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PERCEPTION OF VEHICLE DRIVERS ABOUT THE "ROAD SAFETY ON WHEELS" AWARENESS CAMPAIGN IN PUNJAB PROVINCE, PAKISTAN

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ABSTRACT

The National Highways & Motorway Police (NHMP) has a tradition of organizing Road Safety awareness programs in the shape of walks, workshops, and road safety seminars. This paper explored the drivers' perceptions about the road safety awareness campaign "display of road safety awareness messages on the back side of vehicles". A total of 41 drivers participated in this study who were traveling on the M2 motorway, which is the busiest motorway in Pakistan, connecting Lahore with Islamabad. Data were collected through the questionnaire, and Statistical Package for Social Sciences (SPSS) was used for data analysis. Results indicated that the use of slogans and messages on vehicles and trucks is a highly effective means of promoting road safety awareness, preferred over traditional signboards, and that road safety programs are universally seen as having a positive impact on drivers. Results reflected a positive perception of the efficacy of road safety initiatives, highlighting their importance in promoting safer driving habits and behaviors among the surveyed population. The majority of respondents learn about road safety campaigns through social media and personal networks; it is essential to continue utilizing these channels effectively. There is also a need to explore and use a variety of communication channels, including those not traditionally considered mainstream, to maximize the impact of the campaign and engagement with different segments of the population.

Keywords: Road safety; Awareness; Social media; Campaign; Accidents; M2 motorway.

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INTRODUCTION

Road safety is a global concern, and Pakistan is no exception, facing a significant challenge in curbing road accidents and promoting safe driving practices. As per Pakistan's Statistical Bureau data for the year 2021, there were a total of 10,429 road incidents nationwide, resulting in 5,816 fatalities and 12,886 injuries. Additionally, these incidents caused a direct economic loss attributable to 15,351 vehicles (Government of Pakistan, 2021). An investigation by Mir et al. (2013) revealed that commercial drivers in Pakistan display risky driving behaviors, including fatigue, substance use, and inadequate vehicle upkeep. This underscores the necessity for specific risk mitigation initiatives. The Punjab province, the most populous and economically vibrant region in the country, witnesses a substantial share of road traffic and accidents (Khan & Hussain, 2021; Gulzar et al., 2012). To address this issue and raise awareness about road safety, various campaigns have been initiated, including the "Road Safety on Wheels" awareness campaign. Understanding how vehicle drivers perceive and respond to such campaigns is crucial for evaluating their effectiveness and guiding future road safety initiatives. Hoekstra and Wegman (2011) and Desjardins and Lavalliere (2023) have stressed the need for evaluation of road safety campaigns in order to postulate guidelines and necessary strategies for future developments in road safety campaigns.

The "Road Safety on Wheels" campaign, implemented in Punjab province, aims to educate and sensitize vehicle drivers about the importance of safe driving practices. Through a variety of mediums, including messages displayed on the backs of vehicles and trucks, this campaign endeavors to reach a wide audience and influence driver behavior positively. It focuses on promoting responsible actions such as avoiding distractions, following speed limits, using seat belts, and adhering to traffic rules. As road safety is a multidimensional issue influenced by various factors, the success of such awareness campaigns depends not only on their design and execution but also on the perceptions and responses of the target audience – in this case, vehicle drivers (Heydari et al., 2019). Do drivers find these messages effective? Do they alter their behavior in response to the campaign? Do the messages create awareness and reinforce responsible driving practices? These are questions that need a thorough investigation to gauge the impact of the "Road Safety on Wheels" campaign.

As vehicles advance, the task of ensuring safety becomes increasingly complex. Research conducted by Yuan et al. (2023) sheds light on the substantial challenge posed by the growing number of vehicles on our roads. With the surge in traffic, the likelihood of accidents surges in parallel. Human behavior takes center stage in a substantial portion of the literature and is recognized as a pivotal element in road safety. Larsson and Tingvall (2013) clarify that a multitude of accidents stem from human errors. Issues like distracted driving, speeding, and driving under the influence have garnered extensive attention. It is evident that tackling these behaviors is paramount to bolstering road safety. Recent times have witnessed a notable upswing in technological breakthroughs geared toward enhancing road safety. The research by Furlan et al. (2020) illuminates how innovations such as automatic emergency braking and lane departure warning systems hold the promise of significantly diminishing accidents. These technological advancements can be likened to a modern-day knight in shining armor, safeguarding road safety.

The state of our roadways and the management of traffic are pivotal factors in ensuring road safety. As noted by Gichaga (2017), well-maintained roads with clearly visible signage can substantially diminish the occurrence of accidents. A sound road infrastructure ensures that we navigate smoothly, free from unexpected obstacles or hitches. It's not solely about the road and the vehicles; educating the masses forms another critical aspect of the road safety equation. Hoekstra and Wegman (2011) delves into the significance of awareness campaigns and driver education programs in curbing accidents. These initiatives can be likened to road signs, directing us toward safer driving practices.

Road safety is a concern that transcends national boundaries. International bodies such as the World Health Organization (WHO, 2022) have taken a proactive role in spearheading road safety initiatives. As emphasized in WHO's report (2022), adopting a worldwide perspective is indispensable in confronting this issue. It's a call for collective action to secure safer roads on a global scale. We must address the legal dimension of road safety. Laws and regulations stand as a protective shield for all road users. Research conducted by Hamim et al. (2020) underscores the crucial role of strict traffic laws and their diligent enforcement in advancing road safety.

This research paper delves into the perception of vehicle drivers in Punjab province, Pakistan, regarding the "Road Safety on Wheels" awareness campaign. By examining the effectiveness of this campaign from the perspective of those it intends to influence, this study aims to contribute valuable insights to the field of road safety initiatives. It endeavors to bridge the gap between campaign design and real-world impact, ultimately helping authorities and organizations refine their strategies for promoting road safety. There is a clear literature gap on the evaluation of road safety campaigns because none of the research studies has been conducted on this aspect. Therefore, this research study was justified to be conducted and had a significant contribution to the existing literature.

In the following sections, we will explore the methodology employed in this research, present the findings and analysis, and conclude with recommendations and implications for the future of road safety campaigns in Punjab province, Pakistan.

METHODOLOGY

This study was conducted on the M2 Motorway of Pakistan. The M2 highway in Pakistan plays a pivotal role in the country's economic landscape. As the most heavily traveled motorway, M-2 serves as a critical conduit for the efficient flow of goods and services between major urban centers, notably Lahore and Islamabad (Shah & Khattak, 2013). This motorway serves as a vital link that facilitates and promotes trade and business activities by reducing both travel time and transportation expenses. Moreover, it acts as a catalyst for attracting investments and fostering the growth of industrial and commercial centers along its corridor, creating new business prospects and opportunities. Total 41 drivers were randomly chosen while traveling on the M2 Motorway. Research, with the help of a Motorway Police Officer, gently stopped the vehicles, explained to them the purpose of the study, and asked their willingness to participate. There was a large number of drivers who refused to participate because of a shortage of time and in a hurry to reach their destination. However, there were total 41 drivers who participated in this study after showing their willingness to participate. Formal consent was taken from the drivers, and they were ensured that their information would only be used for research purposes and their identity would be kept anonymous. A questionnaire having binary quantitative questions and Likert-type questions was used for the data collection. Before data collection, the contents were validated through consultation with the experts and motorway police officers. A questionnaire was administered to the respondents, followed by instructions to fill out the questionnaire. Study participants were acknowledged for their time and feedback. Collected data were analyzed using the Statistical Package for Social Sciences (SPSS).

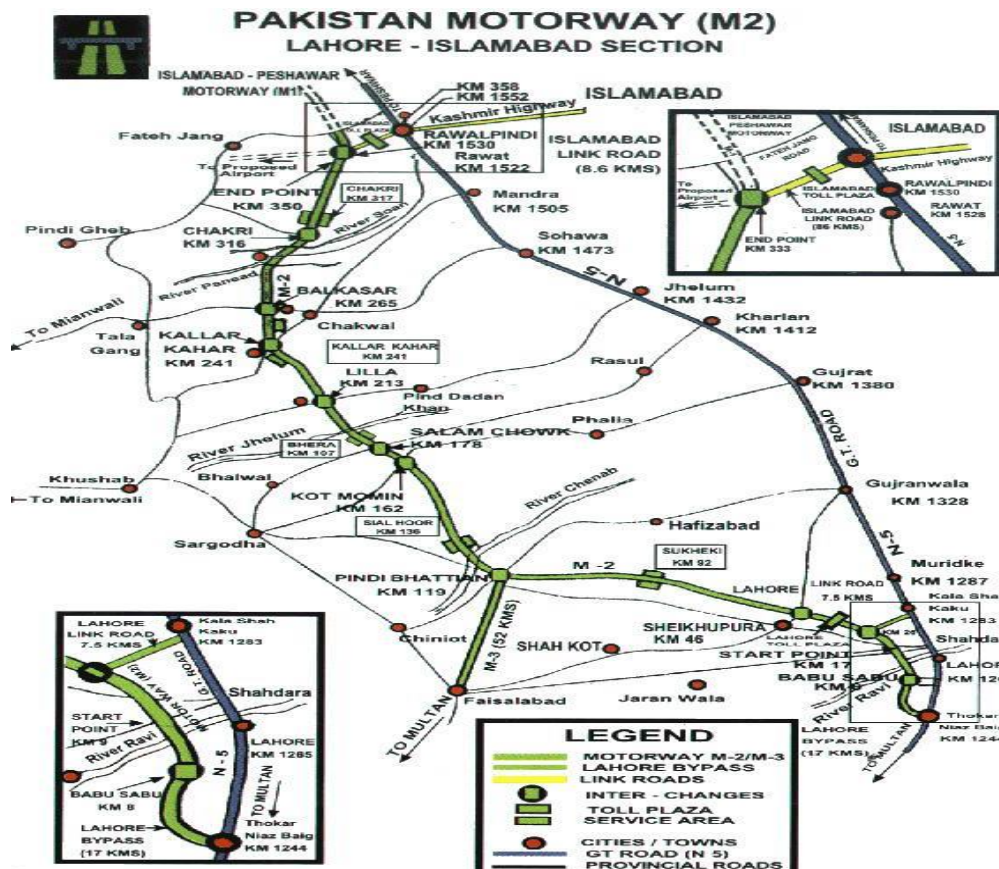


Figure 1. map of M2 Motorway; Adopted from NTTFC,2010) cited in Shah and Khattak (2013).

RESULTS AND DISCUSSION

Table 1 shows that the age distribution of the respondents indicates that a significant majority, accounting for 75.6%, falls within the age group of 26-35 years, while those below 25 years constitute a smaller percentage at 9.8%. Those above 35 years of age make up the remaining 14.6%. In terms of marital status, the data shows that a majority of respondents, totaling 61%, are married, whereas 39% are single. When considering the educational background, the majority of respondents, amounting to 68.3%, have attained a graduation degree. Meanwhile, individuals with less than matriculation education make up 12.2%, and those with a master's degree represent 19.5% of the surveyed population. Regarding annual income, the largest group falls within the income range of 5-6 lacs, constituting 75.6% of the respondents. There are smaller percentages in the other income categories, with 2-3 lacs, 3-4 lacs, and >6 lacs making up 2.4%, 7.3%, and 7.3%, respectively.

Table 1. Demographic attributes of the respondents.

Demographic attributes	Frequency	Percentage
<i>Age</i>		
<25	4	9.8
26-35	31	75.6
>35	6	14.6
<i>Marital status</i>		
Single	16	39
Married	15	61
<i>Education</i>		
Less than matriculation	5	12.2
Graduation	28	68.3
Masters	8	19.5
<i>Annual Income (in lacs)</i>		
2-3	1	2.4
3-4	3	7.3
4-5	3	7.3
5-6	31	75.6
>6	3	7.3

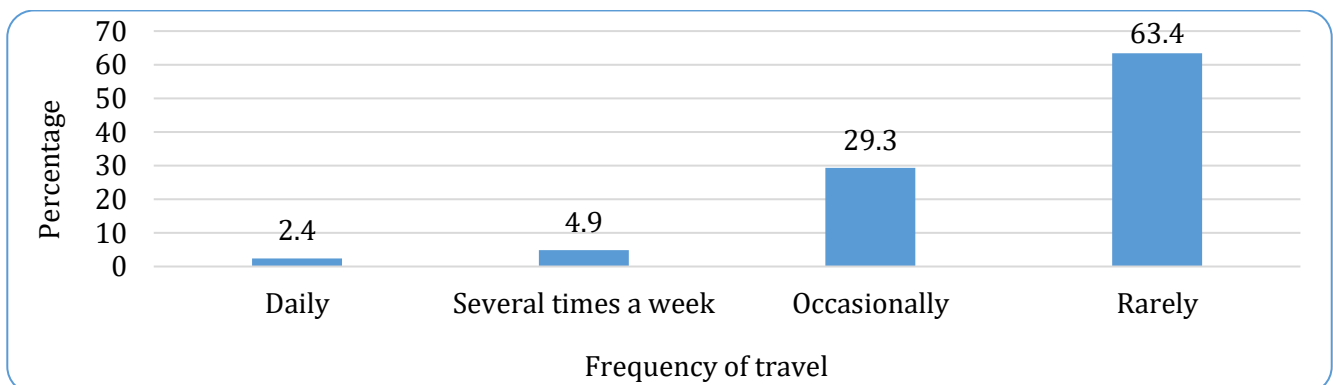


Figure 1. How often do you travel on M2 Motorway?

Figure 1 shows the frequency of travel on the M2 Motorway and reveals interesting patterns of usage among respondents. A significant portion, comprising 63.4%, reported that they rarely travel on the M2 Motorway, suggesting that this route is not a common choice for a majority of the surveyed population. On the other hand, 29.3% mentioned traveling on the motorway occasionally, indicating that there is still a considerable number of individuals who use it from time to time. Only a small minority, with just 2.4%,

stated that they travel on the M2 Motorway daily, while another 4.9% mentioned doing so several times a week. These findings suggest that the motorway is primarily utilized for infrequent or occasional travel rather than as a daily commuting route for the majority of the respondents, highlighting potential areas for improvement or optimization in its usage.

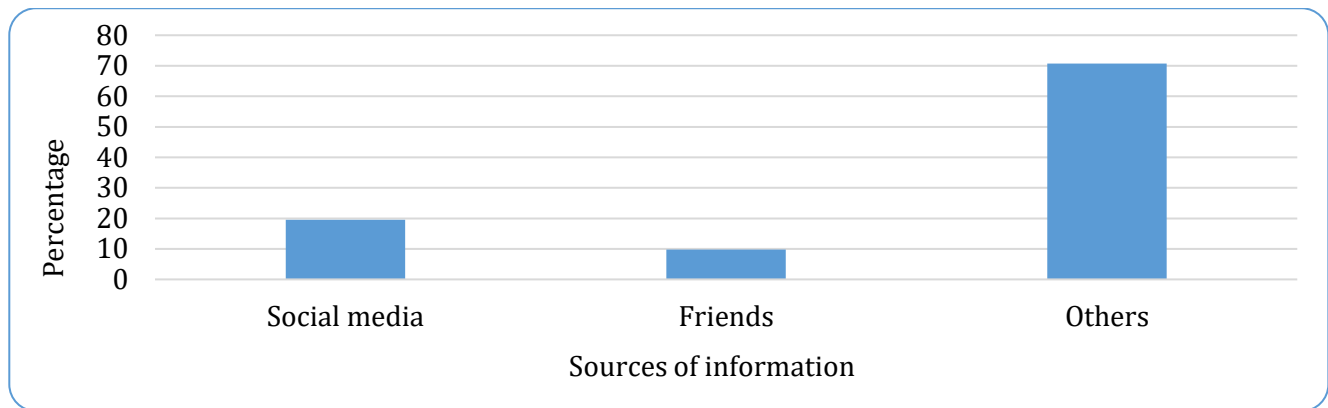


Figure 2. Sources of information.

Figure 2 shows the sources of information about the campaign and sheds light on the varied ways in which respondents became aware of it. A significant majority, constituting 70.7%, indicated that they learned about the campaign through sources categorized as "Others," which suggests a wide range of channels not explicitly listed in the survey. This finding underscores the diversity and complexity of information dissemination in modern contexts. Social media emerged as the second most common source, with 19.5% of respondents learning about the campaign through platforms like Facebook, Twitter, or Instagram. Friends played a comparatively smaller role, with only 9.8% of respondents hearing about the campaign through personal connections. It has been endorsed by research studies such as Nofal (2013), Sack et al. (2019), and Alharbe (2018) that social media networking sites have a prominent role in creating community awareness about road safety. These results suggest that campaigns aiming to reach a broad audience may benefit from utilizing a variety of communication channels, including those not traditionally considered mainstream, to maximize their impact and engagement with different segments of the population.

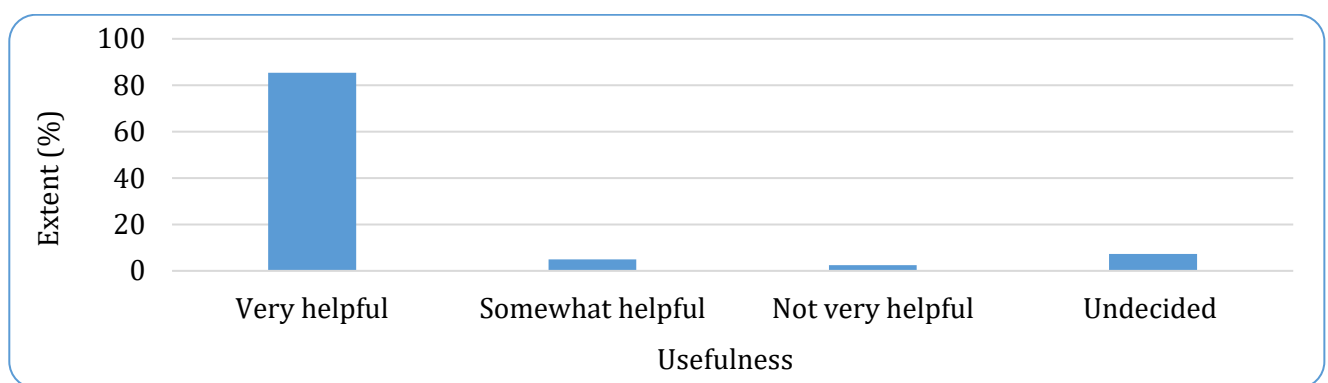


Figure 3. How helpful is this awareness campaign with regard to road safety awareness?

Figure 3 portrays the perceived helpfulness of the awareness campaign concerning road safety and reveals overwhelmingly positive feedback from the respondents. A significant majority, comprising 85.4%, described the campaign as "very helpful." This suggests that the campaign has been successful in making a substantial impact on raising road safety awareness among the surveyed population. Additionally, a small portion, at 4.9%, found the campaign "somewhat helpful," further reinforcing the positive perception of the campaign's effectiveness. The number of respondents who found the campaign "not very helpful" or were "undecided" is minimal, at 2.4% and 7.3%, respectively, indicating that the campaign generally received

favorable reviews. Overall, these findings suggest that the awareness campaign has been highly successful in achieving its goal of increasing road safety awareness among the target audience, with the majority of respondents finding it to be a valuable and impactful initiative.

Table 2. Did you ever see Road Safety Slogans and Messages on backside of vehicles and trucks?

Response	Frequency	Percentage
Yes	38	92.7
No	3	7.3
Total	41	100

Table 3. Is this kind of campaign better than roadside signboards?

Response	Frequency	Percentage
Yes	37	90.2
No	4	9.8
Total	41	100

Table 4. Do road safety programs have positive impacts on drivers?

Response	F	%
Yes	41	100
No	0	0
Total	41	100

Table 2 suggests that a significant majority of respondents, accounting for 92.7%, have indeed seen Road Safety Slogans and Messages on the backside of vehicles and trucks. This high percentage indicates that this mode of disseminating road safety information is quite prevalent and reaches a large portion of the population. Only a small minority, comprising 7.3% of respondents, reported not having seen such slogans and messages.

According to Table 3, it becomes apparent that an overwhelming majority, at 90.2%, believe that this kind of campaign is better than roadside signboards for promoting road safety. This preference for slogans and messages on vehicles and trucks over traditional signboards suggests that respondents find them to be more effective or attention-grabbing in raising awareness and encouraging safe driving practices. Only 9.8% of respondents held the opposite view.

Table 4 indicates unanimous agreement among the respondents, with 100% believing that road safety programs have a positive impact on drivers. This consensus reflects a positive perception of the efficacy of road safety initiatives, highlighting their importance in promoting safer driving habits and behaviors among the surveyed population. Results are similar to those of Shaikh et al. (2017) as they found that road safety awareness campaigns through mass media had positive impacts on the behavior of vehicle drivers. Contemporary technology increasingly influences road safety, it was also revealed by Sultana and Hilal (2022).

Table 5 provides a comprehensive view of respondents' attitudes and reactions to various aspects of the road safety program, as indicated by their responses to a series of questions. In response to the question, "Do you feel bad or lose concentration while driving on motorways while reading these messages?" the respondents' answers had a range of 4, demonstrating a wide spectrum of feelings and distractions experienced. On average, respondents indicated a moderate level of discomfort or concentration loss, with a mean of 3.53 (Sd= 1.266).

Table 5. Response of respondents about the program.

Responses	Range	Mean	Std. Deviation
Do you feel bad or lose concentration while driving on motorways while reading these messages?	4.00	3.5366	1.26684
Do you understand that you are forced to read the message on the back of the vehicle?	4.00	2.9756	1.15082
Reading messages directly displayed in front of you is safer than reading the message on the side of the road?	4.00	2.4146	1.20365
Usually, while traveling, when you cross a vehicle, you either notice or ignore the message written behind it?	3.00	2.1463	.79250
Have you seen and acted on a message regarding your mobile phone, seat belt, or road safety?	4.00	1.8049	1.24939
The messages on road signboards stay in your mind longer than the message written on the backside of plying vehicles?	3.00	1.7805	.96209

The question, "Do you understand that you are forced to read the message on the back of a vehicle?" generated responses with a range of 4 as well. On average, respondents expressed a somewhat ambivalent attitude toward feeling compelled to read these messages, with a mean of 2.9756 (Sd= 1.150). When asked about their beliefs regarding the safety of reading messages directly in front of them versus on the side of the road, respondents' answers exhibited a range of 4, indicating a variety of opinions. On average, they leaned slightly toward considering it somewhat safer to read messages displayed in front of them (Mean =2.4146 Sd= 1.203). In response to the question, "Usually, while traveling, when you cross a vehicle, you either notice or ignore the message written behind it?" the responses had a range of 3. On average, respondents tended to be somewhat inclined to notice these messages, with a mean of 2.1463 (Sd= 0.792). The relatively low standard deviation of .79250 suggests that there is less variability in their behavior in this regard. When it comes to the question, "Have you seen and acted on a message regarding your mobile phone, seat belt, or road safety?" the responses had a range of 4, indicating a broad range of behaviors. On average, respondents reported having seen and acted on such messages to some extent (Mean =1.8049 Sd= 1.249). For the question, "The messages of road signboards stay more in your mind longer than the message written on the backside of plying vehicles?" the responses had a range of 3. Respondents believed that messages on road signboards were more memorable than those on the back of vehicles (Mean =1.7805 Sd= 0.962).

CONCLUSIONS AND RECOMMENDATIONS

The survey results provide valuable insights into the demographic characteristics, awareness campaign effectiveness, and public perceptions of road safety messages among the surveyed population. The majority of respondents fall within the age group of 26-35, are married, have attained a graduation degree, and earn an annual income in the range of 5-6 lacs. Additionally, the majority rarely travel on the M2 Motorway, and their awareness of road safety campaigns is primarily through non-traditional sources such as social media and personal networks. The awareness campaign, as perceived by respondents, has been highly successful, with the majority finding it very helpful in raising road safety awareness. Messages displayed on the back of vehicles and trucks are prevalent and considered more effective than roadside signboards, according to the respondents. Furthermore, respondents universally believe that road safety programs have a positive impact on drivers. Since the majority of respondents

learn about road safety campaigns through social media and personal networks, it is essential to continue utilizing these channels effectively. Additionally, consider exploring other innovative communication channels that can reach a wider audience. There is a need to continuously monitor the impact of road safety campaigns and gather feedback from the public. This will help in making necessary adjustments and ensuring that campaigns remain effective and relevant.

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