

# The Impact of Impulsivity on the Driving Behavior among Gig Drivers

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**Abstract:** *This study explored how the impulsiveness influences driving behavior among the GIG drivers (delivery drivers). The research is focused on finding whether higher impulsive tendencies are related to the poor driving behavior in this group. Data were collected from 200 gig drivers who completed two standardized tools: one measuring impulsivity and another assessing driving behavior. The impulsivity levels appeared moderate, with a mean score of 31.93 and a standard deviation of 5.807, this indicates noticeable variation among participants. Driving behavior scores averaged 20.66, with a standard deviation of 5.538, showing that drivers differed considerably in how they reported their driving habits and actions on the road. The two variables were examined in Pearson's correlation method and found a positive and statistically significant correlation. These findings highlight that impulsive tendencies may play an important role in shaping how drivers react and make decisions while driving in the roads.*

**Keywords:** Impulsivity, driving behavior, delivery partners, GIG drivers

## 1. Introduction

Impulsivity is a concept in psychology. It is when people act fast without thinking things through. This idea has been studied a lot in psychology and behavioral science. People who are impulsive often act quickly when something happens. They might not think about what could go wrong. Impulsivity is linked to some risky behaviors like doing drugs being aggressive, gambling and driving unsafely. In today's world, where we have to make decisions all the time understanding impulsivity is crucial for figuring out why people take risks. When we think about impulsivity in a way it is often seen as a part of someone's personality that affects how well they can control themselves and make decisions. Some ideas about personality say that impulsive people like to seek out things and act on the spot without thinking about what might happen. Other ideas focus on what's happening in the brain like in the prefrontal cortex, which helps us plan and control our impulses. When this part of the brain is not working well people might have a time controlling what they do and they might prefer to get something right away instead of waiting for a better outcome later. Impulsivity is also thought of as having parts, including acting without thinking having a hard time paying attention and not planning for the future.

Driving behavior is what people do when they are driving a car. It is affected by things, including the kind of person they are how they are feeling how well they can think and what is going on around them. To drive safely people need to pay attention be patient and follow the rules of the road. However, people who are impulsive might be more likely to drive in ways like speeding, driving aggressively and ignoring traffic rules. The connection between impulsivity and driving behavior is especially important for gig drivers, who often have to work under a lot of time pressure and are rewarded for performing. These conditions might encourage people to make decisions and drive in ways that are not safe. So, understanding how impulsivity affects driving behavior can help make the roads safer. Can lead to interventions that really work. This study is looking at how impulsivity impacts the driving behavior of gig drivers. The idea of impulsivity and how it affects gig drivers is a part of this study. Impulsivity in gig drivers can lead to some serious problems on the road. By studying impulsivity in gig drivers we can learn more about

what causes driving behavior and how to stop it. This is important for making sure that gig drivers and everyone else on the road are safe. The study of impulsivity in gig drivers can also help us understand how to make the roads safer for everyone.

The main goal of this study is to look at how impulsivity affects the driving behavior of gig drivers. Impulsivity in gig drivers is a concern and it is important to understand what it is and how it works. By looking at impulsivity in gig drivers we can get an idea of what causes risky driving behavior and how to prevent it. This can help make the roads safer for everyone. It can also help gig drivers be more safe and successful, in their jobs.

### Definition

- **Ernest S. Barratt (1959)**- defined impulsivity as “a tendency to act on the spur of the moment without careful thought or consideration of the consequences of one's actions.”
- **Hans J. Eysenck & Sybil B. G. Eysenck (1977)**- described Impulsivity as “a personality trait characterized by quick, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions.”
- **Jeffrey A. Gray (1987)**- defined impulsivity as “a tendency to act rapidly for immediate reward without adequate consideration of future consequences.”

## 2. Literature Review

**Kumar and Singh (2025)** conducted a study titled Relationship between Internet Addiction, Self-Esteem, and Impulsivity in Library-Going Students to examine the association among these variables. The study used the Internet Addiction Test to assess problematic internet use, the Rosenberg Self-Esteem Scale to measure self-esteem, and the Barratt Impulsiveness Scale to assess impulsivity. A correlational research design was adopted, and data were collected from a sample size of 200 from library-going college and university students. The findings revealed a significant positive relationship between internet addiction and impulsivity and a significant negative relationship between internet addiction and self-esteem, indicating that higher impulsivity and lower self-esteem increase

vulnerability to internet addiction. The study concluded that psychological interventions focusing on impulse control and self-esteem enhancement may help reduce internet addiction among students.

**Mittal (2024)**, in the study titled “Big Five Personality Traits and Driving Behaviors of Young Indian Drivers,” examined the influence of personality dimensions on driving behavior using the Big Five Personality Inventory (BFI) to assess the five major personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism—and a Driving Behavior Questionnaire (DBQ) to measure safe and risky driving behaviors, with the purpose of understanding how personality traits predict driving patterns. The sample population comprised young Indian drivers, with a sample size of 100 individuals selected from licensed drivers within the young adult age group. A correlational research design was employed to analyze the relationships between personality traits and driving behaviors. The findings indicated that traits such as conscientiousness and agreeableness were associated with safer driving behaviors, while neuroticism and extraversion showed associations with risky driving tendencies. The study concluded that personality traits play a significant role in driving behavior and emphasized the importance of incorporating personality-based interventions and awareness programs to promote road safety among young drivers.

**Gupta and Ojha (2023)**, in their study titled “Effect of Cognitive Distortion on Impulsivity among Higher Secondary Students,” examined the influence of maladaptive thought patterns on impulsive behavior using the Cognitive Distortion Scale to measure distorted thinking patterns and the Barratt Impulsiveness Scale (BIS) to assess levels of impulsivity, with the purpose of identifying how cognitive distortions contribute to impulsive tendencies. The sample population consisted of higher secondary school students, with a sample size of 300 from the adolescent student group. The study adopted a correlational research design to analyze the relationship between cognitive distortion and impulsivity. The findings revealed a significant positive relationship between cognitive distortion and impulsivity, indicating that students who exhibited higher levels of distorted cognition were more likely to display impulsive behaviors. The study concluded that early identification and correction of cognitive distortions through cognitive-based interventions could be effective in reducing impulsivity among higher secondary students.

### 3. Research Methodology

#### 3.1. Objectives

- To find the level of impulsivity among Gig drivers.
- To find the level of driving behavior among Gig drivers.
- To determine whether different dimensions of impulsivity predict unsafe driving practices.
- To analyse the relationship between impulsivity and risky driving behavior among Gig drivers.
- To study the impact of the impulsivity on driving behavior among Gig drivers.

#### 3.2. Hypothesis

Ho: There is no significant relationship between the impulsivity and driving behavior among Gig drivers.

#### 3.3. Research design

The study uses quantitative correlational research design to explore how impulsive tendencies is related to poor driving patterns among Gig drivers. The Pearson's correlational is used in this study, because correlation is the statistical measure that indicates the extent to which two or more variables fluctuate in relation to each other.

### 4. Sample and Sampling Technique

The population selected for this research is GIG drivers (zomato, swiggy, zepto, etc.) and the sample size for this research study is 200 GIG drivers. The sampling technique used in this study is “cluster sampling” because selecting drivers from randomly chosen delivery hubs. “Cluster sampling”: the population is divided into clusters (e.g., cities, organizations) and entire clusters are randomly selected.

#### 4.1. Inclusion criteria

- Respondents comprise of both genders.
- Respondents within age of 18 to 40 are included.
- Respondents are from diverse delivery and taxi app workers.
- Respondents both part time and full time are included.

#### 4.2. Exclusion criteria

- Respondents besides both genders are excluded.
- Respondents with known cognitive impairments.
- Respondents who hasn't acquired the driving licence.

#### 4.3. Tools used and description:

##### Barratt impulsiveness scale (BIS-15)

The BIS is developed by Ernest S. Barratt, the 15- item version (BIS-15) was used in this study. It is likert scale ranging from 1 (rare/never) to 4 (always). This scale has 3 domains they are Attentional impulsivity (5 items) this covers the aspects like difficulty focusing, cognitive instability, Motor impulsivity (5 items) this covers acting without thinking. Non-planning impulsivity (5 items) this covers aspect “lack of future orientation”. Evidence supports its reliability- Cronbach's alpha exceeds .75 and has very good validity.

##### Driver behavior questionnaire (DBQ)

The driver behavior questionnaire was developed by James Reason and colleagues in 1990 and in 2013, the short version (9-item) questionnaire was developed by Martinussen, L.M., et al. which was used in this study. This scale measures the risky driving behavior such as violations, errors and lapses. This scale is a 5-point likert scale ranging from 1 (never) to 5 (nearly all the time). Researches has shown that the DBQ-9 has acceptable internal consistency, with reported Cronbach's alpha value exceeds .70 and good test-retest reliability over time. Validity studies across different countries support its

construct and criterion validity, showing that higher DBQ-9 scores are significantly associated with the traffic violations, accident involvement and self-reported risky driving.

#### 4.4. Statistical analysis:

Statistical evaluation will rely on SPSS software. The descriptive statistics such as mean, standard deviation will be used to describe the levels of impulsivity and driving behavior among Gig drivers. To examine the relationship between impulsivity and driving behavior, the Pearson's product-moment correlation test is applied.

## 5. Result

This chapter discusses the results and interpretation of the analysis done to understand the relationship between impulsiveness and driving behavior among Gig drivers.

**Table 1:** Descriptive statistics showing the mean and standard deviation between impulsiveness and driving behavior among Gig drivers

Variables	Mean	Standard deviation	N
Impulsivity	31.93	5.807	200
Driving behavior	20.66	5.538	200

The descriptive table shows the mean and standard deviation for the variables. The variable IV: impulsivity has a sample N=200, mean=31.93 and standard deviation=5.807 and variable DV= driving behavior has a sample N=200, mean=20.66 and standard deviation=5.538

**Table 2:** Correlational analysis showing the relationship between impulsivity and driving behavior among Gig drivers.

variables	Pearson's correlation	r value	Decision
Impulsivity	1	+0.393**	Rejecting (Ho)
Driving behavior			

\*Correlation is significant at 0.01 level (2-tailed)

Table 2 shows the values of Pearson's correlation among the two variables. There appears to be a correlation of 1 and a significance of +0.393\*\* ( $p > 0.01$ ). There is significance at 0.01 level and a positive correlation between the impulsivity and driving behavior among Gig drivers. It implies that the higher the impulsivity than their driving behavior is poor. Since it indicates that there is a correlation between impulsivity and driving behavior, the null hypothesis (Ho: there is no significant relationship between the impulsivity and driving behavior among Gig drivers) is rejected.

## 6. Discussion

The aim of the present study was to examine the relationship between impulsivity and driving behavior among Gig drivers. This study was conducted with the sample of 200 Gig drivers and the data were collected using standardized self-report measures, assessing impulsivity and driving behavior. The findings revealed a significant positive correlation (+0.393\*\*,  $p > 0.01$ ) between two variables. The present findings highlight that impulsive gig drivers are more likely to engage in behaviours such as speeding, sudden lane changes, ignoring traffic rules, aggressive driving and

reduced patience in traffic situations. The positive association observed in this study supports the view, that impulsivity is a significant psychological factor contributing to risky driving behavior. Although the relationship between the impulsivity and driving behavior was found to be statistically significant, the moderate magnitude of the correlation indicates that impulsivity alone does not fully explain the driving behavior among the Gig drivers. Other work related factors likes time pressure, traffic congestion, road condition etc. are also likely to influence the driving behavior. Therefore, impulsivity should be considered as one of many important psychology predictors of driving behavior among these drivers.

Overall results, the present study provides empirical evidence that impulsivity is significantly and positively associated with driving behavior among Gig drivers. Higher level of impulsivity are linked with poorer and risky driving behavior. The findings highlights the importance of addressing impulsivity in both preventive and intervention strategies aimed at improving road safety and promoting healthier driving practices within the gig workforce.

## 7. Summary

The present study examined the association between impulsivity and driving behavior among the Gig drivers. The data were collected from 200 working Gig drivers through standardized questionnaires: Barratt impulsivity scale (BIS-15) and Driving behavior questionnaire (DBQ-9). The descriptive statistics values shows moderate levels of impulsivity (M=31.93, SD=5.807) and driving behavior (M=20.66, SD=5.538). Pearson analysis indicated a significant positive relationship ( $r = +0.393$ ,  $p > 0.01$ ) between the two variables. The findings suggest that higher impulsivity is linked with the poor and risky driving behavior. The null hypothesis stating no relationship between these two variables is rejected. The individuals with the higher impulsiveness are tend to violate the traffic rules, speed and risky driving behavior.

## 8. Conclusion

The present study's result shows the significant correlation between the scores obtained using the Barratt impulsivity scale and Driving behavior questionnaire, indicates a positive correlation between these two variables (impulsiveness and driving behavior). Therefore, the Gig driver who has a poor and risky driving behavior tend to have higher impulsiveness.

## 9. Limitations

- The study mainly focused on impulsivity as a predictor of driving behavior. Other factors such as stress, fatigue, driving experience, work pressure, and environmental conditions were not included and may also influence driving behavior.
- The participants were selected from a specific location or region, which may limit the applicability of the findings to gig drivers in other cultural or geographical contexts.
- The sample consisted of 200 gig drivers, which may limit the generalizability of the findings to a larger population of gig drivers.

## 10. Recommendations

- This study can be helpful to deploy policies regarding the time pressure laid by the companies on the Gig drivers.
- Future studies should include larger and more diverse samples of gig drivers and consider additional factors such as stress, fatigue, work pressure, and driving experience to better understand their influence on driving behavior.
- Government agencies and transportation authorities should conduct awareness campaigns to educate gig drivers about the risks associated with impulsive driving and promote responsible driving behavior.

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