

One Direction

Andrew Azzopardi¹, Gottfried Catania² & Paulann Grech³

¹ Dean, Faculty for Social Wellbeing, University of Malta, Malta

² Deputy Dean, Faculty for Social Wellbeing, University of Malta, Malta

³ Associate Professor, Faculty of Health Sciences, Malta

Correspondence: Paulann Grech, Faculty of Health Sciences, University of Malta, Malta. E-mail: andrew.azzopardi@um.edu.mt, gottfried.catania@um.edu.mt, paulann.grech@um.edu.mt

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Abstract

This paper draws on the data from the study commissioned by the Faculty for Social Wellbeing (University of Malta) in 2023 called *'The perceived effect of traffic on our wellbeing amongst the Maltese Population'*. It seeks to navigate around the seeming impact of traffic on the populace, in terms of social wellbeing. In this paper, we will be revealing that there are no two ways around this phenomenon. What we will be referring to as the 'traffication' in our communities is having a major impact on our standard of living. In other words, the commodification of our communities, and car ownership as one of the indicators, is starting to leave an indelible mark on the livability and quality of life of its citizens. The liminality of progress and economic affluence in relation to our quality of life is the tension that will be debated in this epistemological-driven piece of work. The paper will attempt to confer the research question that livability and improved quality of life depend on re-negotiating a lifestyle which is not car-centric.

Keywords: traffic, quality of life, wellbeing, frustration, challenges

1. Introduction

Without a measure of doubt, traffic in Malta has a significant impact on our lives and the livability of our communities. The liminality sees two contrasting realities: one that states

that having a car and a busy life are indicators of quality of life, and on the other hand it is, as the data collected in recently published research by the Faculty for Social Wellbeing shows, a complex and multifarious situation. This is compounded by another study that the Faculty commissioned in 2020 which looked at a number of mitigating factors that impact our lifestyle, traffic being listed among them. Andrew Azzopardi, Dean of the University's Faculty for Social Wellbeing, who commissioned the survey, is quoted in the Times of Malta (6/12/20):

"...that even though public transportation is also an indicator of a growing economy but there is increasing evidence that is creating uneasiness and distress in our communities and simply improving our infrastructure is not good enough."

In fact, in the Opinion Survey commissioned by the same Faculty, the following was reported:

Participants were asked about how problematic they consider traffic to be...The majority of respondents (38.8%) consider traffic to be a very big problem, whilst only 12.3% said that they do not consider traffic to be a problem. ...Traffic was considered more problematic for participants who were female, aged between 36-45, persons with a primary level of education, respondents with four or more children, and those residing in the Northern district.

Owning a car can simply have a utilitarian reason but has also developed into a commodity that for some or more may indicate socioeconomic status - this is further compounded by the brand, model, and level of luxury. For others, owning the economy model or the environmental models are status symbols in their own right. In other words, the acuity of car ownership as a status symbol can mean different things to different individuals. What is true however is that the car has become a protagonist in our communities. In this regard, Gartman (2004) has made reference to John Urry's work. The latter has helped us to understand how we have come to think about cars, the role they have in our communities and the way we steer the way we live. He suggests that:

Sociologists abandon their idea of the car as a thing, a simple object of production and consumption, and look at it as a system of interlocking social and technical practices that has reconfigured civil society (Gartman 2004, p.149).

This Kafkaesque social condition brought about by ‘traffic’ is reminiscent of a confusing, illogical almost absurd situation conveniently buried under a heap of bureaucracy. The State seems to be in oblivion snared by an almost open secret that there is no hope of resolution and only minimal and minor knee-jerk reactions are taken to deal with this matter. In the Faculty for Social Wellbeing *Unity Gazzetta*, Dr Gottfried Catania (2023, p.20) states:

Infrastructural issues related to the situation are complex and difficult to address – the rapid increase in population and related increase in number of cars on the road these past few years, as well as the roadworks being carried out all over the island in the hope of improving the situation but impacting traffic flow in the meantime, have definitely taken their toll on the deteriorating traffic situation. The inconsistency of the public transport system, even though it has been made free of charge for all Maltese citizens, means that few drivers consider this as a viable option to using their private cars. As a result, we might need to look elsewhere in order to find effective solutions for the problems caused or aggravated by ever-increasing traffic.

Catania’s statement links to perfection to what the graph with the question, ‘How problematic is traffic?’ taken from a study in 2020 and quoted in *The Times of Malta* (Calleja, 2020) illustrates, and how the sample (made up of 600 people surveyed) ‘spoke’ about the impact of traffic on their lifestyle. 38.8% and 13.8% view traffic as problematic or very problematic and only 12.3% and 11.4% say that it is ‘not that bad’. This is further mitigated by the fact that the use of the private car is on the increase. As expected, this has led to a number of problems in the community, namely environmental, social and economic. The increase in the use of vehicles, especially private cars has led to the contribution to toxic and damaging substances in our atmosphere:

The number of motorised vehicles in the world grew from about 75 million to about 675 million between 1950 and 1990. Around 80% of these vehicles were primarily used for personal transportation, i.e., cars and motorcycles. The amount of passenger-kilo- metres by private car per capita increased by 90% (from 4,620 to 8,710 kms) in Western Europe between 1970 and 1990. (Linda, p. 27, 2003)

The major debates that will be addressed in this paper will deliberate on how traffic is impacting the way we feel as we go about in life. It is also a paper that will elicit the serious sway it is putting on our temperament and other emotions. Through the study, which is a qualitative random sampled study, literature review and engagement with our own reflections, we will establish the gradations of how traffic is conditioning our quality of life and standard of living.

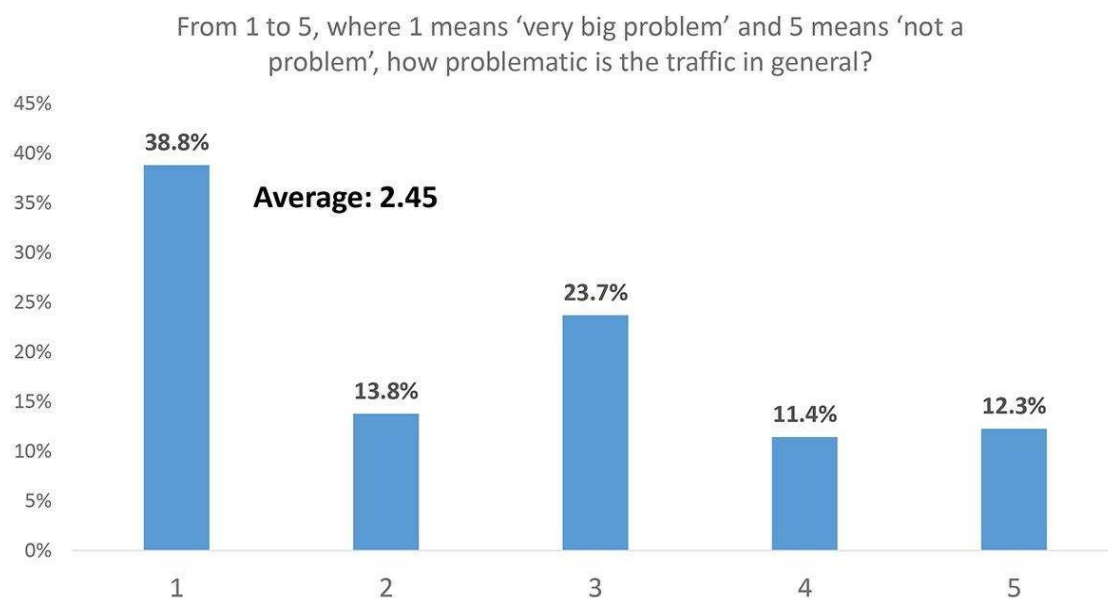


Figure 1. How problematic is traffic?

The notion the authors are proposing here of ‘traffification’ will come to refer to a system that terms our excessive use of cars and the ensuing traffic congestion as a process of profit generation. It is an exploitation of a fundamental

need, which we will be talking about, of community networks and that instead of connecting people, cars have led to disconnecting them. Figure 1 immediately lays out the challenges that are being perceived by people when it comes to traffic and how this is impacting their social wellbeing. In fact, 52.6% compared to 23.7% feel that traffic is problematic. According to a Eurobarometer survey by the European Commission (2013), European citizens are concerned about the negative effects of urban mobility, and the majority are sceptical about the likelihood of mobility improvements in their cities. Congestion (76%), air quality (81%), and accidents (73%) are regarded as significant issues by the majority. A minority (24%) hold the view that the situation will improve, while the majority (35%) anticipate that it will either remain unchanged or deteriorate (37%).

We cannot shy away from public debate where the prevalent conversation is that it takes forever to go from one point to another but not only, there seems to be a perceived increase of road rage and a general feeling that our roads are not safe enough. Fuller (2013) says:

On this view, commercialisation is an emergent feature of our natural propensity to trade, from which the division of labour arises, and complex societies form as a long-term consequence. The process involves many specific interactions in which people decide to make qualitatively different things functionally equivalent in particular exchanges. A unit of currency, or money, also emerges from this process, understood as an efficient mechanism for enabling anyone to trade anything, anywhere and at any time. Once that level of efficiency is established and it covers a sufficiently large proportion of social life, we can speak of “commercialisation.” (p.7)

2. Theoretical Underpinnings

Despite the importance and urgency of the problem, we have a poor theoretical understanding of the parameters controlling urban car use and congestion. (Verbavatz and Barthelemy (2019, p.1)

There are a number of theories that lend themselves to this discourse and will be interlaced in the debate we will be engaging with in this paper, namely, Environmental Psychology Theories; Social Capital Theory, Equity Theory and Sustainable Development Theory.

Environmental Psychology Theories essentially suggest that the physical environment will directly impact the psychological wellbeing of a person (Moser & Uzzell, 2003) and traffic, being such an important variable will lead, in the outcomes of the data we collected, to a negative impact on people in a number of ways. Noise and traffic congestion, to mention just two factors, are seen as consequences that impact the human mind thus causing uneasiness, anxiety and also stress. This will be illustrated further down by a psychiatrist leaning on this matter. Gillford (2014) clearly states that traffic congestion has a number of mental and psychological effects and also leads to what he refers to as a drop in the performance of people and heightened aggressive behaviour. Environmental Psychological Theories are central in the shaping of our communities and this is emphasised by the way we relate with each other including what is referred to as spatial cognition (Frith, 2008). The mental and psychiatric impact of traffic congestion was further reinforced by Prof. Anton Grech, Chairman of the Mental Health Services in Malta, who noticed a spike in anxiety in his clinics due to the traffic situation being experienced in Malta (Newbook, 2021). In other words, what happens in the community actually shapes people even through ways we might not choose.

Another theory which informs this debate is Social Capital Theory. In the context of traffic and its impact, one of the major concerns is that it reduces the time for social interaction and aptitude towards social inclusion which we know are composites of happy living especially in pack animals like human beings who tend to form communities (Schleidt and Shalter, 2003). This is deeply entrenched in evolutionary history and has been a key factor in survival. Whether it is tribes, cities, families (extended or nuclear), communities of practice or other forms of social units, the notion of belonging is typical, central and decisive.

The need for companionship and social interaction (varying from one person to another) is of essence. We have managed to deal with complexities in social interactions and create an ecosystem that ensures our survival but one asks whether traffic and its fallout are threatening this equilibrium. It seems like a lot for one factor to create this instability but when we see the data that is emanating, it is an issue that does drop a dark veil on us (Alexander, 1990).

This issue is further compounded by findings we will illustrate in this paper further on. Social Capital Theory, best illustrated by the work of Pierre Bourdieu and expanded by the seminal work of Robert Putnam's (2000), 'Bowling Alone: The Collapse and Revival of American Community', illustrate the value of social networking and the trust that is developed amongst communities (vide the work of Margaret Ledwith, a scholar, social justice and community activist) within the notion of social connectedness. He comes up with the notion of “connections among

individuals". Traffic as experienced by people and illustrated by Alcantara De Vasconellos (2004) will illustrate that it is interfering in these relationships:

The way people use streets has been analysed by traditional traffic engineering techniques and their practical, operational branch: traffic management. A large body of knowledge has been developed, used by traffic engineers all over the world, that utilizes quantitative techniques based on street capacity, vehicle dimensions and human physical characteristics to decide how street space will be distributed among the users. Implicit is the idea that this technical division is neutral and allocates equal benefits to everybody. (p.3)

Equity Theory coined by John Stacy Adams (1963) also illustrates that when contextualising traffic, the unequalness imposed by the infrastructure, namely effective or absent public transportation (Linda, 2003), will lead to a drop in the livability of communities and social wellbeing. In his work, he suggested that individuals strive hard to achieve an appreciation of equity.

In developing the theory of inequity, which is based upon Festinger's (1957) theory of cognitive dissonance and is, therefore, a special case of it, we shall describe major variables involved in an employee-employer exchange, before we proceed to define inequity formally. Having defined it, we shall analyze its effects. Finally, such evidence as is available will be presented in support of the theory. Throughout we shall emphasize some of the simpler aspects of inequity and try to refrain from speculating about many of the engaging, often complex, relationships between inequity and other phenomena, and about what might be termed "higher order" inequities. (Stacy Adams, 1963, p.422)

It is an established and generally agreed position that the use of a private vehicle provides a number of advantages as contrasted with the unpredictability of the public transport services (Linda, 2003).

Needless to say, livability is made up of a number of notions namely access to national health services, affordable housing, opportunities where to spend free and leisure time, security within the neighbourhoods and communities, inclusiveness, job opportunities, community access and support networks, just to mention a few. These urban decisions are fundamental to ensure quality of life (Azzopardi, 2011).

When seen from a wider lens, traffic management manifests a clear connection between one point and another, and is a fundamental nodal in the interphase with the community. Donald Appleyard, a world-renowned urban planner, was a pioneer in connecting urban design, and traffic management with people's sense of social wellbeing. In his seminal work, "Livable Streets: Protected Neighborhoods?" Appleyard states that streets should create an environment which is not excessively noisy. Inhabitants who live close to streets have the right to maintain a good quality of life including commuting from one point to another, sleeping well, having good air quality and avoiding other inconveniences normally entreated by traffic mismanagement.

The Sustainable Development Theory (SDT) builds around these above-mentioned theories. The SDT seems to suggest that the way our urban life develops should cater for today without bargaining for tomorrow. This, in traffic congestion practices, has major implications, especially in terms of lifestyles and social wellbeing. In their article, "Resilience thinking: integrating resilience, adaptability and transformability." Folke et al. (2010) state that we need to ensure that we have systems in place to be able to react to the social transformations and address the complexity of change that is happening in our organic societies.

Another important report was The Brundtland Report, known as 'Our Common Future' produced and published by the World Commission on Environment and Development (WCED) (1987). This report is considered an influential document to this day and speaks about living standards, motor vehicles and environmental policies all akin to this paper – vide these articles:

5. Living standards that go beyond the basic minimum are sustainable only if consumption standards everywhere have regard for long-term sustainability. Yet many of us live beyond the world's ecological means, for instance in our patterns of energy use. Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire.

The key notions of Environmental Psychology Theory dictate how members of the community are deeply predisposed by the environment, namely the physical but not exclusively. Sustainable practices, to give an example, help nationalise values and beliefs and interpose environmental behaviours. This syncs well with sustainability even within other perspectives, as delineated in Sustainable Development Theory, namely, economic growth. Traffic is starting to become an obstacle to this and the complex interactions and feedback loops need broader systemic action and adaptive management.

The Brundtland Report (1987) goes on to state:

20. Motor vehicles greatly influence environmental conditions in the cities of the industrial world. A recent slowdown in the growth rate of vehicle numbers, stricter emission standards for new vehicles, the distribution of lead-free gasoline, improvements in fuel efficiency, improved traffic management policies, and landscaping have all helped reduce the impacts of urban traffic.

And,

48. The concept of sustainable development provides a framework for the integration of environment policies and development strategies - the term 'development' being used here in its broadest sense....The pursuit of sustainable development requires changes in the domestic and international policies of every nation.

3. Methodology

In this paper, we will be engaging primarily with data collected from a 2023 survey which sought to research the perceived effect of traffic on wellbeing. The survey was carried out through telephone interviews with a sample size of 400 individuals and was collected amongst the Maltese population.

The age of the respondents was that of 18 years of age and above, to reflect the people who are eligible to drive. A Likert scale was adapted as a means of gauging preferences. The people interviewed had to be residents of Malta and were captured through a randomised system. Data capture included demographics, and responses were clustered according to the official districts used by the National Statistics Office. It had a 95% confidence interval: $\pm 4.9\%$ and the sample was stratified based on gender, districts and age. The data was collected during February 2023 and the company commissioned to collect this data was Sagalytics (Refer to Sagalytics Final Report, 2023). The questions were designed mainly by Dr Gottfried Catania and supported by the expertise of the Research Support Officer, Annabel Cuff and Prof. Andrew Azzopardi. The areas dealt with were; *whether you own a car; whether thinking about traffic increases 'my' anxiety; whether 'I' worry when 'I' hear about the frequency of serious road accidents happening; whether 'I' am afraid of arriving late to important appointments if 'I' get stuck in traffic; whether 'I' would prefer to not use my car if public transport was more reliable; and finally whether 'I' waste a lot of time in traffic which could be put to better use.* The process of data collection was first processed through the Faculty Research Ethics Committee. At the beginning of the study, an information letter was provided to potential participants, in which they were informed that their participation and responses will remain anonymous. They were also informed about their right to withdraw from the study up till the end of the telephone call, since after that it would not be possible to delete the anonymous data. Participants were also provided with the research team's contact details.

The following three figures illustrated as Figure 2: Age distribution of respondents; Figure 3: Gender distribution of respondents; and Figure 4: District distribution of respondents, give us an overarching insight into the sample and population which were being investigated. The age distribution is commensurate to the data and the sample is almost equivalent to the percentage representation of the population and the same applies to gender distribution and district distribution making this sample respectable and representative.

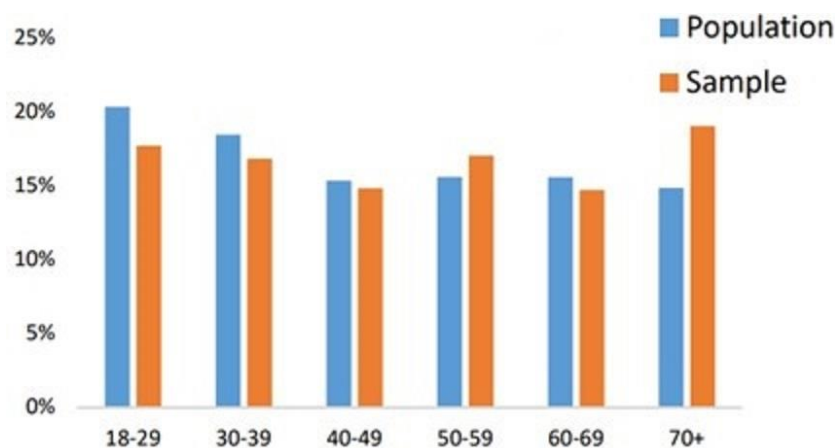


Figure 2. Age Distribution

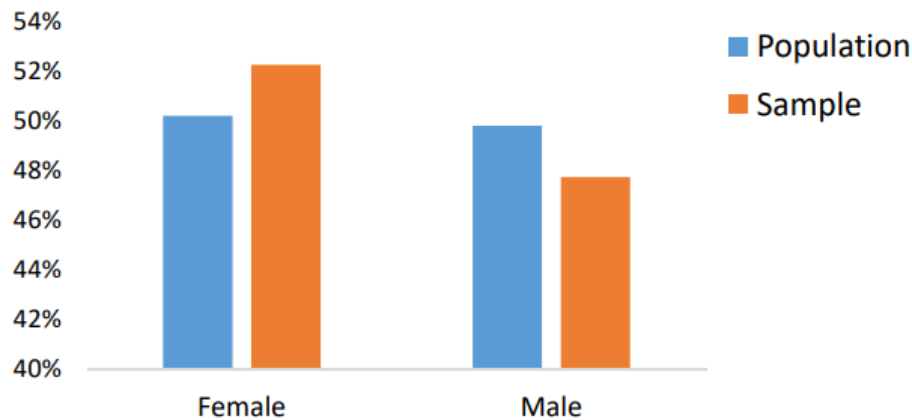


Figure 3. Gender Distribution

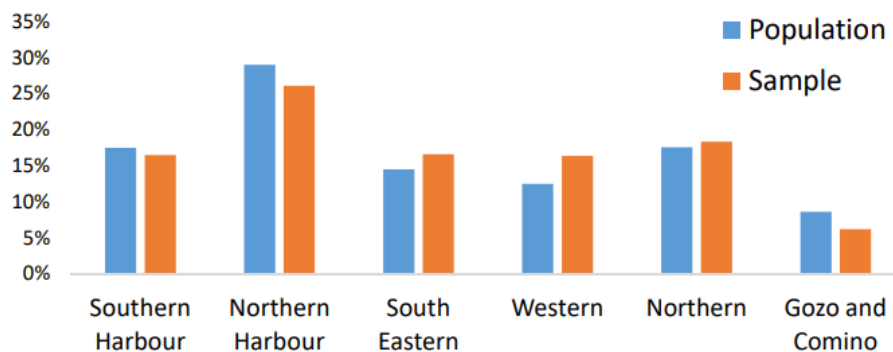


Figure 4. District Distribution

The ontological discourse that side-steps this work juggles with three main notions; existence, property and community connections. The ontology in this paper will help us process how the nature of existence goes hand in hand with making the right choices, or at least some choices. It is clear and in abundance in this paper that the State is in cahoots with the neoliberal tugging “Estimating automobile demand is of paramount importance for policy makers, as such demand has significant effects on our economy and the environment we live in” (Saliba, 2019, p.3) which begs the questions: How would we define quality of life? What is the relationship between the struggles we contend with and the price we need to pay? How do we define individual needs in relation to communitarian urgencies? How does ontology interplay with ethical behaviours, communitarian needs and sustainability? (Lauer, 2019).

In this paper we are looking at how social systems made up of individuals, groups of people and institutions are all impacted by this phenomenon. So, conceptualising the processes and trying to understand how all of these progressions merge and evolve will give us a better understanding of how to resolve this impasse. Naturally, and as one would expect, the beliefs, the cultural hegemonies, the values and the norms of a society are at the heart of these transformations.

So, ontology provides for the understanding of the nature of reality and its interconnectedness. This interconnectedness, as played out in the Sustainable Development Theory concedes that we cannot look at the problem in isolation but we need to converge the social, economic and environmental dimensions and merge the data that comes out of these facets. This will lead us to a balanced and integrated approach to ensure long-term sustainability. Together with interconnectedness are long-term implications to meet future needs as this problem of ‘traffication’ has serious repercussions on the future of communities.

Compounded with this, the epistemological debate steers us towards dealing with trying to comprehend how knowledge is assimilated and warranted. Important questions that feature in our epistemology that will help us understand the foundational elements in this work are; how would we contextualise knowledge as a response to

the traffic problem? Where do our beliefs feature in such a theme? Are there limitations in how to respond to this dilemma of progress versus sustainability?

And how will our language unpack these notions? This understanding helps us relate to knowledge and it also plays a major role in shaping our analysis. The data collated for this paper helps influence and direct social scientific knowledge and raises a number of important questions to ensure that the critical approaches provide valid data. In fact, this paper handles data, theoretical underpinning and other research, and also provides for critical thinking. Epistemology in its essence affords a critical lens.

Findings and discussion (data extracted from the original report of the study by Sagalytics, 2023)

What is very significant and almost taken for granted, is that in the 2023 study we are basing this paper on, 81.9% of the respondents (who were above 18 years of age) said they owned a car. In an article in the Times of Malta (Borg, 2023), it was stated that:

A total of 32 new vehicles were added to Malta's streets each day throughout 2022, as the total stock of vehicles rose to 424,904, an increase of almost 12,000 over the previous year. Just over 303,000, about 74.7% of vehicles on the road, are private passenger cars according to official statistics published on Wednesday by the National Statistics Office. A further 12.2%, or 39,500, are motorcycles, e-bikes or pedelecs. Separate data for e-bikes and pedelecs was not published, however, the number of e-bikes on the road is described as "negligible". (Times of Malta, 2023).

The disconcerting outcomes from this reported data is similar to that cited in the Rye and Hrelja (2020) study:

They are remarkably similar, the main differences being the much higher car use in British and two Swedish cities, higher car ownership in the smaller and particularly German cities, higher levels of cycling (replacing walking) in the Dutch cities and the higher rates of unemployment in the Swedish cities. (Note that mode share is for trips to work in British cities, but for all trips in others). (p.7)

Figure 5 clearly indicates that we have a very limited road network when one compares it to the size of the islands and the number of cars and other vehicles which are dotting our streets. The data presented in this table is extremely significant, showing the extent of the problem we have in Malta with almost 3,000 kilometres of road of which 87% are paved and the rest are not. Compounded with this, we have an area of 316 km² and a population hitting way over half a million. Transport Malta, which has a mission "to promote and develop the transport sector in Malta by means of proper regulation and by promotion and development of related services, businesses and other interests both locally and internationally" provided this figure (Figure 5.) - it confirms the intense and almost verging on the exaggerated network we have.

Road lengths (Malta and Gozo) – 2019

Road Type	Single Carriageway (km)	Dual Carriageway (km)	TOTAL (km)
Arterial	61	47	108
Distributor	89	14	103
Local Access	521		521
Other Urban	1,165		1,165
Other rural (paved)	510		510
Other rural (unpaved)	446		446
TOTAL (km)	2,792	61	2,853

Figure 5. Road Lengths

Taken from the Times of Malta (2023), Figure 6 indicates that a far greater percentage increase in motorcycles/ebikes as compared to cars, occurred during this time period. Could this be interpreted as a way in which vehicle owners are trying to mitigate the negative effects of traffic? The reality is that with the numbers indicated in the table, it is increasingly difficult to make decisions which do not impact directly on peoples'

lifestyles. With the amount of vehicles on the street, we cannot have changes without drastically impacting the way we have organised our communities so far.

Figure 6. Increase in vehicles on the road 2019-2022

	Cars	Motor-cycles & e- bikes	All ve- hicles
2019	293,711	29,034	397,508
2020	297,266	31,163	402,427
2021	301,046	34,661	413,019
2022	303,257	39,468	424,904

Although the data includes e-bikes, the number of e-bikes on the road is described as "negligible".

Source: NSO Get the data Created with Datawrapper

Eurostat (2023) noted that passenger vehicles registered in the EU have increased by 7% since 2017. The quantity of passenger cars registered in the European Union (EU) approached 253 million in 2022, reflecting a growth of 7.0% in comparison to the previous year, 2017. During the five-year span from December 2017 to December 2022, a number of Member States experienced a substantial increase in the quantity of passenger cars that were officially registered. Romania experienced the most substantial growth during this time frame, at 31%. This was followed by Lithuania at 22%, Hungary at 18%, Estonia at 17%, Croatia and Slovakia at 15% each, Portugal, Cyprus, and the Czech Republic at 14% each, and Latvia at 12%.

In this context, to our research question whether thinking about traffic increases anxiety, our study clearly illustrates that 47.7% of the respondents stated that they ‘Strongly agree’ and 14.7% agree that ‘thinking about traffic increases their anxiety’, as seen in Figure 7.

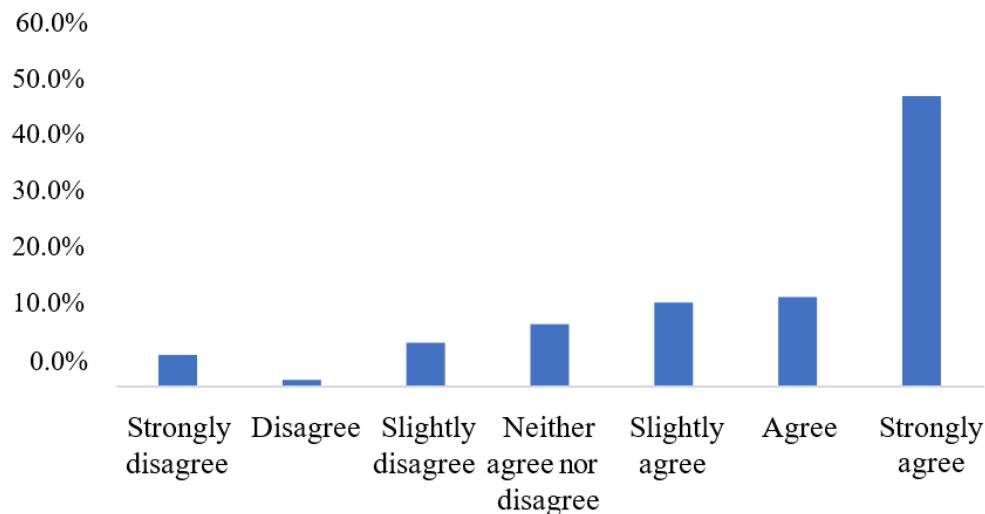


Figure 7. Thinking about traffic increases my anxiety

Research shows that the experience of driving or being a passenger in a car or other vehicle in heavy traffic triggers a melange of symptoms ranging from cold sweats to high heart rates, from muscle tension to irritability and a general sense of anxiety. Collision or the fear of having one, missed appointments and arriving late at work all lead to increased anxiety and its possible consequences. In fact, Kenardy et. al. (2018) report the consequences of crashing and consequent injury:

Our results also support the need for early recognition and treatment of psychological problems to prevent persistent or new psychological diagnoses. Given the comorbidity of psychological diagnoses in this sample and participants' movements between diagnostic categories over time, the development and testing of a comprehensive trans-diagnostic approach in this population may be beneficial. (p. 178)

Our research further shows that respondents worry when they hear about the frequency of serious road accidents happening, with 64% stating that they ‘Strongly agree’ and 15.6% “agree” with this statement (refer to Figure 8).

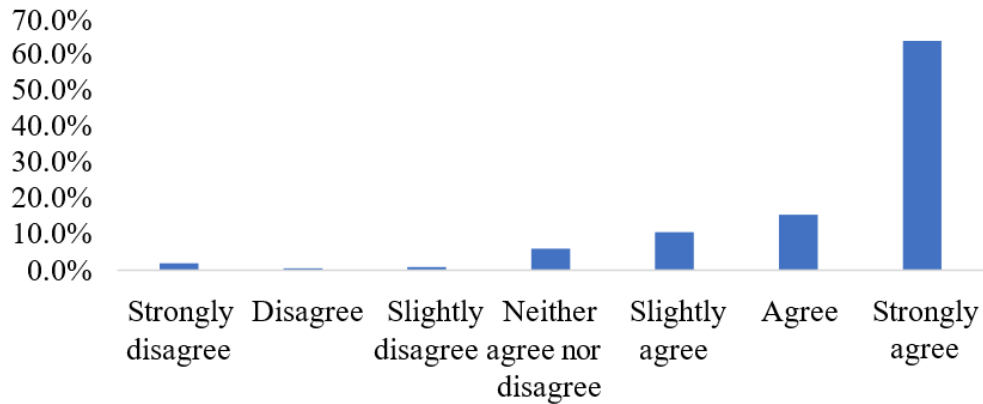


Figure 8. I worry when I hear about the frequency of serious road accidents happening

This happens for a number of reasons namely because the unpredictability of accidents and the resulting injuries, are reasons why people get tense, but respondents also potentially worry about the repercussions this has on their tight schedule. This disruption in daily routines has a major impact on people. Apart from that, accidents might trigger traumatic experiences.

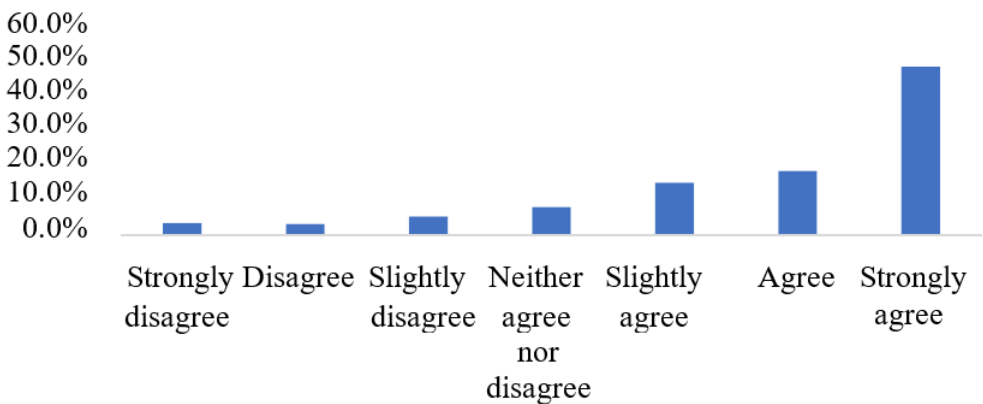


Figure 9. I am afraid of arriving late to important appointments if I get stuck in traffic

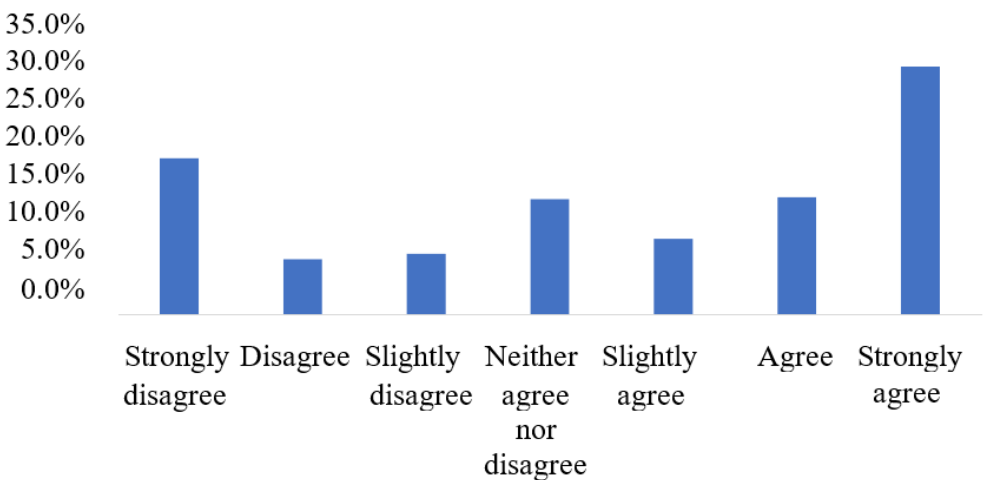


Figure 10. I would prefer to not use my car if public transport was more reliable

The Times of Malta (Calleja, 2022) reports that there were “800 traffic accidents involving death or injuries in past three years”, with accidents and fatalities on the rise:

There were 323 accidents in 2021 that included nine fatalities and 314 injuries. The extent of the injuries was not specified. As for this year, between January and August, there were 16 fatalities and 235 injuries. In another two cases, the magisterial inquiry still needed to determine if the cause of death was a result of the traffic accident. According to media reports, there have been another four traffic fatalities since August.

Using one’s personal car is not only comfortable (for example, due to the ability to carry heavy loads, listen to music and regulate temperatures) but also gives people a sense of control. In some cases, it is also efficient and most of the country is accessible to cars. The truth is that we have urbanised our communities around the car and with a public transportation system which is not always efficient or accessible, combined with hectic lifestyles, it makes it rather difficult to use public transport effectively. In Rye and Hrelja (2020):

Urban transport, since World War Two if not before [1-5], has been planned with a focus on the private car, and in most cities and countries this focus is still the norm in planning practices. (p. 1)

Rye and Hrelja (2020) state that we need to develop policy actions to make our communities more livable and sustainable, and this can happen by minimising the use of cars - an action being dealt with at EU policy level for example through its fossil fuel free by 2030. In the paper by Verbavatz and Barthelemy (2019) ‘Critical factors for mitigating car traffic in cities’, the authors state:

Mitigating the traffic (and its effect such as CO2 emissions) can then be obtained by reducing the urbanized area size or, more realistically, by improving either the public transport density or its access. In particular, increasing the population density is a good idea only if it also increases the fraction of individuals having access to public transport. (p.1)

And furthermore:

This approach illustrates how a combination of statistical physics, economical ingredients and empirical validation can lead to a robust understanding of systems as complex as cities. Our analysis shows that traffic-related quantities are governed by three factors: access to mass rapid transit, congestion effects and the urban area size. (p. 6).

This combines well with the data that is summarised in Figure 9 which illustrates that from the respondents we had, 49.1% stated that they ‘strongly agree’ and 19.7% agree that they ‘waste a lot of time in traffic which could be put to better use’. According to a Eurobarometer survey, approximately 60% of EU citizens consider congestion to be one of the major concerns related to mobility. Research suggests that a 10 % decrease in mobility time can boost productivity by 2.9 % - this can rise to up to 30% in highly congested regions. Notably, road mobility inefficiencies and road congestion cost the EU approximately €110 billion per year, which amounts to over 1 % of the EU’s GDP (European Court of Auditors, 2019).

Furthermore, Figure 10 presents the psychological impact of spending time in traffic and how it affects the mood of the person using the car. This is very much in line with what Rye and Hrelja (2020) state – that from studies in the major cities, the main issue or rather the challenge is skirting on how the car has become pivotal in the social and economic dynamic of the city. That said the ‘car’ is also a key factor in creating an environmental long-lasting impact on the community. Having improved mobility is of the essence to ensure improved quality of life and social wellbeing.

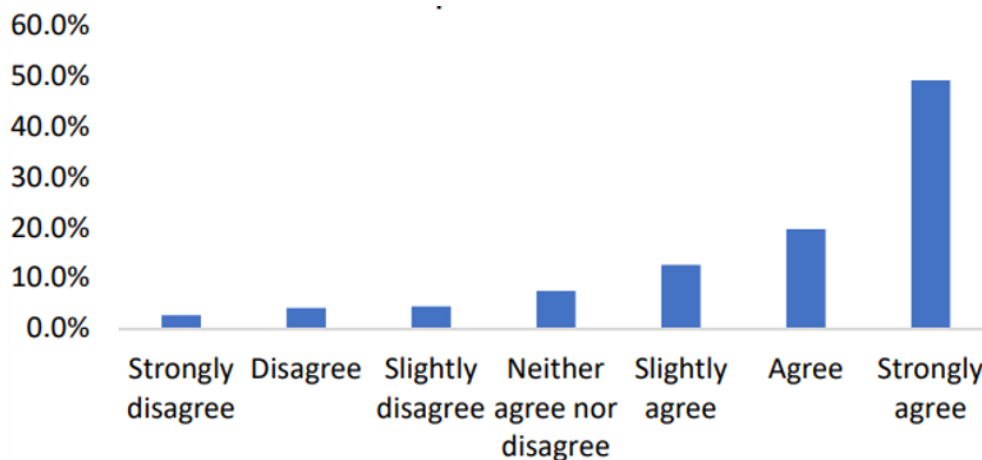


Figure 11. I waste a lot of time in traffic which could be put to better use

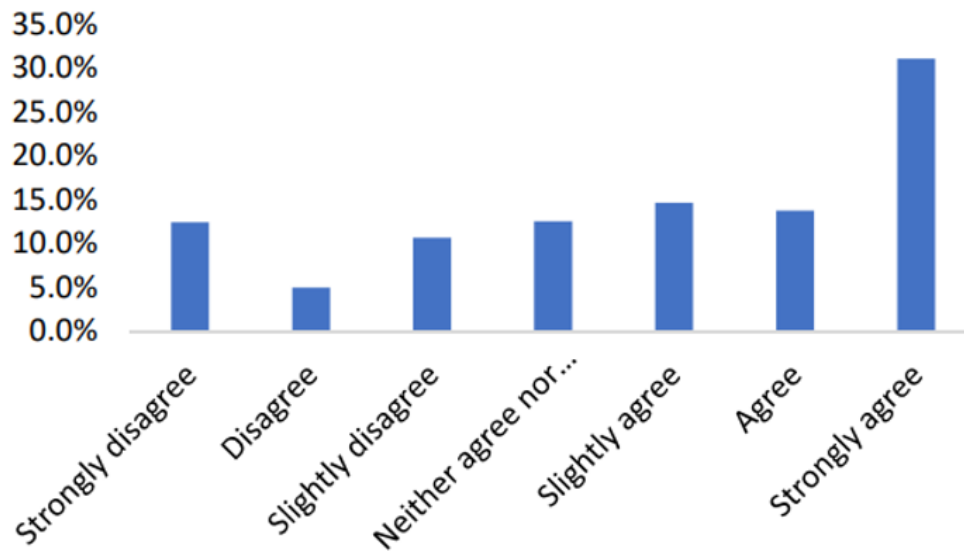


Figure 12. The time I spend in traffic has an effect on my mood for the rest of the day

As illustrated in Figure 12, respondents do not think that there is an easy solution to what we are now accepting to be ‘problems caused by cars’ and as per Figure 11, there is a strong concern about the impact on the climate. This is similar to what Fotel (2005) pointed out, that:

In summary, sociologists increasingly recognize that mobility has become a contributing factor of social stratification. In cities and local neighbourhoods, the mobility - welfare nexus is found in the dominance of car traffic, and it changes and challenges urban planning and civil society. (p.734)

In fact, we found that 32.8% in this study claimed that they ‘Strongly agree’ and 20.5% agree that ‘they do not think there is an easy solution to the problems caused by the number of cars on the road’. Through Social Capital Theory, we can be looking at internal and external proportions linked closely with selection, hence the choices we take on as a community. Social Capital Theory varies according to the context in question and helps produce exceptional actions for board effectiveness (Kim, 2008). Fotel (2005) continues:

Passing cars bring life into some neighbourhoods but can just as easily initiate deterioration in local living conditions and increase urban segregation. Qualities and facilities in local neighbourhoods are important to everybody, but mostly to those not capable of moving if processes of neighbourhood deprivation begin.

Daily life, especially in P. Knudsens Gade, is marked by noise and pollution, limited use of the dwelling, curtailed mobility, and reduced outdoor activities, as well as insecurity and risk-minimizing strategies. As a consequence, the percentage of out-moves is high and processes of neighbourhood deprivation have accelerated during the last decades. (p.745)

The nexus between the available space we have and the flow of traffic is an essential element in how our local communities are being negatively impacted by urbanisation. Urbanisation is making it increasingly difficult for communities to function because traffic is starting to leave an indelible mark on the community. An editorial in the news portal Malta Independent, ‘Staggering traffic’ published last year states in no uncertain terms that there is ‘no way to tackle Malta’s traffic problems without inconveniencing people’. Now this is an important issue to factor into the debate. Are people ready to carry some pain before the gain? Are we ready to have bus lanes so that public transport becomes more efficient and timelier?

In the data gathered by the Faculty for Social Wellbeing, as per Figure 13, 46.5% ‘strongly agree’ and 21.8 ‘agree’ that ‘Being stuck in traffic increases their anger’. This comes about through delays when stuck in an endless line of cars and other vehicles. In such a context, we lose control over our immediate surroundings and needless to say, road rage turns into more than a thought, apart from the obvious discomforts. An article on the news portal Malta Today titled ‘Man released on bail over Xemxija road rage incident’ refers to this:

A 21-year-old man from Dingli has been released on bail following his arraignment in connection with a road rage incident in Xemxija yesterday which left two nearby residents injured, one of them grievously. ... [he] was accused of attacking a man and a woman, grievously injuring the woman and slightly

injuring the man, following a traffic accident in Xemxija yesterday morning. ... The fight is understood to have broken out because the victim’s car had allegedly hit the accused’s vehicle’s wing mirror. Malta Today (2023)

This is further compounded by data presented by Pfeiffer, Pueschel and Seifert (2005), which further emphasises and internationalises the problems that traffic brings in terms of road rage. In fact, in this study ‘aggressive behaviour in traffic is [seen as] a widespread phenomenon’ (p.42). In a study in Canada, circa 50% of those who responded to the study were ‘shouted at, cursed at or had rude gestures directed at them’ – this is probably a much lower figure than what is experienced on the roads in Malta on a daily basis.

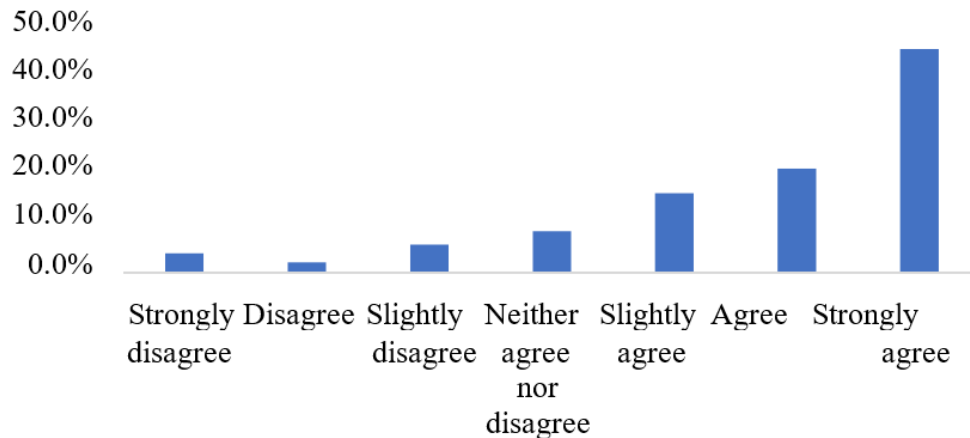


Figure 13. I worry about the amount of emissions in the atmosphere due to the

Traffic does not only generate anger as we have seen in Figure 13 but also, as per Figure 14, leads to tiredness and the potential implications this has on productivity with 60.3% strongly agreeing and 16.5% agreeing that ‘traffic tires them out’.

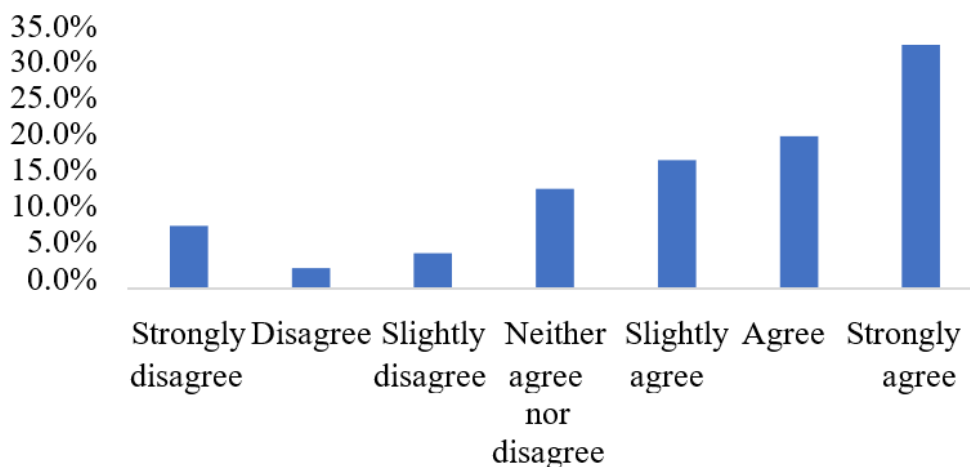


Figure 14. I do not think there is an easy solution to the problems caused by the number of cars on the road

This data keeps having even more significance as 44.4% of those participating in the study state that they ‘strongly agree’ and 17.9% ‘agree’ that ‘sometimes they prefer not to go out, due to the thought of traffic/parking difficulties’ (Fig 17). It is the popular narrative that such tensions create in the citizens this sense of discomfort and uneasiness. (Gifford, 2014; Bourdieu, 1984). 78.0% said that they ‘strongly agree’ and 11.1% that they agree that ‘they feel that traffic has increased considerably in the last two or three years’. Pfeiffer et al. (2005) state that this is pretty much affecting all or most of the community: “violent assaults are less common, but because of the possible consequences [they still] pose a serious problem (p45).

This is in line with what we see in Figure 15. The emotional impulse traffic creates leaves a dent in our performance during the day. It creates anxiety as people rush around to take their children to school and after that, drive to their

next destination, which is often their workplace. After school, they drive around taking their children to extra-curricular activities. This has also brought about a major impact on our road network especially knowing well enough that our only main mass transport system is the bus which leaves a lot to be desired. There is, as yet, no indication that we will have a tram system operating and complementing our national bus transport network. (Appleyard, 1980; Azzopardi, 2011).

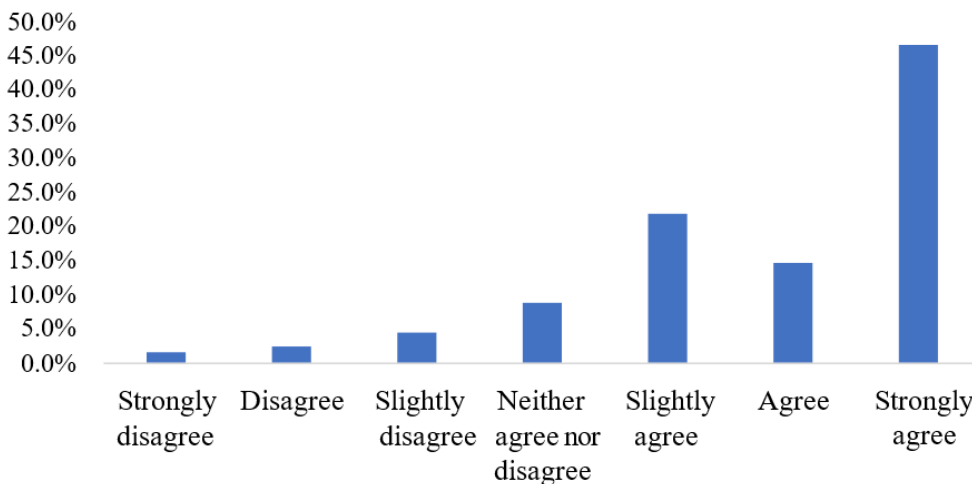


Figure 15. Being stuck in traffic increases my anger

Figure 16 also raises another important notion, that of a sense of exhaustion. Apart from the obvious fact that an increase in driving leads to an increase in fatigue, the fact that driving in Malta happens in short spurts within a resounding warm climate tends to add to this sense of tiredness. In fact, as seen in this figure, 89.3% of the respondents claimed that they ‘agree’ that ‘traffic tires them out’. This is an incredibly worrying statistic. (Balzan, 2023; Azzopardi et al., 2012; De Vasconcellos, 2004).

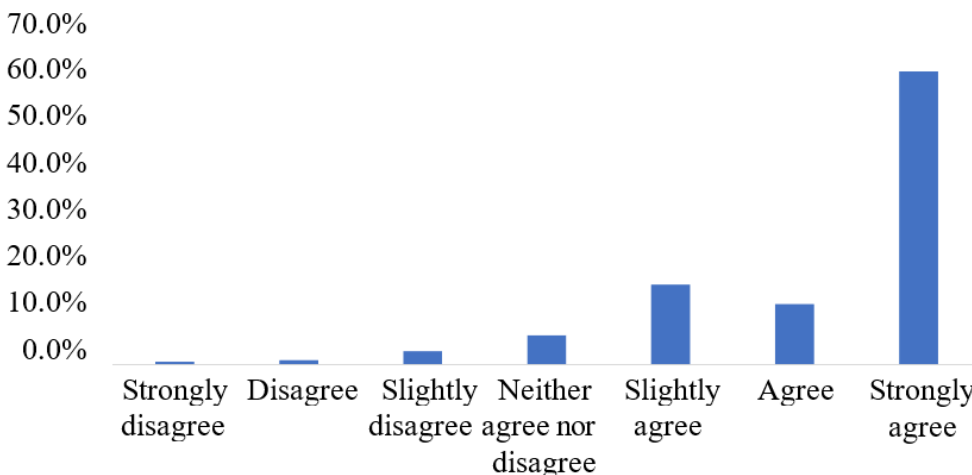


Figure 16. Traffic tires me out

The local findings related to the impact of traffic on mental wellbeing echo those reported in a systematic review by Conceição et al. (2023), in which the evidence regarding delays and congestion demonstrated detrimental effects in a variety of mental health and wellbeing evaluations. Consistently, these effects were noted in relation to traffic density and low velocity, both of which are anticipated to occur in urban regions, during periods of high population density, and peak hours. It is noteworthy that research has also documented stress-induced biological signals that support the adverse consequences associated with perceived travel duration, waiting time, and time pressure.

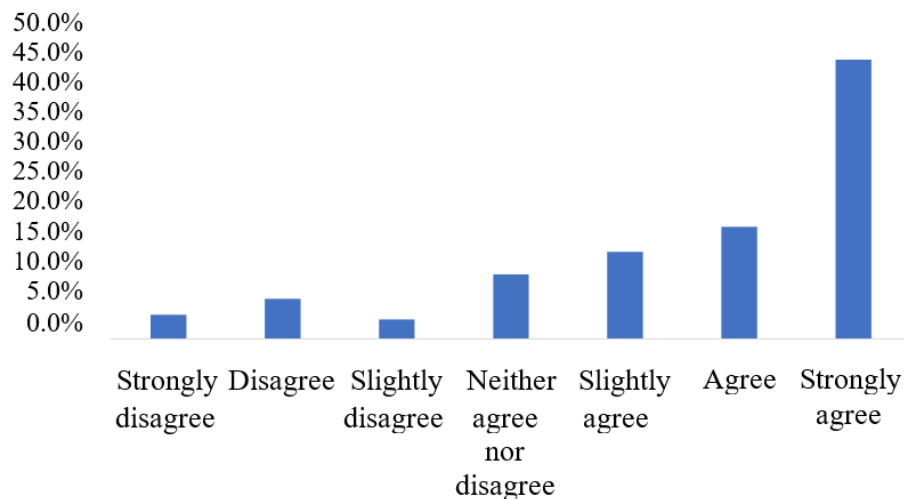


Figure 17. I sometimes prefer not to go out, due to the thought of traffic/parking difficulties

4. Implications and Recommendations

Traffic congestion is a complex and multidisciplinary issue with implications for urban transportation planning and policymaking, psychology and transportation engineering amongst others. Perspectives from these various disciplines can provide a holistic view towards this issue and potential solutions.

Primarily, *urban planning* plays a crucial role in addressing traffic congestion. It involves the strategic design and development of urban spaces to accommodate the needs of the population while minimizing traffic bottlenecks. Urban planners strive to create efficient transportation networks that include public transit, pedestrian pathways, and cycling lanes to reduce reliance on personal vehicles. Key strategies which could be considered, include the following:

- Transit-Oriented Development (TOD): Encouraging high-density developments near transit hubs to increase public transit use.
- Land Use Planning: Strategically placing amenities and jobs to reduce travel distances and promote alternative (non-motorized) transportation modes.
- Smart Growth: Focusing on sustainable urban development that encourages compact, walkable cities with a diverse range of transportation options.
- Adequate parking facilities: the need to ensure that there are adequate parking facilities in busy areas.

From a *psychological perspective*, understanding the factors behind commuting choices can inform strategies to encourage the use of alternative transportation modes. Factors such as perceived convenience, cost, travel time, and comfort level with different transportation modes influence these decisions. As a result, psychological interventions can be planned and implemented, such as:

- Behavioural Change Programs: Encouraging carpooling, public transit use, or telecommuting through incentives and awareness campaigns.
- Cognitive Strategies: Addressing psychological barriers to public transit use, such as social stigma or safety concerns, through targeted information campaigns.
- Stress Reduction: Implementing measures to make commuting less stressful, thereby making alternative transportation options more appealing.

Referring to a *Transportation Engineering perspective*, scientific approaches to address congestion issues can be applied by enhancing the physical infrastructure and traffic control systems. Key approaches include:

- Intelligent Transportation Systems (ITS): these employ advanced technology to enhance traffic flow by utilising real-time traffic management systems, adaptive signal control, and congestion pricing.
- Infrastructure Expansion and Modification: Enhancing traffic capacity and efficiency by expanding roadways, constructing additional transportation routes, and establishing exclusive lanes for buses and bicycles.

- Traffic Flow Analysis: the examination of traffic patterns in order to identify areas of congestion and implement specific interventions, such as the redesign of crossings or the enhancement of signage.

The findings of this study have also identified the need for further research in this area. Primarily, there is a dire need for mixed methods research in order to further understand the depth of the issue. Using additional means of data gathering that go beyond telephone surveys, is recommended. There is also a need of impact assessments that can quantify the effect of interventions and a focus on key performance indicators in policy making.

Ultimately, effectively addressing traffic congestion requires an integrated approach to develop comprehensive strategies that not only mitigate congestion but also contribute to the creation of more livable, sustainable, and efficient urban environments.

5. Limitations of the Study

Telephone surveys are linked to certain limitations, particularly the fact that respondents often become weary of being on the phone, and may answer the questions posed without any reflection, just to conclude the survey as quickly as possible. Moreover, telephone surveys are prone to a substantial risk of coverage error, leading to an inaccurate sample and biased estimations when utilising survey data. This bias arises when survey data is collected exclusively from those who have access to telephony services. Consequently, the survey data will not accurately reflect the total population and this can result in erroneous outcomes. In cases where the participants cannot speak the same language as the interviewer, potentially valuable data may be omitted from the survey, leading to sub-communities being under-represented.

6. Conclusion

As this paper has shown, there are grave instances whereby the mental health of the people in traffic is being affected and this might lead to repercussions on our quality of life. If we want to take this argument forward, we believe we need to do the following. First and foremost, read the data which is being produced, an illustration of which was presented in this paper. Secondly, we need to decolonise ourselves from life patterns that have really and truly driven us up the wall. Thirdly, we need to take a good look at our mass transportation and come up with a model which is not only free (which it already is) but flexible enough to meet the quickly changing dynamics in our organic communities. In his paper 'Three ages of the automobile: The cultural logics of the car', Gartman (2004) states:

The development of the laws of the market over the last century has forced humans into the realm of consumption to satisfy their needs for identity, autonomy and individuality. And the ultimate expression of this compensatory consumption has been the automobile, the individualized means of mobility that has become synonymous with freedom. This automotive folly will end not through some inevitable, objective development of the system but only through the actions of humans to reclaim their fate from their own machines. (p.193).

The implications of this work are varied, namely that traffic is becoming an act of labour which is causing so much distress, creating a great deal of climate-related problems and leaving an impact, mostly a negative one, on the livability of our communities. This is encapsulated in the Environmental Psychological Theory which deems that the relationship between the environment and the individual produces a reaction. A lack of a good fit (for example pollution, crowding and limited privacy) generates discomforts. Traffic, as seen in this paper creates emotions of anger and anxiety and this is perpetuated by feelings of tiredness and lassitude.

In this paper we try to address this composite issue by recommending that we rethink our transportation design, take in cognisance the array of expertise that is looking at alternative means of travelling, changes in life style patterns and re-calibration of employment practices. This is not just about optimising traffic flows but about making serious and alternative designs in how our communities are designed.

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