existence of tunnels.

There were tendencies among the planners and safety coordinators to focus primarily on physical improvements to the environment, and there was a lack of measures taken on the social dimension of safety. Planners pressed on the importance of tunnel design, which might be a way towards the decision of removing the tunnel completely or trying to solve the problem by creating an attractive tunnel. The main aspect of the tunnel's physical environment was the importance of light both day and night. Brandén and Sandberg (2021), and Painter (1996) talked about dark environments needing good lighting and also that installing more lamps in the streets made more people go out during the dark hours. However, the way lighting is discussed is deviating among the authors and studies. Starting with Rönnblom et al. (2020), they had a critical approach to safety measures and they claimed that safety measures only focus on the solvable physical environment, and improved lighting was an example. Sandberg and Rönnblom (2014) also confirmed that improvements of safety have focused on the physical environment. Gerell et al. (2020) also criticized the municipalities' work in vulnerable areas and mentioned that they do not change anything in the foundational socioeconomic prerequisites. The safety measures that include improved lighting in tunnels could be seen as a quick fix compared to initiatives addressing racism or ageism, where people's mindsets are expected to change. However, safety hosts that might be seen as a way to target the fear of crime may be seen as short-term since they might be a temporary way to make a neighborhood safer.

As tunnels are places that both pedestrians and bikers use, the importance of them being able to use that space in a traffic secure way should be stressed. Clear instructions before entering the tunnel could help to separate bikers and pedestrians. Urban planners need to ensure that pedestrians and bikers can interplay and use the tunnel as a shared space in a traffic secure way so people can feel safe.

The Development manager claimed that having a dialogue with residents is essential when a neighborhood or area goes through a change, and it seems to be something that could be a solution to fear of crime even though many safety measures still seem to be on the physical environment. When conducting dialogue, it is vital to have a good representation of people from all age groups. A place can be reported to be unsafe, but there have been no crimes committed there. That is the challenge with working with perceived safety. Urban planners need to listen to people's perceived safety, and they need to know the social context in the tunnel when they approach tunnels. The Safety planner talked about follow-up studies, and mentioned that they are complex to conduct. Since safety is a feeling (Rönblom et al., 2020) that can change by several factors, there would need to be an extensive safety survey or interviews to deeply understand how different groups of society reflect. Returning to the concept of intersectionality; gender, age, ethnicity, sexuality, and disabilities (Castree et al., 2013) might all intervene in how the perceived safety has developed when there has been an improvement in the physical environment. A large amount of information exposed to the elderly today was something that the Head of city lighting brought up as a factor that can develop fear.

Safety walks are a format of safety work that is being appreciated by the planners. Both planners of this thesis and the literature mentioned the limitations of safety walks. Planners mentioned that resident engagement varies, and some residents who participated in those safety walks that SC Biskop did expressed frustration over not everything the residents asked for could be fixed. Li (2007) argued that the limitations of safety walks are that they focus on the physical environment and lack a broader approach to safety issues like social conditions (Rose, 1996). Some outcomes from safety walks that touched on the social factors of safety were, according to SC Biskop, that some residents prefer a flow of people on the street since it increases their safety. For others, it needs to be the right people on the streets. This can be linked to Sandstig's (2010) findings about the fear of meeting the wrong people on the street. To argue that there is only focus on the physical environment during the safety walks might not be correct. The main focus during safety walks is dialogue, and the residents can also point out social factors that contribute to a less safe neighborhood. When it comes to safety walks and elderly, SC Biskop said that a challenge is that not many residents participate in them. This conflicts the intention of the safety walks which aim to work as a democratic dialogue (Brandén & Sandberg, 2021). Efforts of targeting those older than 65 could be made, and also to target those with disabilities such as those who walk with walkers. Art in tunnels is by the Safety planner considered something that can give those who use a tunnel a positive effect since it is known that colors

affect people's mood. Art installations are different since it targets people's experience of the tunnel as a room, and compared to the light that is more "necessary" in a tunnel, art brings that little extra. It can shift the focus from fear of crime to curiosity of the art. Yet, art that is old and not taken care of can give the impression that the environment is not maintained and that no one cares about it. That can be related to disturbance of order (Mellgren & Kronqvist, 2013). This emphasizes the importance of good maintenance of art installations. Art installations can become old or vandalized, and when that happens, the responsibility can be on residents to report that to the municipality so it can be taken care of. If that happens in a tunnel that few people use it might take a while until someone reports it.

The non-physical measures that the planners brought up were few, and the effects of those measures were somewhat diffuse. The safety hosts in Tynnered and Biskopsgården seem to have had a positive effect, according to the safety coordinators. Having safety hosts in these areas could be a good idea; however, they can not be the solution since they can not be there for every resident who fears crime. They can improve the presence of adults in the streets, and with the interaction, they can form relationships that have a positive outcome for perceived safety more overall in the area. The other social effort or non-physical measure mentioned was to target the specific type of criminality that can occur in the tunnels.

There was a slight tendency among the planners to claim that the elderly have special needs regarding safety in tunnels. The planners targeted several physical vulnerabilities of the elderly that can be connected to the physical environment. First, poorer eyesight and more sensitivity to light changes were considered important factors when working with the light in tunnels and the physical environment at large. Other vulnerabilities were worse hearing and poorer balance, which can be negatively affected by steep slopes to the tunnel, or a lack of marks on the ground to separate bikers and pedestrians. Both planners and the findings of Ceccato and Bamzar (2016) stated that the elderly might choose a different path to avoid fearful places like a tunnel. There were various opinions on whether cities and, more specifically, tunnels should be planned for the whole population or if age groups should be considered. For example, the Safety planner argued that if the environments are being taken care of and are well-lit, they should fit every group, while the Development Manager neglected the statement "What is good for children is also good for the older." When turning to the literature, Berglund-Snoddgrass (2016) claimed that the elderly are constructed as a vulnerable and fearful group; consequently, that should be considered in urban planning. Looking at the elderly's safety and fear of crime, it is not only

their age that will affect their feelings and attitudes. Personal characteristics (Pain, 2001) and identities (Castree et al., 2013) will influence their feeling of safety or lack thereof. When comparing the two ways of planning for safety that Listerborn (2002) mentions, it could be asked, what way would benefit elderly people who do not feel safe in their neighborhood? As the urban planning perspective focuses on safety and making places populated, the crime prevention perspective focuses on security, and drawing boundaries between public and private. Safety measures such as art and light installations may influence elderly positively, but their underlying causes for fear of crime are unlikely to be solved completely with safety measures. Safety measures through the perspective of crime prevention may be appreciated by those elderly who have a high fear of crime, and for example stop using tunnels.

7. Discussions and conclusions

7.1. How is the elderly women's perceived safety in and around the tunnel affected by physical and social factors?

The material of the respondents reveals that the majority of them feel safe when they use the tunnel, and their use of the tunnels is only during daytime. However, there was the exception of the group of respondents where none used the tunnel or other tunnels regularly. For those who use the tunnel, their main requirement in order for them to feel safe is that the tunnel needs to have good lighting. The lighting requirement was the most discussed physical factor that made the tunnel safe for them. Another important physical factor to feel safe is to remove bushes, the tunnel should be clean, and pedestrians and bikers should be separated by marks on the asphalt. Disturbance of order can therefore be assumed to play a vital role for their perceived safety when it comes to the physical factors, as Mellgren and Kronqvist (2013) conclude. Some elderly, along with literature such as Rönnblom et al. (2020), argue that improving the physical environment, in this case tunnels, does not solve the safety issues. Those elderly who agreed to that meant that it does not matter what is being done in the physical environment, the tunnel will still be perceived as unsafe. The few comments about safety measures in tunnels revolved around various forms of improvements, and seemed to have different effects on their perceived safety; while some elderly women expressed that the mosaic did make the tunnel better and made them happier, others said that a tunnel went through an improvement but that did not help. Throughout the analysis chapter, it became clear that there is a lot to be said about the social factors that affect the elderly women's perceived safety, while the physical factors are given less attention. However, it is not intended to state that the social factors are more important, since the sample of elderly is small, it rather shines light on the underlying and invisible factors to the elderly's perceived safety.

Since none of the elderly used the tunnel during the dark hours, their reasons for not using the tunnel was rooted in a more broader fear of crime in their neighborhood and society. The social factors that affected their perceived safety in the tunnel could be related to mainly one threatful group in society, and the elderly's own physical vulnerability. Young people were mentioned in all four interviews with various intensity and importance of them as a threat. The main findings was that the elderly lacked trust in the young people. The severity of the risk of meeting young people in a tunnel during daytime varied among the elderly, and what is behind that

could be affected by how much fear the elderly has. Those who did put themselves in public space, because their life choices demanded that from them, they were aware of the risks but they chose not to let that influence them. The literature talks about how youth gangs can be seen as a disturbance of order, and the way many of the elderly talked about young people seems to cohere with that description. The fear of being beaten down as an effect of using the tunnel, or meeting young people in the tunnel, shows how aware the elderly are of their own physical vulnerability. The way natural surveillance influenced their perceived safety in and around the tunnel did not come as a first priority, and as one elderly expressed that people, including herself, might not help other people if they are injured. The main findings for the elderly's fear of crime related to the tunnel is that they are physically vulnerable, and the threatful young people are in a power position. The way their age influences their perceived safety in the tunnel should also be taken into consideration, as with age the human will have a decreased functionality (Mattsson, 2021) it is natural that the fear of crime and the physical vulnerability will increase. Some elderly acknowledged their increasing age as not being able to do certain things anymore, and also related it to being more physically vulnerable. Nevertheless, many of the elderly pointed at how society has evolved, and also mentioned that elderly nowadays are more victimized. Whether the elderly in this study are more fearful today because of their age, or because of how society is less safe, is not something that this thesis aims to answer. To conclude the findings from the elderly interviews, it can be said that their safety issues are connected to power structures, discrimination like ageism, and mistrust of their peers.

7.2. In what ways does the approach of urban planners and safety coordinators to safety problems related to tunnels align with the elderly's perceived safety?

The planners and safety coordinators come from different working places and professions and their ways of approaching safety issues related to tunnels are therefore different. However, there was a tendency of focusing on the physical aspects of the tunnel that will affect the perceived safety; like tunnel design, light, the location of the tunnel and if it is necessary or not to have the tunnel. The latter aspect shows that the planners are aware of the safety issues in tunnels, and that there are discussions of the existence of tunnels. An important statement was that planners need to look at the perceived safety inside the tunnel, this is because a tunnel can be perceived as unsafe but there are no reported crimes in it. Planners also mention the importance of dialogue with those who live in the area when it comes to safety to receive local knowledge.

It referred to how places can be perceived differently both based on how the physical environment is, and what has happened in that place. Looking at the results of the elderly interviews, they were expressing concerns over their fear of crime, and how they stayed inside their houses during the dark hours. They were vocalizing a situation that is not right in a democratic sense, since public space should be a democratic arena (Rönblom et al., 2020). Their need of feeling safe in public space could somewhat be met with more involvement in citizen dialogue.

The way that safety coordinators and urban planners can meet the safety issues related to social factors are more complex, and solutions can be far to reach. Ways that safety issues are approached today are having safety walks, getting safety hosts and increasing the police presence. These measures are somewhat mentioned by the elderly women, however, if the elderly women would have joined safety walks their feeling of being able to influence society may be increased.

As many planners talked about the advantages and disadvantages of tunnels, they brought up the initial aim of tunnels, that they were built to protect the people from cars, and the focus is traffic security. Those elderly women who use tunnels quite regularly may appreciate the tunnel since it can be less stressful compared to crossing a busy road. Since this thesis is not focused on traffic security that argument could be argued to be rejected, however, in this case it should not be rejected. Tunnels were built because of traffic security, to protect people from cars. When reflecting on the dangers of cars, it is in fact the people who drive the cars that others may need to protect from. Today, the study of the elderly, and literature, shows that people want to be protected from people, which is revealed when some of the elderly say that they would avoid a tunnel if there were young people inside. In contrast, there were arguments about how more people in the tunnel increase the perceived safety, but what it all comes down to is the wish to have the right people in the tunnel.

Some more concrete suggestions to meet the problems of safety in tunnels is first and foremost that the tunnel has good light. Other aspects less mentioned were that the tunnel should be clean and nice, and to install art has a positive effect. It was also concluded by the planners that some tunnels are designed in a way that is difficult to make it safer, which could be interpreted as some tunnels are a lost case for safety.

To deal with the safety problems of tunnels was approached through different methods, and whether tunnels should be adapted to elderly was something that divided the planners' attitudes. Many of them mentioned that elderly have special needs that depend on both physical and psychological vulnerabilities. It was also said that it can be dangerous if elderly person avoids a tunnel and instead crosses a road without a crosswalk. To mark clearly in the tunnel floor so pedestrians and bikers are separated was also a suggestion that planners brought up. The awareness among the planners of how elderly people think and work is also considered as important, and the example of how media or news can influence elderly and make them worried can be valid to have in mind when dealing with safety.

The way that the urban planners and safety coordinators approach safety-related issues in tunnels can be considered a good way when considering the tunnel's existence complexity. Choosing between having a traffic secure pathway, as the tunnel is, and removing a tunnel, should be met with proper investigations on every tunnel. Extensive dialogues with residents in the area should be held to clearly understand how the tunnel is perceived. After all, a tunnel can be traffic secure, but be reported as unsafe, and as stated earlier, a tunnel that is not being used can result in a negative spiral regarding fear of crime for the area.

7.3. Future research and final conclusions

The elderly in this study can be seen as a homogenous group, and what is known is that, as with any other age group, the elderly are also a heterogeneous group. The attitudes, opinions, and thoughts on the tunnel should not be generalized. This thesis can be a base for further research on safety in tunnels or elderly people's safety in tunnels. What came across as interesting to study throughout the end of the writing process was studying elderly people and young people in parallel since young people came out as threatful in the elderly interviews. It could also have been interesting to deepen the knowledge of the elderly with more interviews to see if there are any patterns depending on where the elderly live for example. Conducting more quantitative research would also have been of interest, as it would have allowed to make generalizations.

The study indicates that the factors behind the elderly women's perceived safety in and around tunnels is affected by physical and social factors to different extents. The small sample of elderly respondents showed variation in how often the tunnels were used and how the perceived safety was. Some tended to have criterias on the physical environment of the tunnel, such as

good lighting, while others who used the tunnel less either did not need to use the tunnel in their daily life, or they avoided tunnels completely. Tunnels that were considered as safe by the elderly women were well-lit, clean and broad. The urban planners and safety coordinators also mentioned the importance of lighting in tunnels and that tunnels should be attractive. Physical factors such as steep slopes or natural surveillance could be seen as a contributing factor to perceived safety among the elderly women. The main finding of the thesis was that social factors influence the elderly's perceived safety, which are rooted in the individual such as physical vulnerability, previous experiences, and rumors or information about the area. It also points to large scale problems such as power structures, mistrust of their peers, and discrimination like ageism. How the elderly women view the society showed a large impact on their use of the tunnel, and that during the dark hours they stayed inside. The findings from the interviews with safety coordinators and urban planners resulted in various ways of improving the safety in tunnels, focusing mainly on improving the physical environment. The complexity of tunnels, such as they are constructed as traffic secure, needs to be met with further research on residents' attitudes towards tunnels.

Reference list

Andersson (2007) *Ålderism*. Lund: Studentlitteratur.

Berglund Snodgrass, L. (2016). *Demanding Certainty: A Critical Examination of Swedish Spatial Planning for Safety*. (PhD dissertation, Blekinge Tekniska Högskola). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11439>. P. 126.

Boverket (2010) *Jämställdhet på dagordningen : Planera för ett tryggt och jämställt samhälle* (1. uppl. ed.). Karlskrona: Boverket.

Boverket (2012). Plats för trygghet. <https://www.boverket.se/sv/om-boverket/publicerat-av-boverket/publikationer/2010/plats-for-trygghet/>

Boverket, (2020) *Jämställdhet i samhällsplaneringen*. Retrieved from <https://www.boverket.se/sv/samhallsplanering/sa-planeras-sverige/nationell-planering/nationella-mal-for-planering/jamstalldhet-i-samhallsplaneringen/#:~:text=Det%20%C3%B6vergreppande%20nationella%20m%C3%A5let%20f%C3%B6r,f%C3%B6rdelning%20av%20makt%20och%20inflytande>.

Brandén, J., Sandberg, L. (2021) *Governing safety through the politics of community? A governmentality analysis of the practice of 'safety walks' in three Swedish cities*, *Space and Polity*, 25:1, 1-19, DOI: [10.1080/13562576.2021.1894916](https://doi.org/10.1080/13562576.2021.1894916)

Bryman, A. & Bell, E. (2019). *Social Research Methods*. 5th Canadian Edition. Oxford Press

Bryman, A., & Nilsson, B. (2018). *Samhällsvetenskapliga metoder* (Tredje upplagan ed.).

Brottsförebyggande rådet (2017) *Utvecklingen i socialt utsatta områden i urban miljö. Analys utifrån Nationella trygghetsundersökningen*. Brå-rapport 2017:7.

Brottsförebyggande rådet (2018) *Utvecklingen i socialt utsatta områden i urban miljö 2006–2017. En rapport om utsatthet, otrygghet och förtroende utifrån Nationella trygghetsundersökningen*. BRÅ-rapport 2018:9.

Brå, Boverket & Tryggare och mänskligare Göteborg. (2010). *Trygghetsvandring – en vägledning* [Safety walk: A guide]. Retrieved from <https://bra.se/publikationer/arkiv/publikationer/2010-10-04-trygghetsvandring---en-vaegledning.html>

Castree, N., Kitchin, R. & Rogers, A. (2013). *A Dictionary of Human Geography*. Oxford: Oxford University Press. P. 149.

- Ceccato, V., & Bamzar, R. (2016). *Elderly Victimization and Fear of Crime in Public Spaces*. *International Criminal Justice Review*, 26(2), 115–133. <https://doi.org/10.1177/1057567716639096>
- De Donder, L., Verté, D. & Messelis, E. (2005) *Fear of crime and elderly people: Key factors that determine fear of crime among elderly people in West Flanders*. *Ageing Int.* 30, 363–376 (2005). <https://doi.org/10.1007/s12126-005-1021-z>
- De Laval, S., & Svensk byggtjänst. (2014). *Gåtur : Metod för dialog och analys*. Stockholm: Svensk byggtjänst
- Denscombe, M. (2018) *Forskningshandboken. För småskaliga forskningsprojekt inom samhällsvetenskaperna*. Studentlitteratur. P. 184.
- Ericsson, U., Molina, I. and Ristilammi, P.-M. (2002) *Miljonprogram och media: Föreställningar om människor och förorter*. Stockholm: Riksantikvarieämbetet.
- Eriksson, K., & Brottsförebyggande rådet. (2009). *Otrygghet och segregation : Bostadsområdets betydelse för allmänhetens otrygghet och oro för brott*. BRÅ-rapport, 2008:16.
- Esaiasson, P., Gilljam, M., Oscarsson, H., Towns, A., & Wängnerud, L. (2017). *Metodpraktikan : Konsten att studera samhälle, individ och marknad* (Femte upplagan ed.).
- Ewing, R. and Handy, S., (2009). 'Measuring the Unmeasurable: Urban Design Qualities Related to Walkability'. *Journal of Urban Design*, 14 (1), pp. 65–84. P. 67.
- Folkpartiet (2004) *Utanförskapets karta. En kartläggning över utanförskapet i Sverige*. Retrieved from <https://www.temaasyl.se/Documents/Partipolitiskt/Utanf%C3%B6rskapets%20Karta.pdf> 2022-10-05. P. 8.
- Foster, S., & Giles-Corti, B. (2008). *The built environment, neighborhood crime and constrained physical activity: An exploration of inconsistent findings*. *Preventive Medicine*, 47(3), 241-251.
- Franklin, C., & Franklin, T. (2009). *Predicting fear of crime. Considering differences across gender*. *Feminist Criminology*, 4(1), 83–106. <https://doi.org.ezproxy.ub.gu.se/10.1177/1557085108325196>
- Friberg T, Larsson A (1997) *Genusperspektiv i översiktlig planering*. Lund University: Department of Social and Economic Geography. Rapporter och Notiser nr 148.

Friberg T, Larsson A (2002) *Steg framåt: Strategier och villkor för att förverkliga genusperspektivet i översiktlig planering*. Lund. Institutionen För Kulturgeografi Och Ekonomisk Geografi Vid Lunds Universitet, 162.

Gau, J., N., Pratt, T., C. (2010) *Revisiting Broken Windows Theory: Examining the Sources of the Discriminant Validity of Perceived Disorder and Crime*. [Volume 38, Issue 4](#), July–August 2010, Pages 758-766. <https://doi.org/10.1016/j.jcrimjus.2010.05.002>

Gemzøe, Lena. *Feminism*. 2., [uppdaterade] Uppl. ed. 2014. Print.

Gerell, M., Hallin, P.-O., Nilvall, K., & Westerdahl, S. (Eds.). (2020). *Att vända utvecklingen : från utsatta områden till trygghet och delaktighet*. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:mau:diva-17030> P. 17.

Ghazinour, M., & Eriksson, M. (2022). *Polisiärt arbete i utsatta områden : Utmaningar och möjligheter* (Upplaga 1 ed.).

Google. (2022) Google Maps. Retrieved from Google Maps <https://www.google.se/maps/@57.695315,11.9520774,12.29z>

Göteborg konst (2015) *Nytt ljus i Briljantgatans tunnel*. Retrieved from <https://goteborgkonst.se/1-regeln/nytt-ljus-i-briljantgatans-tunnel/>

Göteborgs Stad (2021) *Göteborgs Stads handlingsplan för Åldersvänliga Göteborg 2021-2024*. Retrieved from <https://goteborg.se/wps/portal/enhetssida/senior-goteborg/aldersvanliga-goteborg/handlingsplan-plan-for-aldersvanliga-goteborg>

Göteborgs Stad (no year) *Trygg, vacker stad 2005–2018*. Retrieved from https://goteborg.se/wps/wcm/connect/4088cfe0-baf0-4a6d-af54-17fd29ee9c30/Trygg%2C+vacker+stad+2005%E2%80%932018_red.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE-4088cfe0-baf0-4a6d-af54-17fd29ee9c30-mHut5h8

Göteborgs Stad (no year) *Bo Bra i Biskopsgården*. Retrieved from <https://goteborg.se/wps/portal/start/kommun-o-politik/kommunens-organisation/forvaltningar/socialforvaltningen-hisingen/lokala-rad-hisingen/bo-bra-i-biskopsgarden>

Göteborgs Stad (no year) *Trygg i Göteborg*. Retrieved from <https://goteborg.se/wps/portal/start/social--och-familjefragor/missbruk-vald-och-brott/brottsforebyggande-arbete/trygg-i-goteborg-#:~:text=N%C3%A4r%20G%C3%B6teborgs%20Stad%20och%20polisen,dig%20som%20medborgare%20och%20trygghetsunders%C3%B6kningar>.

- Göteborgs Stad (no year) *Trygg i Sydväst. Samarbete för ökad trygghet*. Retrieved from <https://goteborg.se/wps/portal/enhetssida/trygg-i-sydvast>
- Hale (1996) *Fear of crime: a review of the literature*. International Review of Victimology 4, 79-150.
- Hall, T & Viden, S. (2005). *The Million Homes Programme: a review of the great Swedish planning project*. Planning Perspectives, (20) 301-328.
- Hallin, P.-O. (2020) *Kriminaliseringsprocesser och lokalsamhälle*. Red. Gerell, M., Hallin, P.-O., Nilvall, K., & Westerdahl, S. (Eds.). (2020). *Att vända utvecklingen : från utsatta områden till trygghet och delaktighet*. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:mau:diva-17030>
- Heikkinen, S. & Henriksson, P. (2013). *Äldres resvanor. Äldre trafikanter som heterogen grupp och framtida forskningsbehov*. <http://www.diva-portal.org/smash/get/diva2:669315/FULLTEXT01.pdf>
- Hinkle, J. C., (2014). *Emotional Fear of Crime vs. Perceived Safety and Risk: Implications for Measuring "Fear" and Testing the Broken Windows Thesis*. Am J Crim Just, 2015 (40), pp. 147–168.
- Jackson, J., & Gouesti, I. (Eds.). (2012). *Fear of crime: An entry to the encyclopedia of theoretical criminology*. Hoboken, NJ: Wiley-Blackwell (forthcoming).
- Johansson, S., & Haandrikman, K. (2021). *Gendered fear of crime in the urban context: A comparative multilevel study of women's and men's fear of crime*. Journal of Urban Affairs, Ahead-of-print(Ahead-of-print), 1-27.
- Jönsson, H. (2009) "*Äldreomsorgen, ålderism och de nästan döda*" i Jönsson, H. (red.) *Åldrande, åldersordning och ålderism*. Norrköping: Nationella institutet för forskning om äldre och åldrande, Institutionen för samhälls- och välfärdsstudier, Linköpings universitet.
- Kawachi, I., Kennedy, B. P., & Wilkinson, R. G. (1999). *Crime: Social disorganization and relative deprivation*. Social Science & Medicine, 48, 719–731.
- Kennedy, B. P., Kawachi, I., Prothrow-Stith, D., Lochner, K., & Gupta, V. (1998). *Social capital, income inequality, and firearm violent crime*. Social Science & Medicine, 47, 7–17.
- Keesling, R. (2008). *Gatekeeper*. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 300-300). Sage Publications, Inc., <https://dx.doi.org/10.4135/9781412963947.n200>
- Koskela, Hille (1999). *Fear, control and space: Geographies of gender, fear of violence, and video surveillance*. Akademisk avhandling. Department of Geography, University of Helsinki.

- Koskela, H & Pain R (2000). *Revisiting fear and place: women's fear of attack and the built environment*. *Geoforum* 31(2): 269-280
- Krekula, C., Närvänen, A-L., Näsman, E. (2005) *Ålder i intersektionell analys*. *Kvinnovetenskaplig Tidskrift* 2/3 (2005): 81-94. Web.et al. (2005)
- Li, T. M. (2007). *The will to improve: Governmentality, development, and the practice of politics*. Duke University Press.
- Listerborn, C. (2000). *Tryggare stad: kan man förändra rädslans platser?*. Stadsbyggnadskontoret.
- Listerborn, C. (2002) *Trygg stad: diskurser om kvinnors rädsla i forskning, policyutveckling och lokal praktik*. Chalmers University of Technology.
- Litzén, S., (2006) *Oro för brott i urban miljö. Trygghetsundersökningar med anknytning till Stockholm*. Akademisk licentiatavhandling. Stockholms Universitet: Kriminologiska institutionen.
- Lykke, N. (2003) *Intersektionalitet - ett användbart begrepp för genusforskningen*. *Kvinnovetenskaplig Tidskrift* 1 (03).
- Mayhew, P., Clarke, R. V. G., Burrows, J. N., Hough, J. M., & Winchester, S. W. (1979). *Crime in public view*. Richmond, UK: HM Stationery Office.
- Maxfield, M. G. (1984). *The limits of vulnerability in explaining fear of crime: A comparative neighbourhood analysis*. *Journal of Research in Crime and Delinquency*, 21(3), 233–250. <https://doi-org.ezproxy.ub.gu.se/10.1177/0022427884021003004>
- McDowell, L. (2010). *Interviewing: fear and liking in the field*. In DeLyser, D., Herbert, S., Aitken, S., Crang, M., & McDowell, L. *The SAGE handbook of qualitative geography* (pp. 156-171). 55 City Road, London: SAGE Publications, Inc. doi: 10.4135/9780857021090
- Mushtaha, E., Hussien, A. A., Arar, M., Salleh, S., A., Mohammad, A., Masoud, W., Ahmed, Z., Almubyedh, H. (2022) *Artificial lighting systems and the perception of safety in underpass tunnels*. *Tunnelling and Underground Space Technology*, Volume 122, 2022, 104376, ISSN 0886-7798, <https://doi.org/10.1016/j.tust.2022.104376>
- Mellgren, C., & Kronkvist, K. (2013). *Trygghet i lokalområdet: resultat från Oxie områdesundersökning 2012. Om upplevelser av trygghet, brott och lokala problem*. Retrieved from Malmö högskola, Hälsa och samhälle website: <http://urn.kb.se/resolve?urn=urn:nbn:se:mau:diva-13049>
- Morgan, R. E., & Mason, B. J. (2014). *Crimes against the elderly, 2003-2013*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. <https://bjs.ojp.gov/content/pub/pdf/cae0313.pdf>

- Pain, R. (2000) *Place, social relations and the fear of crime: a review*. Progress in human geography, 24(3), p. 365-387.
- Pain, R. (2001) *Gender, race, age and fear in the city*. Urban studies 38(5-6): 899-913.
- Painter, K. (1996) *The influence of street lighting improvements on crime, fear and pedestrian street use, after dark*. Landscape Urban Plann., 35 (2-3) (1996)
- Panelli R., Little J. and Kraack A. (2004) *A community issue? Rural women's feelings of safety and fear in New Zealand*. Gender, Place and Culture 11(3): 445-67
- Persson, M. (2013). *The Relative Importance of Institutional Trust in Countering Feelings of Unsafety in Disadvantaged Neighbourhoods*. European Spatial Research and Policy, 20(1), 73-95. P. 76.
- Polisen (n.d.) Utsatta områden - polisens arbete. Retrieved from <https://polisen.se/om-polisen/polisens-arbete/utsatta-omraden/>
- Polisen (2021) *Kartgränser utsatta områden i region Väst*. Retrieved from <https://polisen.se/om-polisen/polisens-arbete/utsatta-omraden/>
- Rose, N. (1996). *The death of the social? Re-figuring the territory of government*. Economy and Society, 25(3), 327–356.
- Ryan & Bernard (2003) *Techniques to identify themes*. Field Methods, 15: 85-109.
- Rönblom, M., Linander, I., & Sandberg, L. (2020). *(O)tryggt? : Texter om makt, plats och motstånd*.
- Serfaty M., Ridgewell A., Drennan V., Kessel A., Brewin C. R., Wright A., Blanchard M. (2015). *Helping Aged Victims of Crime (the HAVoC Study): Common crime, older people and mental illness*. Behavioural and Cognitive Psychotherapy, 44, 140–155. Crossref. PubMed.
- Sahlin, I., & Borelius, U. (2010). *I trygghetens namn*.
- Sandberg, L., Brandén, J., Rönblom, M., Coe, A.-B., & Hudson, C. (2017). *Rädsla och trygghet i ord och handling*. Retrieved from Umeå universitet website: <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-146661>
- Sandberg, L., Rönblom, M (2014) *'I Don't Think We'll Ever Be Finished with This': Fear and Safety in Policy and Practice*. Urban Studies 52 (14): 2664-2679. P. 2667.
- SOU 2006: 21. Camauër, L. & Nohrstedt, S. A. *Mediernas Vi och Dom: Mediernas betydelse för den strukturella diskrimineringen*. Rapport av Utredningen om makt, integration och strukturell diskriminering. Stockholm.
- Svt (2022) Bloggaren Dagny Carlsson är död – blev 109 år gammal. Published March 24, 2022. Retrieved from <https://www.svt.se/kultur/bloggaren-dagny-carlsson-ar-dod>
- Söderqvist, L. (1999). *Rekordår och miljonprogram flerfamiljshus i stor skala*:

en fallstudiebaserad undersökning av politik, planläggning och estetik. Stockholm: Stockholms Universitet

Torstensson Levander, M. (2007). *Trygghet, säkerhet, oro eller risk? Begreppsdefinitioner och mått. Sveriges Kommuner och Landsting.* Retrieved from <https://docplayer.se/11873502-Trygghet-sakerhet-oro-eller-risk.html#:~:text=Unders%C3%B6kningen%20inneh%C3%A5ller%20tre%20fr%C3%A5gor%20om,f%C3%B6r%20st%C3%B6ld%20eller%20skadeg%C3%B6relse>

Uittenbogaard, C., Ahlskog, T. and Grönlund, B., (2018). *Trygghet i samhället.* Stiftelsen Tryggare Sverige. Stockholm: Jure Förlag AB. P. 60.

UN-UNITED NATIONS. (2019) *The Sustainable Development Goals* [Online]. New York. Retrieved from <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Ward, R. A., LaGory, M., & Sherman, S. R. (1990). *Fear of crime among the elderly as person/environment interaction.* The Sociological Quarterly, 27(3), 327–341. <https://doi-org.ezproxy.ub.gu.se/10.1111/j.1533-8525.1986.tb00264.x>

White (n.d.) *Ljuskonst i tunnlar.* Retrieved from <https://whitearkitekter.com/se/projekt/ljuskonst-i-tunnlar/>

Whitzman, C (2011). *Half-full or half-empty? Planning for women's safety in Victoria, Australia.* Planning Theory and Practice 12(3): 367-385

Wilson & Kelling (1982) *Broken Windows.* The Atlantic.

Zelinka, A., & Brennan, D. (2001). *SafeScape. Creating safer, more livable Communities through planning and design.*

Appendix

Appendix 1. Invitation letter for elderly in Biskopsgården

Hej senior!

Vill du vara med och bidra med dina åsikter om vad som gör en gångtunnel trygg? Nu kan du vara med på promenadintervjuer där du tillsammans med några andra seniorer får dela dina åsikter och upplevelser kring gångtunnlar i Biskopsgården.

Jag som leder promenadintervjuerna heter Louise Ringeby och jag är en masterstudent från Göteborgs universitet. Jag vill ta reda på hur seniorer upplever gångtunnlar och hur miljön runt omkring bidrar till trygghet eller otrygghet. Jag letar just nu efter seniorer (65+) som vill vara med och delta i promenadintervjuer. Dessa promenader utgår från en bestämd rutt, där vi besöker en gångtunnel (i södra eller norra Biskopsgården) och ni kommer få frågor. Jag räknar med att det kommer ta en halvtimme. Om du anmäler dig till detta kommer du vara med på ett tillfälle och besöka en gångtunnel som du bor nära. Intervjuerna kommer vara en del av min uppsats och du som väljer att delta kommer att vara anonym. Promenadintervjuerna planeras att ske denna eller nästa vecka. Ring till mig på detta nummer 0761080318 eller mejla till gusringlo@student.gu.se för att anmäla intresse så planerar vi in vilket datum och tid som passar.

Hoppas vi ses!

/Louise



Gångtunneln vid Blidvädersgatan och gångtunneln vid Stackmolnsgatan/Södra Fjädermolnsgatan.

Appendix 2. Invitation letter for elderly in Tynnered

Hej senior!

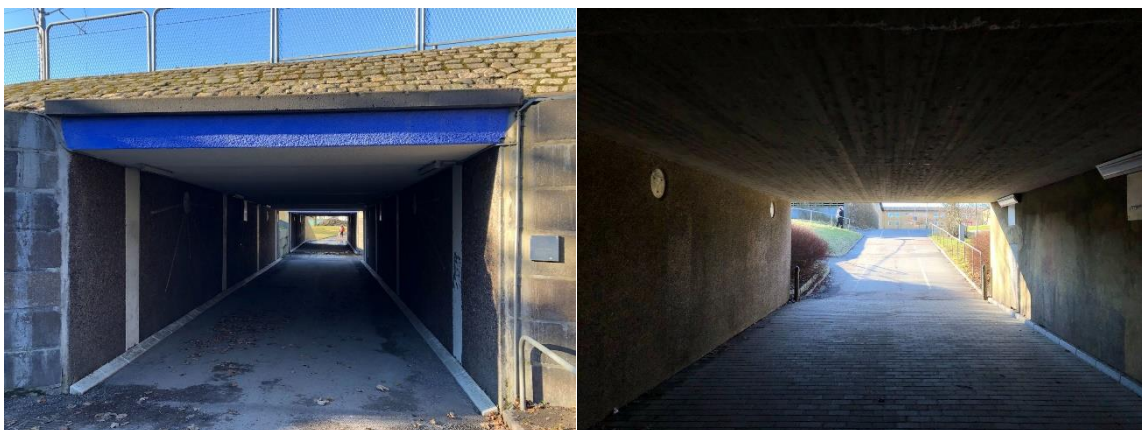
Vill du vara med och bidra med dina åsikter om vad som gör en gångtunnel trygg? Nu kan du vara med på promenadintervjuer där du tillsammans med några andra seniorer får dela dina åsikter och upplevelser kring gångtunnlar i Centrala Tynnered.

Jag som leder promenadintervjuerna heter Louise Ringeby och jag är en masterstudent från Göteborgs universitet. Jag vill ta reda på hur seniorer upplever gångtunnlar och hur miljön runt omkring bidrar till trygghet eller otrygghet. Jag letar just nu efter seniorer (65+) som vill vara med och delta i promenadintervjuer. Dessa promenader utgår från en bestämd rutt, där vi besöker en gångtunnel (under Västerleden eller vid Brilljantgatan) och ni kommer få frågor. Jag räknar med att det kommer ta högst en timme. Om du anmäler dig till detta kommer du vara med på ett tillfälle och besöka en gångtunnel som du bor nära.

Intervjuerna kommer vara en del av min uppsats och du som väljer att delta kommer att vara anonym. Promenadintervjuerna planeras att ske denna eller nästa vecka. Ring till mig på detta nummer 0761080318 eller mejla till gusringlo@student.gu.se för att anmäla intresse så planerar vi in vilket datum och tid som passar.

Hoppas vi ses!

/Louise



Gångtunneln under Västerleden och gångtunneln vid Brilljantgatan.

Appendix 3 Interview guide, safety coordinators

- Vad är din yrkestitel och dina arbetsuppgifter på socialförvaltningen Hisingen/Sydväst? Kan du berätta om din avdelning?
- På vilka sätt jobbar du med den fysiska miljön och den socialt upplevda tryggheten i Biskopsgården/Centrala Tynnered?
 - Finns det några utmaningar?
 - Vad är den nuvarande statusen på fysisk miljö och socialt upplevd trygghet?
 - Har arbetet förändrats de senaste åren?
- Vad innebär det att känna sig trygg i det offentliga rummet?
- Vad gör en gångtunnel trygg? Vad gör en gångtunnel otrygg?
- Vad är din uppfattning om boendes upplevda trygghet i Biskopsgården/Centrala Tynnered?
 - Skiljer den sig beroende på vilka delar i stadsdelen man befinner sig i/bor i?
- Hur är engagemanget hos boende i Biskopsgården/Centrala Tynnered för att jobba med trygghet?
- Hur tror du att fysisk omgivning (öde plats, mycket folk i rörelse, öppet, kuperat, undangömt) påverkar upplevd trygghet i Biskopsgården/Centrala Tynnered, samt upplevd trygghet vid gångtunnlar?
- Vilka gångtunnlar pekas ut som otrygga i Biskopsgården/Centrala Tynnered?
- Hur fungerar processen med en gångtunnel som behöver rustas upp? Från det att behovet upptäcks tills åtgärderna är klara.
 - Har du sett att trygghet och användning ökar vid de gångtunnlar som rustas upp?

Appendix 4 Interview guide, elderly people

Första stoppet

- Hur länge har du bott här?
- Hur brukar du transportera dig?
- Känner du dig trygg på den här platsen generellt och när du är här ensam?
- Nu är det ljus och mitt på dagen, med ganska mycket folk i rörelse. Så om det hade varit mörkt och kvällstid, hur hade du känt då?
- Vad bidrar till att du känner dig trygg/otrygg?
- Om ni tittar er runt, så har vi gångtunneln framför oss men vad ser ni runtomkring? - Finns det byggnader i närheten? På vilket sätt påverkar det att byggnaderna ligger där de ligger?
- Finns det ögon som kan se om något skulle hända här?
- Hur ofta använder du tunneln? Antal ggr/dag, månad
- När använder du tunneln? Tidpunkt på dagen?
- Är tunneln viktig för att ta dig dit du ska?
- Händer det att du tar en annan väg för att undvika tunneln?
- Vad är trygghet för dig?

Andra stoppet

- Känner du dig trygg i tunneln generellt och när du är här ensam?
- Vad är det som gör dig trygg/otrygg i tunneln?
- Har du någon gång varit rädd för att utsättas för brott i eller kring tunneln?
- Om du säger otrygg - är det på grund av tunneln eller området?

Tredje stoppet

- Hur upplever du platsen på den här sidan av tunneln? Är trygghetskänslan förändrad?
- Är byggnader nära?
- Vad är din upplevelse av trygghet i _____ (området)?
- Varför? Vad bidrar till trygghet/otrygghet?
- Vad skulle behöva göras för en ökad trygghet?
- Hur är polisnärvaron här i området?
- Om du tänker på andra gångtunnlar i området, är de trygga eller otrygga?

Appendix 5 Interview guide, urban planners and safety coordinators

1. Vad innebär det att känna sig trygg i det offentliga rummet?
 2. Hur jobbar ni inom den här förvaltningen/avdelningen med trygghetsfrågor?
 3. Hur tror du att gångtunnlar påverkar människors användning av stadens infrastruktur?
 4. Vad är viktiga frågor för att öka människors trygghet i den här typen av platser (gångtunnlar)?
- Följdfråga: Ser du att seniorer har några särskilda behov i det här sammanhanget?