

4-30-2020

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### Recommended Citation

Poerwandari, Elizabeth Kristi (2020) "Chats About Daily Traffic: Agentic Adaptability of Jabodetabek Commuters to Minimize Stress and Transcend Everyday Lives," *Psychological Research on Urban Society*: Vol. 3: No. 1, Article 14.

DOI: 10.7454/proust.v3i1.86

Available at: <https://scholarhub.ui.ac.id/proust/vol3/iss1/14>

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# Chats About Daily Traffic: Agentic Adaptability of Jabodetabek Commuters to Minimize Stress and Transcend Everyday Lives

Psychological Research  
on Urban Society  
2020, Vol. 3(1): 52-64  
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DOI: [10.7454/proust.v3i1.86](https://doi.org/10.7454/proust.v3i1.86)  
[proust.ui.ac.id](http://proust.ui.ac.id)

*Received: April 30th, 2020*  
*Revision Accepted: June 22th, 2020*

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## Abstract

With the increasing number of people invading Greater Jakarta and the ongoing improvement of infrastructure in Greater Jakarta or Jabodetabek, one of the challenges faced by the community is traffic congestion. Previous studies revealed the negative impact of traffic congestion on community welfare and mental health. Thus, the present study aims to shed light on how Jabodetabek inhabitants and commuters experience, make sense, and adapt to daily traffic congestion. Data were obtained from discussions in six WhatsApp groups, which included a total of 160 respondents. The study supports the findings of previous studies, that is, traffic congestion leads to increased costs and losses and causes distress. However, the subjective perception of time management enables commuters to adapt to the situation. Nevertheless, the paper presents a novel finding: agentic adaptability of Jabodetabek commuters, which is evidenced by the ability to discover various means of adjusting to traffic congestion. Although effective policies are required to mitigate congestion, the good news is that many opportunities for adjustment await the community in terms of being stuck in traffic.

## Keywords

Traffic congestion, adaptation, agency, creativity, time perception, Jabodetabek (Greater Jakarta)

**T**raffic congestion around greater Jakarta is an everyday experience and has thus become the subject of daily conversation. In the previous years, traffic congestion has become increasingly heavy due to the massive development of road infrastructure. As an illustration, the author can reach the Universitas Indonesia (UI) Depok campus within 1 h from Jatibening (approximately 26 km) using a taxi 4 years ago. At present, the author needs to allocate 2 or 2.5 h for the same route despite the use of different modes of transportation to shorten travel time. To do so, the author takes an online taxi to the

train station then catches the train to reach the campus. However, arriving to the train station alone requires passing through heavy traffic.

This experience is not unique to the author. A research conducted by INRIX (Cookson, 2018) assessed 25 major cities worldwide. The result showed that Jakarta ranked 12th in terms of cities with the most traffic congestion. Every day, commuters in Jabodetabek witness severe congestion due to the large number of cars and motorbikes parking on the sidewalk. As a result, instances of employees arriving late for meetings and social media posts about being stuck in traffic and being unable to reach destinations on time have increased.

The study intends to present a conceptual explanation of the abovementioned problem using the personal stories of Jabodetabek commuters regarding their experiences and adapta-

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tion in response to being trapped and witnessing traffic congestion. With the many impacts of traffic congestion, the researcher initially anticipated various responses about stress, frustration, and irritation. Although many answers were indeed relate to such accounts, the result suggests more instances of agentic adaptability, that is, the respondents reshaped their experience by presenting positive feelings, creativity, and humor.

The paper presents a brief review of previous research and theoretical perspectives to understand the actual implications of congestion (objective) and experience of respondents (subjective). The study then outlines the research methods, results, and conclusion.

### **Prior Researches and Theoretical Perspectives**

Previous studies have shown that economic growth and progress in infrastructure development in urban areas have forced villagers to move to the city in search of sustenance. Meanwhile, villages have also transformed into cities, such that the majority of the population, subsequently, will live in cities. This transformation will present new challenges, and the study focuses on future challenges in these urban areas.

A significant number of researches have been conducted regarding stress and various challenges in urban areas. Others focused on neighborhood and residential densities in cities. For example, Gong et al., (2016) conducted a literature review and found associations between urban environments and psychological distress. The authors pointed out that the neighborhood, absence of green spaces, industrial activities, and traffic congestion can cause distress. They also found that the urban environment can influence psychological wellbeing when people are exposed to physiological stressors (e.g., noise and pollution), as well as the social surrounding, which may provide support or, on the contrary, present social labeling.

Given the large flow of urbanization, which also influences the emergence of pockets of poverty in urban areas, many researchers endeavored to specifically examine poor communities in urban areas. Other studies focused on the problem of lack of greenery and the need for additional green areas, which was proven to

present many benefits. The first benefit is related to the reduction of pollution and promotion of a healthy environment, whereas other benefits are related to psychological comfort.

Distance between places to live and those of activity is one the main factors in the urban setting that forces many people to commute on a daily basis despite traffic congestion. Thus, the present study specifically examines the impact of congestion and various forms of adaptation or responses developed by commuters. This section provides a review of the literature related to the topic.

Chowdhury et al., (2013) described the term commuting as a situation where people must specifically and regularly cover a certain distance from the place of residence to the workplace. However, previous studies did not define distance or length of time, but discussed, among others, the "status of commuting" (Filipi, 2014). This concept pertains to the measurement of distance and length of time required in relation to various variables. Moreover, it compares between the minimum and actual average commute to measure the efficient or excess time spent from home to work and vice versa (Chowdhury et al., 2013). With this concept, the majority of Jabodetabek residents with regular activities and those who take relatively fixed routes to work or undergo other regular activities can be classified as commuters, unless they live very close to their workplaces or places of activities.

A significant number of researches have been conducted to investigate the impact of the situation, characteristics, or responses of drivers on driving and road safety. Conversely, the influence of the traffic situation on driver stress has been studied, as reported by Taylor and Dorn (2006) and Stephens and Groeger (2006). However, the current study intends to shed light on the responses not only of drivers but also of passengers in relation to traffic congestion. Therefore, results related to commuting and traffic congestion will be presented from both perspectives.

In general, previous studies pointed out negative relationships between commuting and psychological wellbeing. The report of UK Royal Society for Public Health (2016) used the term "time scarcity" or "time crunch," that is, a difficult situation for individuals who continually

struggle to seek a positive work–life balance due to the extremely limited time available in the urban setting. Commuting leads to reduction in the time available and spent for food preparation, exercise, family, as well as sleep. Holland (2016) concluded that commuting has indirect effects, such as increases in snacking (up to 32.8%) and fast-food consumption (28.9%).

In addition, Holland (2016) found that traffic congestion increases travel time, fuel consumption, and uncertainty of arrival time. Furthermore, it increases pollution emissions and driver stress, which exert an impact on the reduction of life satisfaction.

Nomoto et al., (2015) found that the long time allocated for commuting was associated with less sleeping hours and short working hours. The findings may explain why individuals frequently stuck in long commuting hours report an increased rate of absence and sickness, as supported by the findings of Ala-Mursula et al., (2006).

The abovementioned results can be associated with those related to body fitness. Chng et al., (2016) argued that physical activity and physical fitness are negatively correlated with commuting distance. In turn, Hoehner et al., (2012) and Flint et al., (2014) concluded that commuting distance may lead to increased body mass index and obesity.

However, studies that directly explained the negative relationship between commuting, traffic congestion, and psychological wellbeing, which may provide an indication of several factors, are lacking. For example, Lorenz (2018) found no evidence that commuting is in general associated with low levels of life satisfaction. In contrast, long commute times are merely related to less satisfaction with family life and leisure time.

With the different modes of commuting, the impact of such modes should be specifically examined. At the same time, results from such studies should also be considered according to two modes, namely, passive (being a driver or a passenger) and active, which refers to commuters who are physically engaged in the route. This mode can pertain to walking or cycling or any means of commuting that engages the body parts to pursue and avail of the passive mode of transportation. Chng et al., (2016) proposed that walking is correlated to high levels of life satis-

faction compared with car use. Martin et al., (2014) analyzed a large data set of 17,985 adult commuters and found that active commuting is associated with positive psychological effects.

In terms of gender, the UK Royal Society for Public Health (2016) purported that women are more likely to be in “trip-chains,” carry out multiple tasks, and required to accomplish various needs during commuting, such as buying grocery, collecting children from school, and completing other chores. This expectation potentially leads to increased distress among women. Moreover et al., (2004) conducted a natural experiment to elucidate the experience of commuters who use mass transit transportation. Although the authors did not initially consider gender, they found gender differences for an especially vulnerable sub-group of women. That is, women with children are more sensitive to the hassles of commuting.

Meanwhile, Roberts et al., (2009) scrutinized gender differences and similarities in commuting in the UK. The authors suggested that women in general have shorter commuting times than men. Despite this finding, however, commuting remains more stressful for women and imposes more serious negative effects on wellbeing. Analysis pointed to women’s responsibilities for day-to-day household tasks, such as child care, in addition to stress from commuting.

### *Commuting Paradox and Time Perception*

Stutzer and Frey (2008), Mattisson (2016), and other researchers investigated long trips and traffic congestion from the perspective of economy. The authors proposed that commuters should be willing to travel far because they are compensated for the situation. However, the findings suggested that commuters do not feel compensated and have to deal with increasing costs, from economic (expensive transport costs) to “non-material” costs, such as deteriorating health and psychological wellbeing. Time for oneself and with family and significant others has also become very limited due to the long distance for travel and traffic. Thus, the authors concluded that commuters face a “commuting paradox” (Stutzer and Frey, 2008, p. 19), which yet fails to provide an explanation of the results where commuters bear losses.

Therefore, the current study infers that an

answer may be provided from a different perspective that purely deviates from the calculation of economic or objective costs. Li (2003) carried out an interesting study by assembling a stream of research through the concept of time perception, which is subjective and psychological. Referring to Roecklein, time perception is defined as “the attention to, or apprehension of, change through the integration of a series of stimuli and characterized by the ability to conceive of duration, simultaneity, and succession” (Li, 2003, p. 43). Based on the definition, the construct differs from the concept of time, which is physical, material, and objective.

The subjective experience and perception about duration of waiting or traveling differ from objective time. With regard to commuting and especially to traffic congestion, understanding that the same experience can be interpreted or felt differently by various individuals is important. Time perception and its use are not an objective conclusion. Rather, both concepts are dependent on the situation. In contrast, the subjective experience of time is dependent on the content of time periods (whether empty or filled), activities (temporal or non-temporal), and the person’s characteristics (personality and feelings about aspects related to time used) (Li, 2003, p. 44).

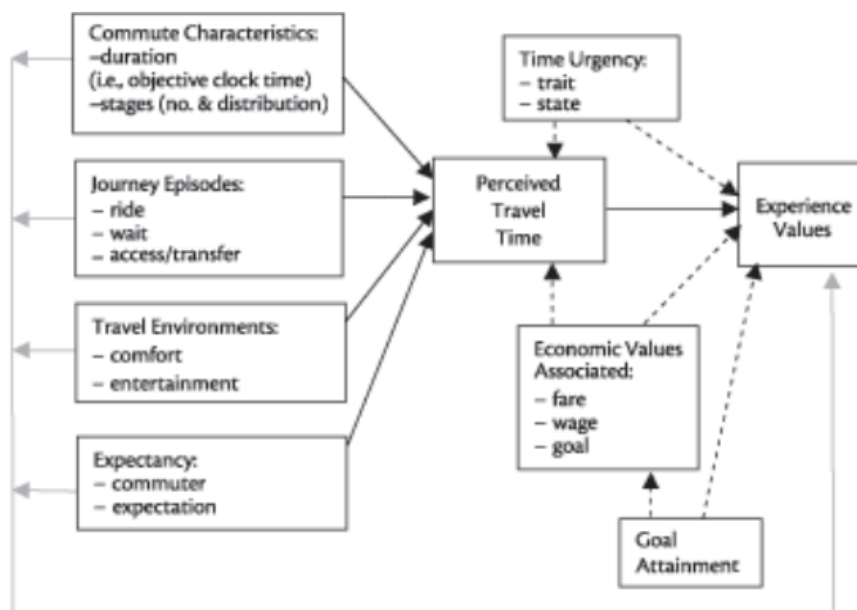
Li concluded that certain episodes of a route are imprinted in the memory of commuters. In

other words, extreme events are easy to remember due to the influence of the effect of a particular moment. Such events may be a peak-positive experience (being helped by the bus driver) or a very negative experience (getting no seats and waiting under the hot sun). In addition, time perception is frequently influenced by experiences near the end of the route, that is, the “end snapshot” (Li, 2003, p. 56). For example, when a person came late and missed the bus, the scenario may elicit a strongly negative mood, which may in turn overwhelm the person’s evaluation of the route.

### Human Agency

Another important perspective is human agency (Bandura, 2006). Bandura suggested an agentic theory of human development, adaptation, and change, which is relevant for the conceptualization of the manner in which urban communities, in particular commuters, construct their situation to present new experiences and ways of life. According to Bandura, human beings possess the four core properties of agency, namely, intentionality, forethought, self-reactiveness, and self-reflectiveness. Human functioning is not only determined by situational influences, but is also “a product of a reciprocal interplay of intrapersonal, behavioral, and environmental determinants” (p. 165). Therefore, the present

Figure 1. Time perception model of evaluating the urban commute experience (Li, 2003, p. 57)



study also examines how commuters adjust to related challenges.

To explore Bandura's suggestion, the present study refers to the analysis of Williams (1999) on human agency. According to the author, humans cannot determine their wants at the onset, and many things are out of control. Numerous random events happen; however, human events, such as responses to situations are meaningfully connected because humans act with reason. The meaning integrated into life preserves agency and morality. Experiences, values, commitments, and desires become grounds for conduct—in this case, responses to problems, such as traffic congestion. Given the grounds of conduct, choices become narrowed and limited on the one hand or free from all constraints without agency on the other hand. According to Williams (1999), humans are caught in a genuine dilemma between how to act and respond to a situation. Agency is not considered similar to mere choice because it manifests in meaningful and truthful ways of living. Thus, humans tend to evaluate and make judgments preferred and considered better given the existing limitations.

An interesting illustration of the agentic capabilities of human beings may be taken from the findings of Lee (2015), who observed that the traffic situation in Jakarta is chaotic and called it "absolute traffic." Infrastructure is unable to support the very large population, commuters, and their activities. However, road users with agentive behavior address the situation through ways of survival that present a new social life. People become acquainted, take opportunities from, display a sense of humor, and seek pleasure in situations outside their control.

## Methods

### *Using Social Media and WhatsApp for Data Collection*

With the advent of the Internet and social media, people have used social media and text-based media on mobile phones to socialize and communicate. Several studies examined the role of the different social media in society. Boczek and Koppers (2020) tracked how WhatsApp is used to spread news, whereas Imran et al., (2019) determined the extent to which social

media facilitates and promotes knowledge exchange. Naeem and Khan (2019) found that social networking applications, such as Facebook, YouTube, WhatsApp, and ResearchGate, are largely used for knowledge sharing in university settings. Furthermore, Naeem (2019) proposed that social media can be used to foster communication, enhance knowledge, promote a knowledge-sharing culture, and increase skills as well as involvement in research activities.

Most studies argued that the majority of people who use social media are young. However, Matassi et al., (2019) pointed out the enormous popularity of WhatsApp in Argentina across age groups, even for those over 60 years. People use the app to facilitate working activities as well as for personal and social matters with friends and family. A review from Chen and Neo (2019) revealed that 91% of the adult population in Singapore use mobile phones, and 73% of the population use WhatsApp. Based on these observations, WhatsApp is widely used for various purposes in Indonesia, including middle-aged to seniors.

The popularity of social media and its ease of application have led researchers to consider its use as a method for collecting data. Moore et al., (2015) assessed the effectiveness of online focus groups to examine access to housing and financial services. With their reflection on this method, which has its advantages and limitations, the authors proposed the use of such method for various fields in social studies. Furthermore, Seligmann and Estes (2020) proposed that social media can be involved in ethnographic studies and that different media might present various forms of data engagement.

Gibson (2020) shared a previous research experience about participants being reluctant or ashamed to speak in face-to-face meetings, although they might have rich data to share. The author then conducted interviews with young people using WhatsApp. In general, the author concluded that this method rendered participation easy for respondents. Other participants explained that through text, they were able to convey more personal stories than face-to-face interviews. In fact, other respondents continued to contact the author and provide additional information or material even after the interview was concluded.

In contrast to Gibson (2020), Chen and Neo (2019) mediated focus group discussions (FGDs) through social media to replace face-to-face FGD and verify the effectiveness of this method. For comparison, the authors then conducted FGDs in person and via WhatsApp on the topic of household item reuse and waste management in Singapore. The study participants varied in age. The study found that out of the two face-to-face FGDs and two FGDs in WhatsApp, only one discussion through WhatsApp was the most interactive.

The participants were then queried regarding their willingness to participate online. Apart from interest in the topic, they relayed that participating via WhatsApp was easy because it can save time and money and does not require traveling. Furthermore, they can carry out other activities during the discussion. In summary, Chen and Neo (2019) concluded that WhatsApp enables the generation of elaborate responses and group interactions. This finding is in accordance with the literature review conducted by Chen and Neo (2019), which cited that the comparison between face to face and online methods does not simply indicate that face to face is always better because each method has its weaknesses and strengths.

Richard et al., (2018) found that online data collection methods did not reduce the number of responses compared with offline ones. Furthermore, online methods enabled participation from people with difficulty being involved offline. Furthermore, Gibson (2020) noted that many online participants felt able to discuss personal matters and were more willing to disagree with others than face-to-face participants. Woodyatt, et al., (2016) reported similar findings after utilizing online FGD.

Substantial amount of research have explored the effectiveness of online data collection, whether synchronous or asynchronous. In addition to the abovementioned studies, Abrams et al., (2015), Apgar (2020), Brügger and Willems (2009), Moore et al., (2015), Reid and Reid (2005), and Stewart and Williams (2005) can be used for further reference.

Against this background, the current study used WhatsApp for data collection. The study expects that WhatsApp users can share their experiences of dealing with traffic congestion and their manner of adjusting to the situation

without the constraints of face-to-face interviews. Notably, data collection using the online method largely facilitates participation without reducing the quality of findings.

The paper presents data collected through informal conversations in six WhatsApp groups in which the author is a member. These groups comprise Clinical Psychology lecturers (23 participants), a qualitative research teaching group (11), a teaching group on the philosophy of psychology subjects (6), a UI gender studies alumni group (66), and alumni of the UI psychology faculty batch 1982 (54). The total number of participants reached 160, where the majority are female. The participants are adults aged mid-twenties to sixties. Referring to the context of the study and the definition of commuting (Chowdhury et al., 2013), the majority of existing WhatsApp group members can be classified as commuters.

The researcher initiated the discussions as informal group conversations, which took place in September 2018. The questions posed were simple: Have you experienced traffic congestion? How frequent? Have you been caught in a bad traffic congestion? At the time, were you a driver or a passenger? How did it feel? What was the impact on you? What was being done? How do you generally adapt to traffic congestions? The participants were also asked to rate the extent of the impact of traffic congestions on psychological wellbeing according to their subjective assessment. The answers ranged from 0 (absolutely no impact) to 10 (highly impacted).

The simple questions led to many interesting and unexpected answers, which presented a different perspective and will be described in the following sections.

## Research Findings

### *Daily pictures and worst congestions*

Time spent in the middle of heavy traffic can be more severe than times spent during smooth traffic. Such is the case that congestion on an ordinary toll road, which is actually a freeway, can exceed expectations. In worst cases, people then tend to ask “You pay the toll and immediately get stuck ... until the toll exit. So, why do we have to pay for the toll?”

The participants recounted stories about the

daily situation they face and explained their struggles as commuters. Many of the participants have to leave home very early and return at midnight. A few of them relayed special situations during severe cases of traffic congestion as follows.

I will be sleeping, then waking up, then sleeping, then waking up again .... I already tried all alternative routes ... I was like crazy went around, jumping between 3 provinces–Jakarta, Bogor and Banten–to find the faster one to get home. All were the same. It feels frustrating.” (female)

Train is the mode of transportation frequently selected because it is convenient, fast, and cheap. During rush hours, however, the train is unimaginably full, such that people cannot enter; once inside, getting out can become extremely difficult. Such a situation is dangerous because people can be trampled, fallen, and injured, apart from the possibility of losing items due to falling or pickpocketing.

Since my family and I decided to return to Indonesia, I began to feel the severity of travel as a Bogor–Jakarta commuter. If I teach at 9 am in Salemba, I have to leave home (to the Cilebut station) at 6 in the morning. If I leave the office at 4:00 p.m., then take the train, I will arrive home at 7:30 p.m. or even 8:00 p.m. It's the most crowded hour on the train, often I can't get into the train. So, I often choose to wait until the next 2 or 3 trains. So, I often choose to catch the train later in the afternoon or even after Maghrib (at 18.30). I arrived very late and tired. (female)

The participants also shared the worst cases of traffic congestion experienced in particular situations, such as going home for Lebaran (New Year) or during accidents. The behaviors of commuters that disobey traffic rules, such as driving against the regulated direction, can frequently cause severe congestion.

To address the situation, the participants tend to remain occupied during traffic. For example, mothers generally use the long wait time by feeding their child, lulling the child to

sleep, or helping the child learn to read.

I spent 3–5 hours on the road for the Bekasi–Jakarta return and now for the Bogor–Depok–Jakarta return. I babysit in the taxi or in our car. When the baby became a toddler, we brought her to our parents' house, and then I would continue to ride a motorcycle to work. (female)

Because we have to travel that way every day, we are ready with food, drinks, and other items needed in the car, including blankets and pillows. Because I was with my children, I made quality time for chatting or my children would do their school assignments while I read. I remember my father used to teach us to do dzikir (praying) to practice breathing. He said it is necessary for us to be more patient. (female)

Many participants cited that arbitrary behavior and violation of traffic rules are frustrating. This scenario includes breaking rules due to being stuck in traffic, which serves to worsen the situation.

I am a person who obeys rules and is patient. I often experience traffic jams on the road, and the traffic jams disturbed my previous plans. What I regret the most is that, due to traffic jams, most road users have violated the rules (either reversing the direction, arbitrarily grabbing the lane). The main thing is people seem rude (their conscience is not functioning). As a result, congestion gets worse and more difficult to deal with. If there is no traffic police or transportation agency that regulates traffic, it will be very chaotic. (male)

I am more disturbed by those who are not following the regulation and do not think about others. The motorcycles are against the flow and break through the red lights most often. Meanwhile, there are occasion when people drive really slow, they take photos/videos or simply slow down when there is an accident to watch. This is very frustrating, they do not help; they even make it more jammed. (male)

Severe congestion and situations on the streets can present various problems, such as a



decline in health and loss of valuable time with family and significant others.

I once felt tense because I was so upset about being stuck in traffic; I was feeling dizzy and nauseous until I vomited. (male)

I often got bladder inflammation because I can't urinate when I got stuck in traffic. (female)

It's the most crowded hour on the train, often I can't get into the train. Also, at this hour my suffering on the train is also higher because people would push each other and the risk of injury for me would be greater due to a history of my knee injury. (female)

Congestion also makes me sleep less. Because I am not a "morning person" who can sleep fast and get up very early to work, I tend to continue working at home until near midnight. There are other things that make me not really like riding cars and choosing to ride the train. My digestion is weak and I often get sudden diarrhea. (female)

My time with children is greatly reduced. Communication technology can indeed be used, but still it is with different values and benefits compared to face-to-face communication. The most difficult thing for me is losing the opportunity to cook dinner with the children. (female)

### *Subjective Assessment of Impact of Traffic Congestions on Psychological Well Being*

The participants experienced obstacles on their routes and undergo periods that can be very long, tiring, and disruptive of daily activities and plans. Nevertheless, the participants' assessment of the extent to which congestion has influenced their psychological wellbeing is interesting. This section explains how time perceptions are subjective, including time spent or wasted in traffic. In addition, this finding introduces the understanding that a purely "objective" and materialistic approach will fail to elucidate why people remain willing to face traffic congestion every day, although the situation is not materially compensated.

As stated in the Method section, the participants were asked to assess the impact of traffic congestion on their psychological health on a

scale of 0–10 (from absolutely no impact to very negative impact or very high stress). Faced with similar situations, scores given by the participants can vary on the extent to which traffic affects psychological wellbeing. Interestingly, they provided not only responses through scores, but also explained the score given.

11 (eleven) if possible .... Many riders don't care about other road users. The wrong ones are angry at those who follow the rules, they are nudging other people's vehicles and even do not say sorry. (male)

I am happy if I can have the assignments to do field research in an area or city in the district because the streets are very quiet and airy .... Far from distress. My point is 8 (eight). (female)

My point is 7 (seven), it plays a role. Annoying. In the past when I came home from work, I was tired and stressed out, but on the streets, it was very jammed, so I got even more upset. (female)

It varies with everyone's judging, if it's like me who is patient enough, I am on the point of 4 (four). (male)

If there is no traffic congestion every day and the distance is not too long it can be 4 (four) or 3 (three). If I face it every day and my house is in Bekasi, it will be higher. (female)

In a relaxed and unhurried condition, if I ride a motorcycle/grab bike, I will be on the scale of 2. If I am in a hurry, and take a motorcycle taxi it increases to 7. (female)

7 (seven). This is with the note that my trip is generally not on the road which is often badly jammed. Last year before returning to Sentul's house, every time I go to and from Depok, I have to pass the JORR toll, so the score for that time was 8 or 9. (male)

I am on 5 (five) .... Thanks to Bach, Beethoven, Mozart, Vivaldi etc. Oh yeah, just remember, I'm going to the campus driving south. So, if it's sunny I can see the mountain Salak, which is very beautiful with light blue sky and a little white cloud. (male)

Individual assessment of the impact of traffic congestion varies with subjective perceptions, such that the leveling effort becomes less meaningful. The abovementioned quotes are subjec-

tive assessments that enhance the understanding of why a participant does not consider traffic congestion as having an impact on psychological wellbeing or vice versa.

To further elucidate subjective experiences and assessments, Li (2003) explained that the perception and use of time are situational. An individual's affective mood will have an effect on judgment because it influences information recalled from memory. Individuals in a good mood, for instance, tend to retrieve positive information, which leads to a positive direction in judgment congruent with mood. Therefore, the judgments of urban commuters during congestion are influenced by affective states during the route.

Commuters who wait while stuck in traffic congestion or for transportation to arrive are subject to unoccupied time and thus acutely aware of the passage of time. They become attentive to cues, such as the number of times of going to the toilet, whether beautiful scenery is passed or contrarily, and waiting in slums and under the sun. Therefore, commuters' time perception will differ, that is, the subjective time may be longer than objective time. Boredom or discomfort may lead to an overestimation of temporal judgment and perception of its impact on psychological wellbeing.

When the experience of traffic congestion can be extremely annoying, however, the participants responded with more nuances of positive emotions than negative. This notion is reflected by the use of positive emoticons compared with negative emoticons. In general, the participants related many stories as jokes or simply viewed the humor in their experience. Emoticons reflecting positive emotions outnumbered the negative ones, thus indicating joy, enthusiasm, content, excitement, amusement, humor, and even gratefulness.

The lesser number of emoticons pertain to negative emotions, which reflect fatigue, saturation, aggravation, anger, and exhaustion and exert an impact on the physical self, that is, "as if being trapped in unbearable situations." Meanwhile, others described negative situations but expressed calm and resignation. Several emoticons were difficult to classify into positive or negative ones. Thus, the study classified them as neutral and deemed that the message to be conveyed is that being stuck in traffic is an

unbearable or "unreasonable" situation. Nevertheless, the participants reacted with a sense of humor to improve mood or, at the least, without intense anger or other negative emotions.

### *Agentic Adaptability*

As previously pointed out, Bandura suggested the agentic theory of human development, adaptation, and change. This concept is evident in the manner that commuters reconstruct the current situation to maximize being trapped in "absolute traffic." The commuters displayed intentionality and forethought as well as self-reactiveness and self-reflectiveness.

You need to bring a powerbank and have your mobile phone with battery charged. Check Google Map.

As a driving person I anticipated that Jakarta would be stuck. I take that attitude so that I don't get too stressed on the road. Radio is a very entertaining friend. Not because of the song but because the topic or silly chat is not important but entertaining. Although physically tired, it keeps the mood positive. (female)

Combining "time perception" with the approach of Bandura (2006) regarding human agency is interesting and important. This notion is clearly discernible from the responses. Li (2003) stated that one important factor is the expectancy of individuals. Urban commuters adjust or attempt to adjust to situations as a result of daily routine activities. A significant number of commuters may adopt future-oriented attending, such that they can discover new means of filling time, reducing boredom, and continuing to benefit from wasted time.

I drive myself. If I go to the office in Sudirman from Jatibening I always carry a book. The toll road is jammed, so I just read the book .... If you are stuck in traffic jams and you don't do anything you will be very upset because it wastes useless time. By reading books, resentment is gone. (male)

I often read e-books on the Transjakarta bus and listen to music from my cellphone while enjoying the hurt on my leg because I have to stand for several hours. While riding ojek,

I will look around and pay attention to people passing by, watching people chat, and seeing houses that are being passed. If it gets stuck right in the narrow alley we can even see inside the living room, I like watching people and their activities. (female)

When riding a motorcycle to go to campus, I feel upset but try to enjoy, look around, left and right, while recognizing the roads and locations, and what buildings are being passed. Or learn to know new roads when the driver suggests turning around looking for an alternative way. To prepare just in case I get lost in the future. (female)

Time spent on the road can be perceived as "me time" for reflection and enjoying oneself or it can be used for hobbies and improve certain skills. Several participants admitted to knitting, viewed the route as "me time," and exerted effort for pleasant pastimes during traffic.

If it's jammed, I open my cellphone and watch Korean drama videos on my cellphone. Now there are gadgets that really help overcome the frustration of traffic jams, as long as there is enough signal. Before there were gadgets, it was funny to listen to the radio, simply to reduce the level of stress. (female)

I also sang .... I even recorded and kept asking for friends' opinions about my voice. (female)

Human agency is even displayed in spiritual conduct and feeling of gratitude, which is in agreement with Williams (1999) who stated that people can choose better and useful choices despite limited options.

"I often take a taxi, and while being stuck I will be praying, especially I read Qulhu continuously. It feels like it's becoming easy and smooth. (female)

If I am going home when it's jammed, I am still grateful to be in an air-conditioned car —since on the other side there are people in motorbike carrying small children and goods. After Eid, villagers go home on a truck, but they look happy. (female)

... And in the morning if I am alone in the car I also use it for the prayer of 1 rosary, no

more than 15 minutes. (male)

Williams (1999) stated that human beings with agency face dilemma and make useful, or at least, mentally pleasing choices. For aspects that cannot be controlled or are out of control, adapting by nurturing a positive state of mind seems to be the best path.

## Conclusion and Recommendation

Commuting and especially traffic congestion present a variety of risks or costs, which are deemed insufficient for consideration from the economic perspective. That is, transportation costs can increase sharply (by resorting to other modes of transportation that are comfortable and safe, cost of gasoline, and the need to spend more money, such as buying snacks and coffee during the wait). Notably, considerable time is wasted, and additional time is required to regain energy for work. In addition, individuals can experience various health problems, such that others need to take a leave from the workplace or spend money on drugs and health care.

From the non-economic perspective, commuters experience distress and fatigue when faced with long journeys and traffic congestion. Further problems can also emerge due to reduced time for family and socialization, further impacting the possibility of decreasing harmony in personal life and family life. In women, the stress and impact of the decline in psychological wellbeing are more apparent, which is related to social work and gender roles (in addition to earning a living). In other words, women are associated with plural demands, which increase pressure and reduce personal time.

The results indicate that equating long and far trips or commutes with traffic congestion is inappropriate because they two different concepts. Data show that participants are less mindful of the long journey when the trip is smooth, but are more disturbed by traffic congestion.

Clearly, time perception is subjective and influenced by various factors, the environment, and the specifics of the traffic situation. Meanwhile, individuals are capable of meaning construction as evidenced by the different reasons provided regarding their assessment of the impact of traffic congestion on mental health.

The study contributes to the literature on the

ability of participants to respond positively and minimize the psychological implications of stress due to traffic congestion. Minimization of stress and maximization of time wasted during traffic congestion stand out among the responses. A relative number of participants have anticipated and made a variety of mature preparations, such that they can fill the time with various activities to remain productive during traffic. Despite the difficulty of maintaining productive activities, many commuters devised new means by listening to music, dressing up to boost the mood, seeing the positive side of the trap (beautiful scenery), interpreting it as “me time” and time for reflection, even prayer. This aspect strongly explains the presence of agentic adaptability.

Another contribution is that the research findings support the subjective experience of time perception, which is in line with the perspective of human agency through accounts and stories in which people positively shape experiences. The time perception approach is promising when used to take into account different perspectives of the research on transportation. It also leads to creative ideas for policy formulation and design of transportation systems. Meanwhile, the perspective of human agency can be integrated through different points of view by viewing humans not only as victims of a system or structure, but also as thinkers of material-economic aspects. Human beings are self-organizing, proactive, self-regulating, and self-reflecting. They are contributors to life circumstances, not mere products of such circumstances.

Nevertheless, traffic congestion leads to many disadvantages and costs from the economic and social-psychological points of view. Therefore, effective policies and designs to solve congestion problems remain necessary.

Meanwhile, in terms of research methods, a reflection of the study indicates that using WhatsApp seems to invite adequate responses from participants, thus becoming a means of retrieving data in a sufficiently accountable manner and in accordance with the present characteristics of urban society.

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