Stress and the City

Exploring perceptions of stress and what coping strategies are used among university students in the city of Tokyo, Japan

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Abstract

Introduction and Aim
Stress and how individuals cope with environmental stressors is an essential issue in urban settings, where expanding and densely developed artificial environments have negative effects on the psychosocial health of the urban population. The aim of this thesis was therefore to explore and identify environmental stressors and coping strategies among young adults.

Method
Collection of data was made through five focus group discussions with four to five university students, between 20 to 30 years of age in Tokyo, Japan. The data was then further analyzed with thematic analysis.

Findings
Three themes with sub-themes were identified from the thematic analysis, highlighting exposure of external pressures and stressors that threaten young adult’s capability in coping with these stressors on a daily basis. The study identified the urban environment, including transportation and crowds as main sources of stress. Furthermore, young adults in Tokyo expressed interpersonal relationships as a significant factor when coping with environmental stressors.

Conclusion
The present study identifies several different and similar perceived stressful threats and coping strategies among young adults in Tokyo. Where potential stressful threats were created by person-environment transactions that determines how one can adapt and cope with these stressors. Further research on the subject of environmental stressors will be needed to further outline the relationship and influence of environmental stressors on individuals wellbeing and health.

Key words: Environmental stress, Coping strategies, Young adults, Urban, Tokyo
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Introduction

We live in a world that is becoming more and more urban as people move to cities all around the globe. More than half the world’s population – about 3.3 billion people – live in urban areas. With the growing urban population, we face new conditions that influence our health (1–3). Urban citizens, on average, have the advantage of enjoying and receiving suitable sanitation, nutrition and access to health care. But, urban living is also associated with increase risk of chronic disorders, a more demanding and stressful social environment and greater social disparities (1–3). Researchers have discussed urban societies to become interdependent and now share similar issues globally (4,5). Also, they have illustrated expanding and densely developed artificial environments to have negative effects on the psychosocial health of the urban populations (4,5). Stress in the urban environment underlines the greater risk for mental illness, compared to rural settings; including increased social evaluative threats, social defeats and chronic social stressors. Because of urbanization, urban citizens have a high risk of anxiety and mood disorders (2,6).

The concept of stress

The basic concept of stress could primarily be described as the following: When a person is exposed to a stressor, the body’s resistance is temporarily reduced by a state of shock until the alarm reaction mobilizes the body’s resources. During the stage of resistance, stress hormones maintain the body’s defensive changes and the alarm reaction virtually disappears. But if the stress persists over a long time, the body’s resources become depleted, and exhaustion occurs; the organism can no longer cope and is highly vulnerable to breakdown (7).

In other words, stress can be defined as a pattern of cognitive appraisals, psychological responses and behavioral tendencies that occur in response to a perceived imbalance between situational demands and the resources needed to cope with them (7). Depending on the situation, stressors are a specific kind of stimuli on the stress level. The more the demands of a situation outweigh the resources we have to deal with, the more stressful a situation is likely to be. The present study distinguish stress to be viewed as an ongoing transaction between the organism and the environment since stressors are demands made by internal or external environment that upset balance and homeostasis. Hence, stressors affect physical and
psychological well-being and require action to restore balance (8). Furthermore, stress can contribute to illness through its direct physiological effects or indirect effects via maladaptive health behaviors (for example, smoking and poor eating habits) (7).

Environmental stressors

Environmental stressors are often aversive, mainly uncontrollable, and affect people in different ways and at different stages of life (9). In the present study, the researcher place emphasis on environmental stressors that have been identified by Baum, Singer and Baum (10); Campbell (11); Lazarus and Cohen (8) and these will be used when further down discussing the findings. Environmental stressors could be stressful life events with major incidents of social or personal adaptive response. It could result in changing family status (for example, a divorce, marriage, birth), or alteration in an economic situation (for example, gain or loss of job, change in educational status etc.) (8–11). Furthermore, daily hassles or ambient stressors are incidents in daily life that may cause unwanted circumstances and are sometimes difficult to notice, until they interfere with some important goal or directly threaten health. For example, loud noise, crowds and/or argument with friend or family member. These stressors are shorter than life events, but more common and could result in longer exposure of stress (8–11).

Several reviewed scientific articles identify numerous general environmental stressors, which affects people in their everyday life. Where physical environmental stressors, for example, air pollution is a source of potential stress (12). Also, poor working environments and disasters, for example exposure to earthquakes, are huge sources of stress and stress-related chronic diseases (13,14). Mental illness due to stress-related factors in Asia has been discussed widely. Research on stress in China highlights that mental stress is persistent and relatively high, primarily, in densely populated cities (15). Furthermore, studies identified that groups with lower socioeconomic status manifested a very high stress level (13,15). Research respondents with lower educational levels had fewer resources and opportunities and had probably fewer coping skills to confront challenges such as stressful life events, daily hassles and ambient stressors. Groups with more resources, for example better educational opportunities, more social networks, more personal freedom and healthier and safer work environment, reported lower stress levels (13,15).
Environmental stressors threaten an organism’s existence and well-being and how an organism copes with the threat depends on how they respond to this threat. The stress reaction often creates symptoms of anxiety, fear and anger, which is only a part of this process. Baum, Singer and Baum (10) explain that the adaption sequence, which includes how we perceive the threat, coping with it and adapting to it, is the main influence on how stress affects us. The adaption sequence is something that happens daily, and our lives can be characterized as constant adaption to sudden changes or gradual evolution of our surroundings. We can often adapt to minor stressors without even being aware of them. However, these stressors can sometimes be severe and threaten the everyday life (10).

Coping strategies
When people are exposed to potentially stressful situations, they can appraise the stressors and make judgments on how threatening, harmful or challenging they are. When doing so, i.e. when a person appraises a situation as stressful, secondary appraisals are made. If the person’s focus changes from the assessment of danger, towards the dangers or benefits of different modes of coping with the perceived threats (7,8). The stressful event motivates the person to search for a coping strategy that will reduce the potential stressful threat. Thus, these understandings of potential threats and coping strategies are connected to the primary appraisal of the environment. Coping strategies are therefore significant to take into account when discussing stress responses (7,8).

Coping skills such as maintaining an employment and healthy lifestyle are demonstrated as good when dealing with potentially stressful situations. It is possible to find ways of managing the situation and finding social support when doing so (14). Additionally, high pressure from work, problem drinking, a feeling of insufficient sleep, absence of confidants and no use of stress reduction techniques was identified as sources of high stress levels. Also, workers in Japan who did not use any stress reduction techniques and had no confidants, had high stress levels (16). The findings may be summarized by saying that lack of coping skills results in more stress, which then may lead to depressive symptoms and even suicidal ideation (16).

Moreover, sense of coherence (SOC) is one way of coping with stress and provides a person with sets of meaningful experiences and coherent life experiences (17,18). It is associated with individual’s physical and mental well-being. Also, people with a strong sense of
coherence have a high level of ability to cope with stress and have better resources to maintain good health, even when in a stressful situation (17,19). People with a lower sense of coherence are leaning more to not finding meaning in activities and perceive challenges more difficult than people with a strong sense of coherence (17,20). This approach could ameliorate high stress levels in different environmental stressors such as major incidents of social or personal adaptation and daily hassles (8–11). The way an individual cope with a stressful event may have profound effects on physiological and physical health outcomes. Attitudes towards stress are dynamic and the ways people perceive different sources of stress differs. People define different heuristic factors as stressful and also perceive the risk and danger associated with different stressors, differently (10).

Young adults in Japan report different sources of stress but a lack of coping strategies to ameliorate stress levels (19,21). Young adults face several kinds of challenges in the society e.g. day-to-day stressors (22). The higher level of daily hassles, the more anxiety and depression will be generated. Coping outcomes from daily hassles are prone to be subjectively experienced and influenced by the individual’s environment and his or her coping efforts. Day-to-day stressors, such as daily hassles will affect young adults differently depending on the time and context (22). In Japan, young adults and academics tend to compare themselves with their peers in terms of accomplishments (19,21,23). Furthermore, young adults in Japan are exposed to stressful events from unsatisfied interpersonal relations with seniors and teachers in school and unsatisfactory emotional relations with parents etc. (19,21,23). Young adults are exposed to pressure from fulfilling parental expectations and avoiding the loss of face of worsening the situation, which would add even more stress for them. When feeling pressure from your surroundings and from family, you are losing your social support (21,24). Social support can influence how people adapt to stressful events. When one feels stressed from people in one’s surroundings, this may lead to affecting one’s perceptions of personal risk or the severity of the stressful state.

Rationale/Justification

There are few studies on Japanese student’s perceptions of stress in Japan and even fewer that have explored international university student’s perceptions of stress and how they cope with stress in Tokyo, Japan. Stress has been identified as a source of several negative health outcomes in a densely developed artificial setting where e.g. social factors have an influence.
on people’s health outcomes (4,5). The reviewed literature in the present study shows primarily, interpersonal relations and social support as the most important factors in ameliorating or hampering stress levels for Japanese young adults, in Japan (12–14,17,18). Also, the studies show a lack of coping strategies among young adults and few studies actually focus on the relationship between how stress affects young adults stress levels and coping abilities in an urban setting (19,21–23).

The present study intends to explore university student’s (see appendix 4) perceptions of stress and how they manage to cope with stress in Tokyo, Japan. The study will aim to investigate how environmental stressors influence young adults’ stress levels and coping strategies in an urban context. As researchers have discussed urban societies to become interdependent and now share similar issues globally (4,5), the findings will hopefully increase knowledge, awareness and provide an integrative understanding of young adult’s perceptions and coping strategies of stress in an urban setting.

Aim
The aim of the study is to investigate university student’s perceptions of stress and how they cope with stress in an urban setting. The study focuses foremost on environmental stressors in Tokyo, Japan.

Research question
What are the perceptions of stress and what are the coping strategies used among university students in the city of Tokyo, Japan?

Conceptual framework
There are different ways and approaches of conceptualizing stress and different approaches have been evolved over centuries. Research in stress and coping has long been discussed through psychological or biological factors and both have effects on health status and health behavior. The present study uses a qualitative approach when collecting data on different perceptions of stress and coping strategies. Therefore, a cognitive-behavioral theory is suitable when exploring this topic further (18). The present study will use the conceptual framework: The transactional model of stress and coping by Lazarus and Folkman (1984), when analyzing and discussing the findings.
The main concept of the transactional model of stress and coping consists of: primary appraisal, secondary appraisal, coping efforts, meaning-based coping, and outcomes of coping. The present study will also use theoretical extensions related to dispositional coping styles to generate a comprehensive framework for understanding and analyzing perceptions of and responses to stress (7,18).

Stressful experiences are shaped as person-environment transactions, in which the influence of an external stressor, or demand, is mediated by the person’s appraisal of the stressor and the psychological, social and cultural resources at his or her disposal. When a person is faced with a stressor, that person evaluates potential threats or harms (primary appraisals). A person can perceive the threat from how susceptible they are to it and/or how vulnerable they are towards it. Moreover, if an appraised stressor interferes with a person’s goal and/or if casual focus (for example, self-casual focus) is generated, that could lead to guilt and depression (7,18).
A person’s coping strategies and options sets in when secondary appraisals are assessed. In contrast with primary appraisals that focus on the stressful situation, secondary appraisals focus on the perception of ability to change the situation and manage one’s emotional reactions to stressful threat and expectations on how good one’s coping resources are (7,18). Furthermore, coping efforts, aimed at problem management (for example, information seeking) and emotional regulation (aim to change the way one thinks and/or feels about a stressful situation) and also meaning based coping (induces positive emotions), all give rise to outcomes of the coping process (both short- and long-term positive or negative adaptations) (7,18).

To understand the complexity about stress and coping it is also essential to reflect not only on situation-specific coping efforts, but also how a person acts and behaves more generally in everyday life. Moderators in fig 1. are more persistent and can drive appraisal and coping efforts. When faced with a potential stressful situation one can either be observant and monitor the situation, or avoid the threat. Additionally, social support is able to influence how a potential stressful situation is perceived, which can both affect a person positively and negatively (7,8,18).

Methodology

Research setting
This study was conducted in Tokyo, the capital of Japan, with an agglomeration of 38 million inhabitants it is the world’s largest city (25). Japan has the fourth largest economy in the world and Japan’s population is approximately 126.9 million people and 93.5 % of the population are living in an urban setting, with a general life expectancy of 84.7 years of age, which is one of the highest in the world (25). The study site was selected because Tokyo is the largest and most populated city in the world. There are today 36 megacities (a city with more than ten million inhabitants) in the world, where Tokyo has the world’s largest metropolitan area (5,25). This means that Tokyo’s population accounts for 24 percent of Japan’s total population, but Tokyo’s area only covers 3 percent of the total area of Japan (4). Furthermore, Sophia University was chosen as the location to conduct the study because the location was close to the center of Tokyo and the researcher was enrolled as a student at the university during the research period.
Research population and recruitment

The participants (see appendix 4) compromised of young men and women aged 20-30 years who were enrolled as students at Sophia University in Tokyo and data collection was conducted between November, 2016 to January 2017. The inclusion criteria were students who understood and spoke English and the researcher included participants from a wide range of countries around the world to acquire a more general view on environmental stressors in an urban context. Convenience sampling was used when recruiting participants for the focus group discussions (26). This sampling approach based on English ability and being enrolled as a university student at Sophia University made it easy and fast to recruit participants (26). The researcher was able to recruit participants at the campus of Sophia University in Tokyo, by handing out information leaflets (see appendix 1) and speaking to potential participants and briefly explaining the research.

Research design

The study was carried out using a qualitative research design. This is used to explore groups or individual’s experiences or understandings of a phenomena. It is a useful approach when there is limited previous research on a topic (27). This is why the present paper collected the data using focus group discussions (FGD) with university students in Tokyo, Japan. Focus group discussions intend to focus on a specific subject, with a predetermined group of people, participating in an interactive discussion (27). It was decided after a discussion with the supervisor at Uppsala University. Focus group discussions are essential when identifying a range of perspectives on a research subject, and to gain an understanding of the issues from the perspective of the participants themselves (27). Therefore, focus group discussions were suitable to explore student’s perceptions of stress in urban Tokyo. During the focus group discussions, participants shared their views, heard the views of others, and perhaps refined their own views in light of what they have heard (27). Often, the discussion opens up and participants are able to ask questions of others in the group, which then may trigger them to raise more issues or share experiences, thus increasing the clarity, detail and depth of the discussion (27).
Research team
The research team consisted of a Swedish male master student in International Health at Uppsala University (in the present study, referred to as the researcher) with supervision from a professor in Global Studies at Sophia University and a professor in Public Health at Uppsala University. The supervisors helped develop the focus group interview guide and the recruitment strategy. The data collection was conducted only by the researcher.

Data collection
In the beginning of the data collection, potential participants were greeted with brief information about the focus group discussion and the research, including a timeframe for the discussion and that participation was voluntary. If then the potential participant agreed to participate in the study, a focus group discussion of four to five participants was set up, within a week. When meeting for the discussion, the researcher had beforehand booked a room and arranged chairs and tables to form a circle with the moderator slightly outside of the circle. This was done to increase the interaction between the participants and to reduce their dependency on the moderator. The focus group discussions were then guided by a discussion guide (see appendix 3) that explored numerous aspects of perceptions of stress and coping strategies. The discussion guide was shaped just before data collection based on the local context. The guide contained broad questions about university student’s everyday life in the urban setting and further narrowing it down to perceptions and coping strategies of stress.

The data were collected through focus group discussions held in English between 1st of November and the 14th of December 2016 until saturation was reached. Saturation was based on observations and notes by the researcher, when no ‘new’ data was generated from the focus group discussions. A total of 23 young adults participated in this study, where 16 were men and seven were women. The data was collected with four to five participants in each of five focus group discussion and each of them lasted between 50 to 70 minutes. Furthermore, they were all tape-recorded and conducted in a private and quiet place. The focus group discussion was held either on campus at Sophia University or in one of the Sophia University dormitories. Both places were familiar to the participants. The researcher conducted and moderated the focus group discussions and also transcribed verbatim the recorded focus group discussions.
The participants were given verbal and written information (see appendix 2) about the study. Participants were also informed on confidentiality, anonymity and the right to withdraw and/or refuse to answer any question at any time without having to give a reason and without consequences. They were also given chocolate, but no other incentives were provided. After we had gone through the information sheet (see appendix 2) the participants were asked if they wanted to participate in the study. When the tape-recorder was turned on verbal consent was given by the participants. In the beginning of the discussion the participants were asked to answer some introductory questions about where they were from, what they studied and what an ordinary day would look like for them, in Tokyo. The discussion then continued to follow the discussion guide (see appendix 3) on participant’s perceptions of stress and how they cope with potential stressful situations that they have identified in Tokyo.

During the discussion, the researcher operated as the moderator and note-taker. After providing a question for the group to discuss, the researcher observed non-verbal communication and took notes. After the focus group discussion, the researcher turned off the audio recorder and stayed with the participants and answered questions and comments about the discussion. Finally, the researcher looked through the notes and wrote down thoughts about the discussion in a field journal. The field notes gave the researcher a deeper understanding when analyzing the data.

Data analysis
Thematic analysis was chosen as the method of analysis as it allows for the distillation of large volumes of qualitative data into representative themes while maintaining the richness of the original contributions (28). Themes may be defined as a patterned response within the data set that captures something important in relation to the research question. In the current analysis, themes were identified in an inductive or ‘bottom-up’ way (28). Thematic analysis according to Barun and Clarke, begins with a data familiarization process and commencing observations, followed by initial coding and development of themes which are later reviewed, refined, named and placed into a thematic map (see fig. 2). The themes should further serve as narrators and tell a story in an interpretive and analytical way (28).
### Ethical considerations

When conducting research on perceptions of stress it is important with all research to take ethical aspects into account, regardless of the topic. The ethical considerations are carefully reviewed via the Declaration of Helsinki (29). All young adults gave verbal consent in regard to participation in the study and the use of tape-recorders. Based on the culture context of Japan and participants from widely different cultures only verbal informed consent was collected. Additionally, consent was restricted to a verbal form because some participants might have felt an unwillingness to sign documents. In the first interaction with future participants they were given both written and verbal information about the focus group discussions. The information clarified the confidentiality of data, data collection and how the findings would be used. Additionally, the information set out their right to stop the discussion at any time and/or to not answer certain questions, without having to give a reason and without any consequences.

To guarantee anonymity in the study of the young adults, only gender, age and nationality were given and used when the data collection was analyzed. Also, the focus group discussions were held in a safe and private setting, which was familiar to the participants. Furthermore, the topic of the focus group discussions was assessed to not cause distress or other discomfort by the researcher and the supervisors before the data collection. If a participant would have shown or expressed any symptoms of distress, then there would have been a therapist informed beforehand about the research and available at the campus at Sophia University.

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**Fig 2. Example of analysis and coding procedure**

<table>
<thead>
<tr>
<th>Data extract from transcript</th>
<th>Codes</th>
<th>Sub-theme</th>
<th>Theme</th>
</tr>
</thead>
</table>
| “My issues are, not only manage my budget but also managing time. It is really, kind of the issues for me. Because there are so much to do and I can not keep up with a lot of stuff, you know, letting me spend time with friends and those kind of things and give enough time for studying. (Male participant, FGD 1) | • Not able to manage time and financial budget  
• Overwhelmed by obligations | Balancing social and financial obligations with time pressure | Managing life and stress |
At the end of every focus group discussion the researcher stopped the tape-recording and stayed with the participants to answer questions, discuss the focus group discussion itself or something associated with the discussion that was just held. The data, including tape-recordings and transcripts were kept stored on a memory stick which was locked up in a safe location that the researcher had exclusive access to. Lastly, the researcher sought ethical clearance and got ethical approval from the ethical committee of Sophia University in Tokyo, Japan, before the focus group discussions were conducted.

Reflexivity

Qualitative research contains more interaction with the study population, which can lead to data being influenced more easily by the researcher, compared with a quantitative study approach. Therefore, it is preferable to describe the characteristics of those involved in the data collection and analysis and highlight any potential effect this may have had on the collected data (30). First of all, it is of significance to highlight that the researcher was relatively new to the Japanese context which required the researcher to make an effort to understand the social and cultural context and to understand a different hierarchical system from what the researcher was used to, e.g. other gender perspectives and how to act as a foreigner in Japan. Furthermore, the researcher was aware of different existing social factors, for example, gender, ethnicity, socioeconomic status, religion, age and culture that could have impact on the data. For instance, the researcher needed to always be open and prepared for various views and/or believes that sometimes did not match the researchers own values. (30). The researcher needed to always reflect on the role as a Swedish master student in international health in Tokyo, Japan. The main feature was to always be flexible in every way when collecting data and to minimize the impact on the data generated from the discussions.

Further, the researcher needed to be aware of interpersonal dynamics when conducting focus group discussions. Power dynamics, interruptions and/or the location of discussion could influence the data. For instance, in one discussion there was one or two persons who took more space than the others. This was probably because they were more confident in using the English language and/or had more insights in the topic of stress in an urban setting. As the researcher always strive to get rich and diverse data on the topic and also keep the flow in the discussion, these factors might have inflicted the role as the moderator, risking
generated data to be biased or modest. Moreover, at one time, one of the discussions was interrupted by a person walking into the room. The moderator paused the discussion and kindly asked that person to leave. The moderator then resumed the discussion by a short recap where the discussion had broken off and then the moderator allowed the discussion to go on. When the moderator gave the participants a recap of the discussion, the data was risked to be distorted and/or false from what the participants considered. Also, beside that incident there were no interruptions and the discussions held were enjoyable and the participants showed respect and support towards each other.

Findings

Guide to interpret quotations

… = Participant’s silence

(..) = Text before or after quote that is unrelated to the quotation or theme

Participant 1, 2 etc. = Indicates a conversation

[] = Purpose towards clarifying meanings

The findings did identify three themes with sub-themes through the thematic data analysis, described above, regarding young adult’s perceptions of stressors and stress in an urban context. The result in this study is generated from participants’ knowledge and ideas of the topic and from their own perceptions and experiences. The data from the focus group discussions are demonstrated by three themes with sub-themes in the following text (see fig 3), where the theme: Manufactured living: The intensity of urban living, should be seen as an overall theme that intersect with the other themes.

All the themes will be further explained in the following section and be highlighted with illustrative quotes from participants and conversations between the participants when the focus group discussions were conducted.
Manufactured living: The intensity of urban living

Both female and male young adults were affected by their urban setting and how an urban life impacts on their everyday life as students. The intensity of urban living in Tokyo was described as inevitable. As a resident of an urban city and you face daily challenges and opportunities. All participants described briefly their everyday life in Tokyo, and their way of living as well as highlighted different positive and undesirable factors of urban living. Several of participants enjoyed the urban living and highlighted endless possibilities and the overwhelming feeling to explore the city. Not all participants had been living in a mega-city before coming to Japan and expressed excitement and puzzlement by the urban life.

*I like Tokyo because it is the biggest city in the world, so it is always exciting. I do not think you never are done exploring it really.* (Female participant, FGD 5)

Urban living was perceived as being adjacent with obligations, responsibilities and pressure from their everyday life. Some of the participants expressed concerns about how to manage all duties both regarding their studies but also just coping with their everyday life. Participants stated that their living environment was really busy and bustling, and that many struggled to find motivation to wake up, go to the university and have time to socialize etc.
The feeling of being obligated and pressured by the everyday life was expressed in the following quote:

*I’m living alone now, which is new for me. Now, I have to do all the housework by myself and I have two part-time jobs to help me pay my rent and bills. I return back home at around 1 a.m. every day. To handle, work, university, friends, sleep are all very stressful for me.* (Female participant, FGD 3)

Being under pressure in their everyday life was expressed by physical pain and distress by many participants. There was a feeling of being overwhelmed expressed by participants and a sense of difficulty to balance and control their everyday life in the city. Participants expressed a huge impact from the urban environment itself, by just walking on the streets of Tokyo could generate anguish, as it is expressed in the following conversation:

Male participant 1: *(...) after being in crowds of people I could easily get a headache and wanted to see no one for a while, so that is quite stressful.*

Male participant 2: *Yes, I can even lose appetite and develop migraine just walking around on the streets.*

Male participant 3: *Yeah, I feel that there is always pressure here in Tokyo, from everywhere.*

(Male participants 1, 2, 3, FGD 1)

**The clash at the train station: Transportation stress**

When participants discussed the urban environment of Tokyo and potential stressful sources, one source was exceptional. Being dependent on public transportation and having to commute everyday created a concern among participants. Words like frustrating, packed, aggressive, painful and worrying were chosen to describe their experiences from the transportation system.

*The transportation system is stressful, maybe the worst thing about Tokyo.* (Male participant, FGD 1)

*I’m commuting two hours back and forward everyday from home to the university. Even the thought of it makes it frustrating. It is time that I could spend on something else.* (Female participant, FGD 2)
The trains are almost always full and packed according to the participants. The morning and evening rush hours were especially described as the most stressful moments of the whole transportation system and participants expressed feeling grateful to avoid them. Rush hours are for many a painful journey between university and home and a couple of participants experienced physical pain from it. When in rush hours’ participants felt vulnerable and exposed to people pushing and increased levels of stress, this was expressed in the following conversation:

Female participant 1: (..) everyone is cramped into that really really small carriage train. I do not think people hesitate to push other people on the train and that makes other people more stressed out. It is like the stress levels gets higher and higher.

Female participant 2: I agree, once I had the railings against my back and people were just pushing so it hurt my back really bad, so my back did hurt the entire day. Since then, I have avoided rush hours. (Female participants 1 and 2, FGD 3)

Furthermore, several participants highlighted the fact that they were restrained from really enjoying Tokyo the way they wanted because of the transportation system, not being active between approximately 12am to 6am. Because the trains do not run during the night, participants were concerned about their freedom and did not feel that they could enjoy Tokyo as much as they wanted. The following conversation noted this:

Male participant 1: (..) it is stressful when you are out on a Saturday evening with friends and you have to decide if you should take the last train around midnight to get home, or stay out 6 hours longer and take the first in the morning.

Male participant 2: I have experienced that too, you can never really fully enjoy the night here in Tokyo. (Male participants 1 and 2, FGD 2)

You are never alone: Stress from crowds and people

It is not only trains that participants’ experienced as crowded with people but pretty much everywhere in Tokyo. Several participants experienced a lack of quiet places. They expressed a concern and misery about the overcrowded sites all around Tokyo and how it affects their everyday living.
The city really wears me down mentally, because I get exhausted by the amount of people everywhere and the noise around you. So, I think that is one reason why I’m so tired in the morning and when I’m coming home. (Female participant 1, FGD 4)

Also, lack of peaceful places was frequently mentioned by some participants when discussing crowded areas with people and stress. Several participants talked about difficulties of finding a peaceful place and to find room in a cafe or other public places, as it is expressed in the following conversation:

Male participant 1: I want to highlight that there is SO many people in Tokyo wherever you go. It is really hard to find a peaceful place.
Male participant 2: Yes, there are no peaceful places. It is difficult to find a calm place to sit, to find room at a cafe and no places to go.
Male participant 3: You have to get used to crowds! Unfortunately, it is always overcrowded here. Even if you out in the nature outside Tokyo, it is always overcrowded. If you want to find a peaceful place it is pretty much impossible. (Male participants 1, 2 and 3, FGD 4)

Even though they expressed never being lonely participants felt lonely in the mass of people. Some participants expressed alienation and feelings of detachment from the community, where people in the city are self-centered and focus on where they have to go and what they have to do as indicated below:

Male participant: Having so many people around me, still makes me feel lonely. Everyone is in their own worlds and there is little communication between people. People are so busy cutting out their own stress, which makes me in a way, one of their sources of stress. I feel like a ghost here sometimes.
Female participant: There is no sense of community in Tokyo. (Male participant and female participant, FGD 3)

Experiences of stress
This section highlights young adult’s experiences of factors that influence them in their everyday life as university students in Tokyo. These stressors, who are presented in this section are interfering with future goals, ability to take care of oneself and underlines constant
pressure from both external and internal factors in the urban scenery. The sources of stressors are many in an urban context and the following sources are identified and experienced as the most common ones for university students in the urban context.

Money talks... loudly: Financial pressures

The life in a mega-city like Tokyo, contains different factors that could ameliorate and/or diminish the quality of life. University students are known of having a low income and several participants explained that they were under financial pressure to be able to go out and meet friends, because it always came with expenses, e.g. food and drinks etc. A feeling of restriction by high living costs was expressed and indicated as a concern in their everyday life. One participants explained Tokyo as a “different world” when explaining the high living expenses and a feeling of powerlessness.

* I have the inability to meet up with all my financial obligations in an urban setting. *(Male participant, FGD 1)*

Time is running out: Time pressures

Feeling pressure as a student was common by several of the participants and was highlighted by a lack of sufficient time. When talking about time and the lack of time, some young adults expressed being paralyzed and powerless when having so much to do and a feeling of being stuck in life. Often it was a matter of choice, either you study or you rest, however both was similarly important for numerous of the participants. This made it problematic to live a life as a student with time pressure always present. Time pressure was present in different aspects of life and several young adults believed it was impossible to get free time or a break from all obligations, resulting in a feeling of helplessness, as expressed in the following conversation:

Male participant 1: *There are so much to do and I can not keep up with everything.*
Male participant 2: *Yes, I agree! When I’m stressed I feel stuck.* *(Male participants 1 and 2, FGD 1)*
To sleep or not to sleep

When young adults feel pressure from external and internal factors in their everyday life, these may obstruct balance in their lives. Sleep was identified as a crucial factor when attempting to cope with stress by many of the participants. A concern regarding sleep in correlation with stress was expressed by some participants, by saying that sleep protects them from high stress levels. Moreover, sleep was stated as extremely important and crucial to deciding how stressed one would be. The dominant idea was that a good night’s sleep was essential and a way of balancing their stress levels. Further, inclining that stress prevents sleep and sleep prevents stress.

Female participant: *I have a feeling of having to choose free time or sleep.*
Male participant 1: *I have a similar way of thinking and chose both, which means that I then go to bed very late at 3-4 am every night.*
Male participant 2: *Same here, I do not have time to get a good night’s sleep.* (Female participant and male participant 1 and 2, FGD 4)

The stress of socialization

Being pressured by a lack of time, lack of sleep and lack of money, are possible factors in young adult’s everyday life, which can all impact their wellbeing. To be able to perform as a student and at the same time socialize and juggle different social groups is very much stressful for several of the participants. Furthermore, how young adults interact with each other can have a huge impact on stress, according to numerous of the participants. Where the social interaction often releases a feeling of stress and pressure from their studies or other obligations. Simultaneously, many participants expressed a concern in how to balance social interactions with obligations from their studies etc. Explained that it is nerve-racking and stressful to always try to balance their social expectations from their social circles. A shared view by many participants was that social expectations and how to live up to them, was a major source of stress. Lastly, several participants expressed difficulties in socializing with other people in some places. Where they expressed language barriers and cultural differences as sources of stress, this is highlighted in the following quote:

*(..) when you are trying to get something done or just going to a café and the people have no idea what you are saying and you have no idea what they are saying... that is pretty annoying at times.* (Male participant 1, FGD 3)
**Future outlook: A source of worry and stress**

A life as a student is dominated by different stressors and factors that pressure them in different ways and when looking at the life after their studies, then worry, stress and anxiety are present for several of the participants. When looking at future prospects of each and one of them, the shared view of the participants was that they experienced a worry in finding a job, doubting their qualifications and capabilities in doing a good job. Furthermore, knowing who they were and identifying what their strategy was after their graduation. A feeling of distress and fear was shared by numerous participants and was expressed like this, in the following quote:

*I’m a third year student and that implies that you have to go for job-hunting in Japan. That stresses me out from 0 to 100. I know how hard it is to get a job in Japan... and I know how much work that people have to go through that period of time. It is like rejection and rejection every day and if you do not stay firm, you will get destroyed...* (Female participant, FGD 5)

Furthermore, some participants stated that they did not like how the Japanese system works regarding job-hunting. In the end of your studies you are supposed to go to 60-70 interviews and supposed to have the same dress code as everyone else, this was according to some participant who where in middle of this process during the focus group discussions. These participants explained that pressure from outside regarding what you are supposed to look like and how you should apply for jobs creates a major amount of stress.

Another fear of the future was that several participants felt pressure from their family and friends. They compared each other with siblings and co-students, where it was important to get good grades and a good job eventually. Pressure was shaped by many participants for having a feeling of guilt towards their parents. Many participants had got financial support from their parents to be able to study. This created pressure for students and a fear of failing a test or failing to get the highest grade in a course. In a way they were not only failing a test, they also failed their parents, by disappointing them.

Female participant 1: *I will spend 7 years at university eventually... and if I do not get a good job after that, then I’m afraid that I would feel like I failed... and everyone would be disappointed at me. Because my family are so proud of anything I do, so if I actually do not succeed with something... How will that, then affect everything...?*
Managing life and stress

This last section identifies how young adults in Tokyo look at stress and how they cope with it. Also, how they outline different coping strategies and how they categorize them as helpful or not. Coping strategies and how they identify stress are all different from each other, but also similar in many ways, these similarities and contradictions are highlighted in this section.

An effort in defining stress

According to several participants, defining stress was important when wanting to cope and balance it. Coping with stress was expressed with contradictive believes from the participants where some expressed a concern regarding defining stress, not knowing and also impossible to know what stress is and what it does to your wellbeing. Others expressed stress as a big weight on top of your shoulders pressuring you down, or external or internal thoughts that can overwhelm you and create stress. One participant even expressed a worry in defining stress, which could lead to a stressful situation itself. Nevertheless, the dominate idea was that stress is unhealthy for you and would lead to misery etc. like it is expressed in the following quote:

...If you have personal or social stress which will not go away by itself, then if you do not deal with it, I guess it just gets worse. I think that kind of stress is really BAD!

(Female participant, FGD 2)

Stress that erupts from external pressure and obligations etc. was expressed as short-term stress and not as threatening as long-term stress from personal and/or social factors. Long-term stress was said by several participants to require action and coping strategies so that stress would not sustain on high levels. Furthermore, stress was said by numerous participants to be a motivator where it could be good and a reason for one to change something in their everyday life.
It is always that thought back of your head that you have to push yourself harder. I mean it is not a bad thing pure say, but stress is what makes you go forward and helps to change you. (Male participant, FGD 4)

Again, several participants highlighted that stress needs to be balanced and that too much stress would lead to your brain shutting down, for you to lose memory and for you to have a hard time focus. Furthermore, according to many participants, you learn how to deal with stress by experiences and exposure to stressful situations. Where stress is a driving force that we all how to learn to identify and to create coping strategies with.

The art of coping: Coping mechanisms

The dominate idea from the conducted focus group discussions was that one needs to always have some kind of strategy to cope with stress. Without coping strategies, the present situation would only lead to more anxiety, worry and stress. One participant was shocked by how he acted when exposed to a lot of stress from his studies and the everyday life.

I was shocked by myself, when I punched the wall once, when being anxious and stressed. (Male participant, FGD 1)

Moreover, when describing how to handle stressful situations it was described by many participants to be inevitable to procrastinate and to postpone their obligations. When being exposed to a stressful situation, several participants expressed a concern in always procrastinating and wanting to change that approach in coping with stress. Many participants were aware of the disadvantage of postponing duties, but could not find a solution to stop doing that and how to handle it. The process of handling a potential stressful situation could lead to the process itself becoming stressful, as expressed in the following conversation:

Male participant: I need better self discipline... to stop procrastinating and show responsibility towards yourself.
Female participant: I agree; I think a lot of stress is caused by you not prioritizing things that you should prioritize. I mean, if you know that you have a deadline you should probably work on that before doing something else. But that is usually what you are not ending up with and
that causes you stress, even though you know that deadline itself is not that stressful but is it more how you handle it, that is stressful. (Male participant and female participant, FGD 5)

The importance in how to handle a stressful situation was highlighted by numerous participants and many expressed concerns in how they handle stress sometimes. Some participants mentioned, when trying to manage stress, this would sometimes lead to just feeling more stressed.

I try to organize, my life... very rigidly. Then I would be less stressed out... but when things get’s out of hand, things gets more stressful. Because you put all this work to organize it and then it does not’ work out... I realized that the best way is to be flexible. To just go with it, as crappy it is sometimes. (Female participant, FGD 2)

All participants expressed different ways of coping with their own stress. Some participants preferred to leave the city and go into the nature and just spend a whole day there to create a physical, as well as mentally distance from the stress in the heart of Tokyo. Others tried to organize and prioritize things to get a good overview in to handle one thing at a time. Further, some participants coped with stress by just emptying all their thoughts and to stop thinking about all their obligations. They could do so by being on their own, to listen to music, by running and/or smoking etc. The following quote and conversation sums up what coping methods means to many of the participants in the focus group discussions:

…it is important that you find a way to deal with stress and work on it and research on it. To find a good and appropriate method to deal with it and to stresses you off. (Male participant, FGD 2)

Female participant: You always have an option... there are always solutions. If you are really stressed, then you can question yourself; what can I do about it now?  
Male participant: Yes, as long as you accept it... people tend to adapt to things. (Female participant and Male participant, FGD 4)

Stress and coping methods were diversely identified and subjective. One participant explained how she looked at stress and her environment which reflected many participants believes about coping and stress, as follows:
...I would look at it more in that I pick something that I have to do and then my goal is to go for it... I have to do it, tough luck. That means that you might not get enough sleep, or get agitated but as long as you communicate that with your environment, they will know that you are stressed and that they should not take any offence and the same goes with other people. They are going through similar thing and you have to show a bit of understanding from both sides and each others stress. (Female participant, FGD 5)

**Balance is key – Stress is both healthy and unhealthy**

The last paragraph of the result highlights the balance with healthy and unhealthy stress and identifies different ways of looking at stress in one’s everyday life. Many participants looked at stress as something you need to keep in check and not let go out of hand. In one discussion, there was a conversation about a “switch off-button” to push when in need of regroup to deal with a stressful situation at a later stage. The stress would still be present, but, by not thinking about it, one is not adding more stress and anxiety to it, at that moment. Finding ways of looking at stress was subjective, where the following quotes explain how many participants looked at stress:

*Everything is poison, only the dosage makes it poison. That works with everything in life, where certain levels are good, but if it is too much, it burns you out.* (Male participant, FGD 2)

*If you do not put aside time for your health, you are going to have to put aside time for sickness.* (Female participant, FGD 3)

Additional, stress was considered as having an unknown negative health effect by several participants. Stress was often something that was not identified in an early stage, resulting in negatively impacting many participants wellbeing.

Female participant: “...we never get a healthy amount of stress... it is always too intense.

Male participant 1: Sometimes I do not really feel that stress is building up and then one day I would feel really bad. And not really understand why.
Male participant 2: "It is really weird for me... because I can not really detect my stress. It is definitely a possibility that you could lie to yourself and tell yourself that you are not stressed...” (Female participant and male participants 1 and 2, FGD 3)

Again, stress was seen as something that can consume and overwhelm one with the feeling of not being able to perform by many participants. The dominate idea from all focus group discussions was the importance of feeling in control and familiar with one’s own environment, and then to be able to handle stressful situations optimally.

*If we understand our setting, then I do not think we are going to feel stressed.* (Female participant, FGD 5)

*You have to learn how to focus on things you can control over, otherwise you will be eaten up by the society as you get older.* (Male participant, FGD 1)

**Discussion**

The aim of this thesis was to explore university student’s perceptions of stress and how they are able to cope with stress in Tokyo, Japan. This study intends to investigate young adults’ experiences and perceptions of coping with environmental stressors in an urban context.

The findings will be discussed and conceptualized with the transactional model of stress and coping (described in the introduction above), where stress generated through person-environment transactions are the fundamental factor for the discussion. Furthermore, the concept of stress was defined differently and young adults were identifying different, but similar factors as stressful. Also, coping strategies were outlined as diverse and perceived differently. Additionally, methodological strengths and limitations will be discussed with regard to the conducted focus group discussions.

**Interpretation and explanation of key findings**

The present study found that environmental stressors in an urban context have contradictive impacts, but foremost damaging influences on young adults’ well-being. A densely populated environment is generating several sources of potential threatening stressors for young adults (1–3). This is emphasized, when explaining the artificial environment in Tokyo and the
negative influences on psychosocial health of an urban population (4,5). As a student and a young adult in Tokyo, one face external stressors from the artificial environment on a daily basis, where one is dependent on that environment and at the same time want to escape it. Many participants from the study perceived their environment to be stressful itself, e.g. walking among crowds of people on the streets and being cramped into a small carriage at the train station. According to the transactional model of stress and coping (7,8) (further referred to as the conceptual framework) this is a primary appraisal of a stressor or threatening event. How susceptible and how severe young adults perceive these, are leading on towards how well one can cope with these stressors.

Several young adults from this study agreed upon the importance of social interactions and a supportive environment from friends and family etc. to cope with their stressful life’s. Student’s in Japan look at interpersonal relations as a key factor when coping with stress and this is also highlighted from this study where it releases stress and pressure from studies according to the participants (19,21,24). However, interpersonal relations are more complex where both the literature and the study agrees that pressure from family, teachers and co-student are a major source of stress for young adults in Japan (19,24). This has a lot to do with expectations that several student carries around from their family and from themselves. They want to do good so that their family can be proud of them and do good for themselves so that they can get that job they want etc. This aspect is also highlighted in the conceptual framework, where these interpersonal interactions could hamper beliefs about one’s ability to cope with situations and manage difficult emotions (secondary appraisal) (7,8). Just as a supportive environment is related to positive psychosocial and health outcomes, a non-supportive environment can adversely affect one’s ability to cope with a health threat. When key social support (like support from your family) actively neglect one’s disclosure of feelings about a stressor, coping efforts e.g. avoidance and adverse psychosocial outcomes can emerge and increase (7,8).

Young adult’s in Tokyo seems to be under a lot of pressure from different external factors from their environment and everyday life and where they do have none or few coping strategies to handle their situation. Exposed to financial pressure, time pressure and lack of sleep are prominent and inevitable factors that potentially lead to stress for young adults. From the present study, it is clear that several participants cope with all these sources of pressure and stress by trying to accept the situation and manage it by doing so. By handling
the situation rationally and trying to cope with the outcome can lead to positive health outcomes. Where having a sense of coherence would possible lead to physical and mental well-being for an individual (20). This approach could ameliorate high stress levels in different environmental stressors such as major incidents of social or personal adaptation to daily hassles (8–11). Moreover, the adaptation sequence itself could be stressful where one can often adapt to minor stressors without even being aware of them (primary appraisals). However, these stressors can sometimes be severe and threaten the everyday life (10). This was shown in the present focus group discussions, where participants expressed confusion in how to define and know how stress effects one’s wellbeing.

This study identifies that it is subjective in how each and one of the participant’s cope and perceive different potential stressful threats and the conceptual framework emphasizes this too. By pinpointing certain coping efforts, it is possible to see how the outcome of the coping strategy might develop and affect young adults wellbeing (8,18). According to the conceptual framework, problem management (strategies for example, active coping, problem solving and information seeking) and emotional regulation (strategies for example, seeking social support, venting feelings, avoidance and denial) are essential mediators to use when coping with stress (7,8). Numerous young adults in the present study identified themselves as procrastinating and avoiding stressful situations. Avoiding a stressful situation could lead to shifting attention from the stressor and minimize the stressor for the moment (18). But it might also hamper the will to develop healthier coping strategies and create more stress in the long run. Several participants identified this adaptation sequence as the most annoying and frustrating factor when coping with stress. Maladaptive strategies of handling stress, such as avoidance, was expressed as deteriorate the potential stressful threat.

Finally, the study recognizes several different sources of stressors in Tokyo where international students are especially exposed to. When faced with language barriers, cultural differences, may not be used to be living in a mega-city and external pressures, they are prone to an increased risk of a more demanding and stressful social environment and greater social disparities (1–3). This add additional stress to a already stressful life as a university student in Tokyo, where it is common that young adults and academics tend to compare themselves with their peers in terms of accomplishments (19,21,23). It is a stressful life where many students have a hard time in finding appropriate and suitable coping strategies. Because researchers have discussed urban societies to become interdependent and how they share
similar issues globally, it is reasonable to state that these factors can be identified by young adults in any urban context (4,5).

Methodological strengths and limitations
The present study always aimed towards upholding trustworthiness via these four features: transferability, dependability, conformability and credibility (31). These features were followed consistently during the research, where the researcher allowed time to familiarize with the research setting to better be able to understand the context. Additionally, the researcher conducted the research alone, which can be seen as a strength in the collection process where the researcher had total control over the structure and process of the focus group discussions. Hence, this also result in a lack of cross-checking the data and triangulation, which could lead to reduced credibility and dependability of the research (31).

Furthermore, the study has collected rich descriptive data about stressors in an urban context for young adults that can be further applicable to other urban settings. Researchers have discussed urban societies to become interdependent and how they now share similar issues globally. Research in an urban context can be applied in other urban settings because they share similar characteristics and environmental influences (4,5). Moreover, convenience sampling was used to maximize the range of information uncovered. These aspects and conceptualizing the data gives the study transferability (31). It is important tough, to mention that convenience sampling is susceptible to bias (26). Regarding conformability, there is again a lack of triangulation to eliminate data bias. Moreover, reflexivity by the researcher was practiced during the research when keeping a journal in which introspections where noted after each focus group discussion (31). Lastly, this study has a small sample of 23 participants, foremost international university students, divided on five focus group discussions which may be reviewed as having a lack of generalizability.

Recommendations for future research
As research on stress is dynamic and constantly changing it is significant to always keep on investigate and explore this field. The present study has foremost highlighted the need of investigating how environmental stressors can be managed by young adults. This is a field that needs more attention where coping strategies needs to be evaluated to better understand
the correlation between coping with stress and an individuals well-being. Also, it is of importance to further study people in cities and the health outcomes from living and breathing in an artificial environment, and to better understand how the urban environment may or may not impact potential stressful factors and how coping strategies effects one’s well-being and health. Finally, the present study interpreted the findings throughout the conceptual framework: transactional model of stress and coping, which suggests that outcomes of stress and coping process are decided by the interplay of situational factors, individual appraisals of a situation and coping strategies. The conceptual framework is useful when wanting to understand and analyze perceptions and reactions of stress. There is an identified desire from the present study to investigate stress and coping strategies with a research framework, to then be able to hold up or support a theory of the research of stress and coping with stress in an urban context.

Conclusion

The present study recognized diverse methods in how to cope with stress in an urban context. Which was highlighted by identifying different environmental stressors that young adults perceived as potentially stressful, that might threaten their health and wellbeing. In line with previous literature, this study identified interpersonal relationships as a major factor for young adults when exposed to different stressors. Interpersonal relations are significant when dealing with stressors, where it can both aggravate and/or ameliorate stress levels.

Throughout the present study, it also showed that the physical environment in an urban setting had negative impacts on young adults coping strategies and the resources they had to cope with stressors. As expressed in this study, artificial environments are supported by previous research to implicate and worsen exposure to stressors and stress managements. Lastly, the present study highlights through the conceptual framework, that the relationship between person-environment transactions are mediated by coping strategies and determines how well one can cope with the stressor.
References


27. Hennink MM. Focus group discussions [Internet]. Oxford University Press; 2013 [cited 2017 Mar 5]. Available from: https://books.google.co.jp/books?hl=sv&lr=&id=5DLLAgAAQBAJ&oi=fnd&pg=PP1&q=Understanding+Focus+Group+Discussions+Monique+M.+Hennink&ots=hlPSwYcRM&sig=B3WDDzHrSSOUm1aT0pJhx3V6_uA


Appendix

Appendix 1: Information leaflet

Looking for university students at Sophia University to take part in a research study on urban stress in Tokyo

Introduction: I am a student from Uppsala University, Sweden studying MSc in International Health. For my final thesis project, I am carrying out a study on urban stress in Tokyo, Japan.

Purpose of the research: To investigate university student’s perceptions of urban stress. The study will include social, economic and environmental stress factors in Tokyo.

Participant selection: Participants should be students at Sophia University and have lived in Tokyo for a couple of months.

Research intervention: During the research process you will be requested to take part in one focus group discussion with the duration time of 60 minutes.

Voluntary participation: Your participation in this study is completely voluntary. You have a right to withdraw at any point in time.

Confidentiality: The information you give will be confidential and will only be accessed by me as the researcher. The focus group discussions will be tape-recorded.

To be part of the study, email me at:
You are free to ask any questions concerning the study and participation.

Researcher: Martin Holmberg
Master’s student in International Health at Uppsala University, Sweden.
Exchange student at the Graduate School of Global Studies at Sophia University, Japan
Appendix 2: Information sheet

What are the perceptions of urban stress and what coping strategies are identified among university students in Tokyo, Japan?

Introduction: I am a student from Uppsala University, Sweden, studying MSc in Global Health and exchange student at the Graduate School of Global Studies, Sophia University, Japan. For my final thesis project, I am carrying out a study on urban stress in Tokyo, Japan.

Participant selection: You have been invited to participate in this study because your experience can help us improve awareness and increase our knowledge related to this topic. You are free to ask any questions concerning the study and participation. The information you give during the study will be used to raise awareness concerning this topic.

Purpose of the research: To investigate university student’s perceptions on urban stress. The study will include social, economic and environmental stress factors in Tokyo, Japan.

Because of the increasing urbanization around the world it is of importance to investigate how people can cope with the new urban lifestyle. How people live and cope with stress in an urban environment are questions you need to ask to cover the risks within urban public health.

Research intervention: During the research process you will be requested to take part in a focus group discussion with the duration time of 60 minutes. The research outcome will be published and presented at relevant academic conference at Uppsala University, Sweden. The participates are encouraged to read and take part of the result when it is published.

Voluntary participation: Your participation in this study is completely voluntary. You have the right to withdraw at any point during the research procedure, without any consequences for the participator.

Confidentiality: The information you give will be confidential and will only be accessed by me as the researcher. The focus group discussions will be tape-recorded and the tapes will be securely stored. The data will be coded and stored into a locked place in a cabinet at the researcher’s home. The researcher will keep the collected data until the research is done. The data on the tapes will be erased and the coded documents will after the project is finished be maculated.

Benefits: There is no direct benefit, but the information you give will help cause awareness.
Appendix 3: Focus group discussion guide

Introduction

My name is Martin Holmberg and I am a master’s student at the program in International Health at Uppsala University in Sweden. I am conducting focus group discussions about perceptions of urban stress as a part of a project for my master thesis.

Explain purpose and ground rules

Participation in this study could help increase the knowledge on urban stress and coping strategies how to handle stressful aspects in an urban environment. There will however not be a benefit for you personally.

The information about your name or identity will not be a part of the thesis and you will be completely anonymous. The focus group discussions and all information that you share will be strictly confidential and nothing will ever be traced back to you in terms of published words.

The focus group discussion today will take approximately 60 minutes and your participation is completely voluntary and you can choose to withdraw at any time without having to give a reason and without any consequences. If there are questions that you do not want to answer, you have the right to not answer them without giving a reason. The focus group discussion will be tape-recorded and the recordings will be kept at a safe location and I will be the only one with access to them. Please read the sheet with information and ask questions if there is something that you wonder about. Take your time:

- After the participants has read the information’s sheet, ask the following: Do you want to participate in the study and in the focus group discussion?

- If the answer is yes, continue by saying: Thank you for participating in this study about urban stress. Do you have any questions before we begin the discussion? (If there are no questions; put on the tape-recorder and ask again for full consent to tape-record the discussion).

Start the discussion with three introductory questions:

1. Introduce each other - Let’s share our first name and what you are studying. Share something you especially like about Tokyo.
2. What made you all chose to start studying at Sophia University? (Probes: Family? Own choice? Friends?)

3. Please describe a typical day for you as a student? (Probes: Commute? Study? Lack of sleep? Activities?)

Guiding questions
2. When you think about your environment around you, what stresses you then? (Probes: Traffic? Commuting? Crowds? Noise? Other student’s achievements? Does everyone agree that it is stressful?)
4. After you have finished your studies at Sophia University, what do you think will happen? And how does that make you feel? (Probes: Unemployment? Doubts about the future?)
6. Do you think stress can be both good and bad for you? If so, how would you describe that? (Probes: Keeping you going? Motivates you?)
8. Do you feel that you have control over your stress level, or can it sometimes be overwhelming? If so, how do you feel then? (Probes: Tired? Powerless?)

Closing question
Our discussion is almost over, but if you have just a few words, how would you summarize the discussion about stress in urban Tokyo?

Ending the interview
Thank you so much for participating in this focus group discussion. You have all shared valuable information that will increase the knowledge on urban stress and how to cope with it.
Appendix 4: Information about participants

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