

SEMI-STRUCTURED INTERVIEWS AS THE FOUNDATION FOR INTERDISCIPLINARY RESEARCH ABOUT THE BUILT ENVIRONMENT, HEALTH, AND HAPPINESS

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ABSTRACT

The interest in researching the connection between health, happiness, and the built environment has been raised in the last decade. Each one of these three concepts of health, happiness, and built environment are complex concepts. Investigating the high-impact factor connected to all three concepts needs a method that has the potential for gaining in-depth and rich information. This study aims to investigate the potential of the semi-structured interview in making the bridge between health and happiness in the built environment. The research will benefit from semi-structured interviews as a method through both bottom-up and top-down approaches to build the foundation for future investigation with other methods. The data will be analyzed to detect themes that are common between the mentioned fields and to find areas for improvement. This study seeks contribution to identify missing information through the semi-structured interview method and to contribute to building a sufficient foundation for research related to health, happiness, and the built environment.

KEYWORDS _ *Happiness, Health, Semi-Structured interviews, Qualitative Study, Built Environment*

INTRODUCTION

Over decades researchers have acknowledged the high impact of the built environment on people's health and well-being. In parallel with health and built environment research, the happiness concept gained high interest from researchers with different background subjects. However, with the growth in research about health and happiness, there is a need for research on the complex relationship between health and happiness with the built environment (Andalib et al., 2023, 2022a, 2022b; Helliwell et al., 2023, 2022; Salaj, 2005; Salaj et al., 2010; Ulrich, 1984; Ziabari et al., 2023).

Happiness is a complex and multi-aspect concept that can be defined as a subjective experience of positive emotions such as Joy, satisfaction, and pleasure as well as the feeling of control over life and life meaning and fulfillment. Several internal and external factors could affect happiness such as health, well-being, personal values, social relationships, and control over life, income, and employment. While the impact of these factors on each person's individual happiness may vary, these factors have a role in shaping happiness.

The social relationship can create a sense of belonging, connection, and support that is helpful for well-being. People who have strong and meaningful connections are happier than people who are socially isolated. Personal values are another factor that can affect happiness. People with strong purpose, focus, and direction in their lives are happier than people who don't have ambitions (Helliwell et al., 2023).

Health is also an important factor that can affect health. Based on the redefinition of health by WHO, health is not just the absence of diseases. Health is a state in which a person has complete mental, physical, and social health. A person in good health condition can have the ability to carry out their daily activities and have a productive life. The number of days that a person is sick has an impact on their happiness. Chronic pain, disability, and mental health issues like stress and anxiety could have an impact on the positive emotions and social engagement that a person wants to be involved in. A good health condition can provide a feeling of energy and a sense of liveliness that can help increase happiness.

External factors such as job, income, education, and financial security can create a sense of stability and reduce negative emotions such as stress. The external factors can also provide the chance for growth and more achievement which can lead to satisfaction and an increase in happiness. Happiness is a complex and multilayered context related to life's cognitive, emotional, social, and cultural context. Understanding different types of happiness can help better understand the possible approaches to increase meaningful positive emotions (Helliwell et al., 2023, 2022; WHO, 2013).

One of the main challenges in investigating the relation of these three concepts is that all of them are complex and multilayer. Health is a multi-aspects concept that covers mental, Physical, and social health (Galea and Vlahov, 2005; Mberu et al., 2016). Happiness as a multifaceted concept cover all type of social, individual, cognitive, emotional, subjective, objective, etc. (Helliwell et al., 2023). The built environment is also a multidimensional concept consisting of a variety of elements that can affect health and happiness (Andalib and Khodadadeh, 2021; Kent et al., 2017; Mouratidis, 2017; Prabowo et al., 2021; Senior et al., 2021). Even with the challenge of finding the connection points between three complex concepts, it is important to develop and gain better knowledge of the impact of the built environment on the health and happiness of society. Considering the complex nature of health, happiness, and the built environment, it is essential to use an interdisciplinary approach for conducting this research.

The Semi-structured interview method is proper for interdisciplinary research. The potentials of this method such as open-ended questions, flexibility, and adjustability allow participants to express their experiences and responses in their own languages and the researcher can follow the path of their responses. The rich and in-depth data that can be obtained from the semi-structured interview can be used to identify concerning concepts. However, like all of the other methods besides the potential,

this method has some challenges. One of the challenges is having a professional interviewer who is familiar with all aspects of the specific research and knows how to guide the flow of the interview in a way that allows participants from different disciplines to speak based on their backgrounds and knowledge. The other challenge could be the diversity of the data from different participants which makes analyzing the data difficult. There is a need to design the questions, and interview process and choose a good method for analyzing the data to reduce the impact of the challenges on data generation (Adams, 2010; Holstein and Gubrium, 1995; Horton et al., 2004; Xue et al., 2020). To do interdisciplinary research about health, happiness, and the built environment, the semi-structured interview is a method with considerable potential.

To address the challenge of the complexity of researching health, happiness, and the built environment connection with the semi-structured interview method, this research will use the perspectives of different expert participants with different background fields and citizens. This research design provides the opportunity to build a comprehensive analysis of the complex context and navigate missing connection points between three concepts. This study aims to address the below question to explore different expert perspectives about the connection point between three concepts.

Can semi-structured interviews help set a suitable foundation for interdisciplinary research between health, happiness, and the built environment?

By addressing the potential use of the semi-structured interview method in setting the foundation needed in this interdisciplinary research, this study aims to provide a comprehensive investigation of the possible bridge between health, happiness, and the built environment. By exploring diverse perspectives from people with different backgrounds related to these three topics and citizens' perspectives this study hopes to narrow the complexity existing in this research to contribute to reducing the health and happiness gap through the built environment elements.

BACKGROUND

Qualitative Research and Interviews

A qualitative study is a research method for collecting and analyzing data to recognize and develop a concept, or opinion or to investigate a problem. This method can be used to generate a new concept or idea or to get a deep insight into a problem. It is used to investigate people's behavior, viewpoints, and interactions. The sample group in the qualitative study varies based on the aim of the research but it can be from individual studies to groups or communities. Through qualitative studies, the meaning behind these individuals' or group experiences will be explored and analyzed. Several methods can be used in qualitative studies such as interviews, observation, and document analyses. In this research, the focus will be on the interview methods to have a rich and in-depth analysis of human behavior and experiences to point to emotions and social interactions. The three types of interviews are unstructured, semi-structured, and structured interview.

Unstructured interviews are based on open-ended dialogues between interviewers and interviewees. The interviewers ask a general question, and the interviewees respond in the way they prefer. This type of interview is useful for a topic that was not studied or investigated much before. Facing unfamiliar concepts this type of interview will be used to explore the topic.

Structured interviews are interviews with fixed questions and a set specific order of asking the questions. A structured interview will be used in research that explores the comparison between the responses from participants and collects the data in a systematic way.

The semi-structured interview is a hybrid between structured and unstructured interview methods. The open-ended questions that are designed before the interview sessions can be used in this type of interview. These open-ended questions are flexible based on the responses of the interviewees. The

questions can be expanded in the dialogue or adapted to provide sources for the framework of the interview (Chauhan, 2019; Holstein and Gubrium, 1995; Horton et al., 2004; "The Structured Interview: Enhancing Staff Selection - Normand Pettersen, Andre´ Durivage - Google Books," n.d.).

Semi-Structure Interview

The semi-structured interviews are a combination of open-ended questions with structured questions that allow for achieving rich and comprehensive answers. In the semi-structured interviews, the researcher prepares a set of questions with the consideration of flexibility and adaption for following up the responses from interviewees. Based on the interviewees' responses the questions will be directed to explore deeper the topic that was brought up and get a deeper insight during the interview. The interviewer set some instructions for following up the guide and questions for the interview but the order of asking the questions, and adopting the questions are flexible based on the responses. Semi-structured interviews are common in research that investigates the perspectives and life experiences of individuals or groups. This type of interview is beneficial with the topic related to investigating in-depth research while maintaining consistency among the interviewees. For research related to interdisciplinary topics, and complex contexts, semi-structured interviews with open-ended questions are specifically valuable (Bryman, 2016; Clark et al., 2021; Gubrium and Holstein, 1997).

Semi-Structured Interviews in Interdisciplinary Research

Semi-structured interviews are practical methods for investigating a complex or sensitive topic that needs deeper understanding and coverage of different perspectives. To investigate complex topics, interdisciplinary research involves collaboration and knowledge integration among disciplines. The nature of open-ended questions that allow interviewers to be flexible based on the responses and perspectives of interviewees makes it a beneficial method for interdisciplinary research.

It can help the interviewers discover missed experiences and perspectives that may be skipped by the structured interviews. The missed insights and perspectives have high importance through interdisciplinary research, to uncover unknown or missed connections and strengthen the connection between disciplines. The flexibility and adaptability of semi-structured interviews are other benefits of interdisciplinary research. The researcher can adapt the questions based on the perspectives and knowledge levels of different participants. This flexibility can help to find the answers to the gap between fields and integrate the knowledge (Bryman, 2016; Holstein and Gubrium, 1995).

Potentials of Semi-Structured Interviews

One of the potentials of semi-structured interviews is the detailed information and comprehensive knowledge that the researcher can obtain about the research topic. The type of questions in this interview that are both open-ended questions and flexible allows the participants to describe in detail their experiences and viewpoints, and it provides the possibility for the researcher to follow up with the participants with unexpected responses and find missed perspectives. The possibility of flexibility in the interview helps discover the essential perceptions or ideas that were missed in the research.

The second potential of semi-structured interviews is the adaptability to different participants. Exploration of research topics in interdisciplinary research that needs adaption based on the background, knowledge level, and experience with the topic of participants can be achieved through this type of interview. The interviewer can modify questions to make the possibility that all participants could provide meaningful information. This can be helpful to generate rich, diverse, and comprehensive data to explore different fields of science from psychology, and sociology to engineering science.

The other potential is the possibility to cover different topics and research questions. The semi-structured interviews are not limited to any specific topic or field, and they can be used as adjustable research tools to generate rich information. It can be used in a wide range of disciplines due to its ability to explore complex phenomenology, experiences, behaviors, and concepts. The last potential that has a high impact is the possibility to track changes over time. The researcher can follow the changes and developments that happened over time. It can be a change in attitude, experience, or interactions. With the open-ended questions, the researcher can follow up on the topic to have more detailed information and gain information about the factors or reasons for the change. It can be helpful to identify factors that can have a positive or negative impact on the topic of research (Bryman, 2016; Clark et al., 2021; Seale, 2003).

Challenges of Semi-Structured Interviews

The semi-structured interviews have some drawbacks that the researcher needs to consider. The first challenge of this research method is needing a professional interviewer. To navigate the conversation, a skilled interviewer is needed to effectively keep the balance between guiding the interviewees and letting them speak freely. Also, the interviewers need to be capable of adjusting the questions based on the cues they got from the conversation progress which is challenging. The adjustment of questions is especially challenging in complex research or when the participants are cautious about sharing their experiences.

Another challenge is that this method can be time-consuming. The open-ended questions can make the interview time and the transcription of the interviews long. Analyzing and classifying the data can be difficult and time-consuming for the researcher, and it can be a complex process. The rich and in-depth data gathered from the semi-structured interviews can act as another challenge for the researcher. The comprehensiveness and diversity of the responses can make it challenging to investigate and classify the findings. Several tools and techniques may need to be used to analyze the data clearly.

Despite all the challenges mentioned above, the richness and potential of semi-structured interviews make them a popular method for data collection in different disciplines. The researchers need to carefully design the research questions and choose the participants to reduce the impact of the challenges on the data accuracy (Bryman, 2016; Clark et al., 2021).

METHOD

As mentioned in "Bryman's Social Research Methods" book, even though the semi-structured interview is flexible and doesn't need a completely fixed structure, the requirement for designing and preparing interview guidelines cannot be overlooked. The interview guide for the semi-structured interview covers issues that the researcher wants to examine. There are some criteria that are needed to be considered. One is that the questions and the guidelines need to be prepared in a way that can be understandable by all participants. The questions need to be meaningful to the research and in balance with participants' perspectives from the social world. Also, to prepare for the interview guideline, the researcher can use the question "Just what about this thing is puzzling me?" in every step and in every question design that is suggested by Lofland and Lofland (Lofland et al., 2022).

In designing both interviews, these criteria will be considered to structure interview guidelines:

- 1- Prepare a logical order in terms of topics to ask the participants to have a proper interview flow but be flexible to change order during the interview.
- 2- Prepare the interview questions so that they can provide answers to the main research question.
- 3- The language that is going to be used in the interview needs to be considered as a language that

is comprehensive and understandable by all participants.

- 4- Avoid asking leading questions and questions that direct the answers of the participants in a particular way.
- 5- Asking for general contextual information such as name, gender, age, etc, will help to analyze the answers of the participants.
- 6- Asking for specific contextual information such as the number of years employed, job title or position in the job, number of years of experience, etc could help in exploring the answers (Bryman, 2016; Clark et al., 2021).

By considering the protocol mentioned in Bryman's book, the interview design proposed for my research is a combination of top-down and bottom-up approaches. The reason is to gather visions from both experts and citizens and receive a comprehensive overview of connection points between health, happiness, and the built environment. The aim is to understand both expert perspectives and high-impact elements of the built environment while simultaneously understanding citizens' needs and experiences from the interaction they had with the built environment elements.

The first round of interviews

The top-down approach will be used to gather insights from experts. The criteria for participation will be having a minimum master's education in topics related to the built environment such as architecture, or civil engineering, or at least five years of professional working experience. Questions will be designed to mostly approach the insight of environmental elements that had negative and positive impacts on society based on the experience of the experts and the feedback they got back from society. The questions will also cover their viewpoints of what elements need to be considered with high impacts for future development. The experts will be from Scandinavian countries such as Norway, Sweden, Denmark, and Finland. The reason is to ensure of being familiarity with the urban lives and design of Scandinavian countries which are at some points different from other countries. The five main questions for this interview that are designed and later will be expanded by some sub-questions are as below.

- What elements in the built environment do you consider have a high impact on people's happiness?
- What is your perception that the elements that you mentioned worked better in interaction with people?
- What elements do you think need more attention in future development?
- What elements do you think can bring changes with low investment?
- Can you describe a built environment that you consider has a high impact on people's health and happiness?

The second round of interviews

After investigating the results from the experts, elements that are considered high impact will be added to the context of this second semi-structured interview round. The target group for this interview will be citizens. The citizens need to be between 18 to 64 years old in the working age. The other criterion is to change at least two times their house or dormitory after separation from their parent's house. It is preferred that the citizens be Scandinavian or lived at least 8 years in Scandinavia to reduce the effect of different cultures on data. The main five questions will be:

- What are the environmental elements that you considered high impact on your health?
- What made you change your house, was it related to your environment?
- The three other questions will be designed based on the criteria found in the first round of interviews with experts.

ETHICS

The participants will be informed about the context, nature of the study, the participant's rights, and the withdrawal rights. They will be given the opportunity to ask freely about the research and have all the necessary information to choose if they want to participate. The information about participants' personal data and their responses will be kept confidential and only the researchers of the project will have access to the data. The participant will be informed about the confidentiality of data. The participant will have the right to withdraw from the study and their data will be taken out of the study by withdrawing. The participants will be informed about the withdrawal rights that they have. The researchers will protect the data store it securely and use the data only for research purposes. The researcher will obtain ethical approval from the Norwegian Center for Research Data (NSD).

DISCUSSION

In this study, the potential of semi-structured interviews was explored to understand the possibility of using this type of interview as a tool to build the foundation for future research with other methods such as quantitative for exploring the intersection between the built environment, health, and happiness. To address the potentials and benefits I categorized the discussion into three subcategories as below:

Semi-structured interview in interdisciplinary research

In the "Social Research Methods" book it is discussed that if the researcher wants to explore topics with clear intention and specific issues semi-structured interview is a practical choice among interview types. The use of semi-structured interviews in interdisciplinary research is recognized as a beneficial tool since it keeps the balance between flexibility and structure simultaneously. It enables the researcher to reach diverse, rich, and in-depth data from different viewpoints while keeping the connection and consistency between the interviews. This potential is needed for interdisciplinary research that needs perspectives from various disciplines with the same method that has the focus consistency between participants (Bryman, 2016; Clark et al., 2021).

Kallio et al. (2016) Support the use of semi-structured interviews declaring that the flexibility of the semi-structured interview allows the researcher to keep a flexible and open conversation with participants while supporting the focus of the research. It is argued that the method supports achieving detailed information from participants. Also, generating and modifying unexpected perspectives and getting in-depth information about the unexpected insight by developing questions is possible through the potential of semi-structured interviews (Kallio et al., 2016).

DeJonckheere et al. indicate that the semi-structured interview allows researchers to identify the unexplored research area and bridges between fields to define the undefined. The exploration nature of this method will result in achieving a thorough analysis of the topic and understanding the complex content of the research (DeJonckheere and Vaughn, 2019). Mashuri et al. state that the flexibility of semi-structured interviews that provide adaptability to the responses of the participants makes it a valuable method and tool for researchers. Also, they emphasized the potential of the semi-structured interview to provide the researchers the opportunity to achieve detailed data and investigate the in-depth participants' viewpoints and experiences about the topic (Mashuri et al., n.d.). William C. Adams in the Handbook of Practical Program Evaluation chapter 19, conducting semi-structured interviews, implies that the semi-structured interview provides flexibility and adaptability that is needed in a variety of research settings. It suggests that the open discussion of this type of interview combined with keeping the focus and structure defined for the research, allows researchers to gain a deep understanding which has a high impact on research especially in interdisciplinary research (Adams, 2015).

Semi-structured interview potentials in built environment research

The built environment research is becoming increasingly impact in addressing social determinants of health and uncovering elements impacting the health gap. To discover the elements, it is important to use the right method that enables researchers to explore the complex connection between multiple disciplines. As such in this case the discipline will be built environment, health, and happiness. Besides the exploration of the complex context between disciplines, the method needs to have the potential for exploring living experiences, phenomena, and the relationship of individuals with their environment.

One of the considerable potentials of semi-structured interviews is the possibility to investigate the participants' lived experiences in the built environment and their connection to their community. One study state that by using the semi-structured interview tool we can identify and explore the feature of the built environment that affect social behavior and make it unique (Rafiei and Gifford, 2023). Another study emphasized the usage of semi-structured interviews in investigating social behaviors and activities that impact the health gap and equity caused by the built environment. The study emphasizes the potential of this type of interview allowing participants to describe their experience from their viewpoint and allowing the researcher to be flexible and ask questions to discover more about their experiences to discover the unknowns. This allows the researcher to obtain detailed and rich data through semi-structured methods that may not be reached by other methods because of the direct interaction that it has between participants and the researcher (Spartz and Shaw, 2011).

The semi-structured interview could assist in the investigation of elements of the built environment that could have an impact on the health and happiness outcome. One study declared that through using semi-structured interviews, they found out that the condition of the neighborhood and the experiences of the citizen from the environment has an impact on citizen perception of social cohesion and it resulted in the mental health outcome (Li and Zhang, 2021). Another study stated that physical characteristics of the built environment would have an impact on the social behavior and health behavior of residents and citizens, pointing out that the characteristics of the built environment are impactful in shaping their identity and attachment (Larson et al., 2015). Another study emphasized that the flexibility of the semi-structured interview and its open-ended questions is useful for the researcher to cover a wide range of perspectives and lived experiences related to the built environment (DeJonckheere and Vaughn, 2019).

The high impact potential of the semi-structured interview is that besides the flexibility, participants can reflect on their responses. They can expand their perspective and experiences which will lead to a deeper perception of the concept (Paine, 2015). Another study pointed out the potential of the semi-structured interview but also mentioned the structure defined for this type of interview allows keeping track of different participants with different backgrounds and perspectives and ensures that all the covers defined for investigation for the topic are covered in the interview. Also, the interview allows the flexibility to change the order of the topics to ask and allows more exploration, The feature of the defined structure is particularly high impact in interdisciplinary research since the researcher needs to track that they covered all the theories and concepts that they defined for the research ("A Handbook of Research Methods for Clinical and Health Psychology - Google Books," n.d.).

Building the foundation of research by semi-structured interviews

As I am going to use the data that I will find in qualitative research as a foundation to build my quantitative research, I tried to find and discuss whether the semi-structured interview is a suitable method to build a foundation and add criteria that are missed. According to Bryman's book the use of semi-structured interviews can help create and modify the research questions for quantitative research and shape the hypothesis needed for future research. The semi-structured interview can help find the undiscovered research area which helps make the foundation for future research that

needs more investigation (Bryman, 2016). Another study emphasized that the use of semi-structured interviews in the initial steps of the research can help identify and generate practical variables. These variables could be identified through interviews and can be developed and assessed with other methods to investigate the impact based on including wider perspectives with more participants.

Another study stated that semi-structured interviews can help uncover the hidden points or unexpected findings that may be missed in research. The unexpected finding could help define the structure to promote the investigation of the topic (Schatz, 2012). Interestingly, one study emphasized that semi-structured interviews could help discover the confounding factors that needed to be considered in quantitative research as controlled variables (Berta et al., 2010).

Generally, the use of semi-structured interviews could help in identifying or redefining research questions, developing the hypothesis, expanding the theory, and researching the in-depth context. Data gathered through semi-structured interviews will be beneficial in discovering findings that were hidden and determining confounding variable that is needed for future research with other methods such as quantitative. Therefore, semi-structured interviews can be valuable tools to build the foundation and find in-depth valuable context for future research.

CONCLUSIONS

In conclusion, the semi-structured interview method proved to be a valuable and effective method in investigating interdisciplinary research topics. It is a significant tool to investigate the relationship and bridge between different fields of science and to find practical data about people's viewpoints from their experiences and perspectives. The flexibility of the type of interview allows for the inclusion of various ranges of viewpoints. This flexibility leads to the investigation of the participant perspectives and lived experiences which provide rich data for researchers to identify the missed data and factors. The pre-defined structure of the semi-structured interview method with open-ended questions allows researchers to be flexible but at the same time keep the constancy between different participants and the data gathered from different interviews. The semi-structured interview provides valuable insights into complex theories and multifaceted connections between different disciplines.

It allows researchers to identify the factors for developing the research and find the further potential to have in-depth findings. The researcher can benefit from the findings and data from the semi-structured interviews to build and cover the missed data in the foundation for developing the research field. The semi-structured interview method is a powerful tool to include experiences, insights, and perspectives about the complex and interconnected relationship between three complex fields of science and to ensure the inclusion of stakeholders involved in these disciplines.

Overall, the potential of the semi-structured interview method makes it a valuable source and tool for interdisciplinary research in the context of urban studies and to gain deeper and richer findings of factors with high impact that could contribute positively to enhancing public health and happiness. The implication of this research will be significant for the urban planner, designer, and public sectors to create an environment that helps to promote health and happiness for all. Considering the rapid urbanization, it is essential to prioritize shaping healthy and sustainable cities both for future urban development projects and existing area redevelopment.

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