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Examining the Influence of Riding Distraction on Risky Riding Behavior among P-Hailing Riders in Malaysia: The Mediating Role of Moral Disengagement

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ABSTRACT

Road traffic accidents involving motorcyclists are a significant public health issue in Malaysia, with p-hailing riders particularly vulnerable. This study investigates the influence of riding distraction on risky riding behavior among p-hailing riders in Malaysia, focusing on the mediating role of moral disengagement. Drawing on Bandura's Moral Disengagement Theory and the Job Demand-Resources (JD-R) model, this research explores how distractions, such as mobile phone use and navigation adjustments, contribute to moral disengagement and subsequently lead to risky riding behaviors. A sample of 200 p-hailing riders, representative of the broader rider population, was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the hypothesized relationships. The findings reveal that riding distraction significantly increases risky riding behavior and that this relationship is partially mediated by moral disengagement. These results underscore the importance of addressing external distractions and cognitive justifications to improve road safety among p-hailing riders. The study recommends implementing specific interventions such as strict mobile phone usage policies and targeted training programs to reduce risky behaviors. These findings have the potential to inform policy and enhance safety practices for p-hailing riders, thereby reducing the incidence of road traffic accidents in this high-risk group.

Keywords: Riding Distraction, Risky Riding Behavior, Moral Disengagement, P-Hailing

1. INTRODUCTION

Road traffic accidents (RTAs) continue to be a significant public health issue worldwide, with motorcyclists being disproportionately affected. In Malaysia, motorcyclists represent more than 60% of road traffic fatalities [1]. Among them, p-hailing riders, those who deliver goods via platforms like GrabFood and Foodpanda, are particularly vulnerable. These riders face numerous challenges as they navigate congested urban areas, often while managing multiple distractions that can compromise their safety.

Riding distractions, such as using mobile phones, adjusting navigation devices, or interacting with delivery apps, are common among p-hailing riders. These distractions divert a rider's attention away from the primary task of riding, impairing their ability to respond to sudden changes in traffic conditions and increasing the likelihood of engaging in risky behaviors such as speeding, weaving between lanes, and running red lights [2, 3]. The nature of p-hailing work, which often requires constant communication with customers and rapid navigation adjustments, makes riders particularly prone to distractions. These distractions can significantly impair a rider's judgment and reaction time, heightening the risk of accidents [4].

The high-pressure environment of p-hailing work exacerbates the impact of these distractions. Riders are often required to manage multiple tasks simultaneously, such as checking their route, responding to customer inquiries, and handling deliveries, all while navigating through traffic. This multitasking can lead to cognitive overload, where the rider's mental resources are stretched too thin, increasing the likelihood of errors and risky behaviors [5, 6]. Younger riders, who dominate the p-hailing workforce, may be especially vulnerable to these distractions due to their tendency to rely heavily on mobile technology, which further increases the risk of accidents [7].

Bandura's Moral Disengagement Theory [8] provides a framework for understanding how p-hailing riders may rationalize their risky behaviors when distracted. Moral disengagement involves cognitive mechanisms that allow individuals to justify unethical or unsafe behaviors, thereby reducing feelings of guilt. For instance, a rider might justify using a mobile phone while riding by believing it is necessary for job performance, despite the risks involved [9, 10]. The Job Demand-Resources (JD-R) model [5] also explains how the job demands of managing multiple distractions can lead to stress and burnout, resulting in risky riding behaviors. Understanding these cognitive processes is crucial for developing interventions that can help riders manage distractions and reduce the incidence of risky behaviors [4].

This study investigates the impact of riding distractions on risky riding behavior among p-hailing riders in Malaysia and explores the mediating role of moral disengagement in this relationship.

2. RESEARCH OBJECTIVES

In order to address the gaps identified in the literature, this study formulates the following research objectives based on the hypotheses:

- To examine the relationship between riding distraction and risky riding behavior among p-hailing riders in Malaysia.
- To investigate the impact of riding distraction on moral disengagement among p-hailing riders in Malaysia.
- To explore the relationship between moral disengagement and risky riding behavior among p-hailing riders in Malaysia.
- To evaluate the mediating role of moral disengagement in the relationship between riding distraction and risky riding behavior among p-hailing riders in Malaysia.

3. LITERATURE REVIEW

3.1 Underpinning and Supporting Theories

3.1.1 Bandura's Moral Disengagement Theory

Bandura's Moral Disengagement Theory [8] explains how individuals rationalize unethical behaviors to diminish feelings of guilt or responsibility. Moral disengagement involves cognitive mechanisms such as diffusion of responsibility, dehumanization, and attribution of blame, which allow individuals to engage in behaviors they would otherwise find unacceptable. In the context of p-hailing riders, moral disengagement can explain how riders justify risky behaviors when distracted, such as using mobile phones or engaging in other distractions while riding [9, 10].

3.1.2 Job Demand-Resources (JD-R) Model

The Job Demand-Resources (JD-R) model posits that job demands, such as riding distractions, can lead to stress and burnout, which in turn can result in adverse outcomes like risky behavior [5]. According to this model, resources such as training and support can mitigate the negative effects of job demands. This study uses the JD-R model to understand how riding distractions as job demands influence risky riding behavior and how resources can help in mitigating these effects [6, 7].

3.2 Riding Distraction

Riding distraction is a critical factor that compromises the safety of motorcyclists, particularly those engaged in delivery services, such as p-hailing riders. Distractions while riding can come from various sources, including mobile phones, navigation systems, and interactions with delivery apps [3]. These distractions divert the rider's attention from the primary task of navigating traffic, leading to delayed reactions, impaired decision-making, and ultimately an increased likelihood of accidents [2]. The nature of p-hailing work, which often requires riders to juggle multiple tasks simultaneously such as communicating with customers, checking routes, and managing deliveries, further exacerbates the risk posed by distractions.

Research has consistently shown that distracted riding is a significant contributor to traffic accidents. A study by McEvoy et al. [11] found that motorcyclists using mobile phones while riding are up to four times more likely to be involved in a crash compared to those who are not distracted. Similarly, a study by Charlton et al. [2] indicated that distractions from mobile devices and in-vehicle technologies are among the leading causes of near-misses and crashes among motorcyclists. In the context of p-hailing, the need for constant connectivity to manage deliveries adds another layer of complexity, making it more challenging for riders to maintain focus on the road. Despite the known risks associated with distracted riding, there is limited research specifically examining how these distractions impact p-hailing riders in Malaysia. This study aims to fill this gap by exploring the direct effects of riding distractions on risky riding behavior among p-hailing riders.

3.3 Risky Riding Behavior

Risky riding behavior encompasses a range of unsafe practices that increase the likelihood of traffic accidents and injuries. These behaviors include speeding, tailgating, running red lights, and weaving through traffic [12]. For motorcyclists, engaging in risky behaviors is particularly hazardous due to their vulnerability on the road, where the absence of protective barriers exposes them to greater risks in the event of a collision [13]. The literature on risky riding behavior has identified several contributing factors, including individual traits, situational influences, and external pressures, such as distractions and the demands of the job [14].

In the p-hailing industry, risky riding behavior is often driven by the need to meet strict delivery deadlines, leading riders to prioritize speed and efficiency over safety [15]. The competitive nature of the gig economy, where faster deliveries can result in higher earnings and better customer ratings, further incentivizes riders to take risks. Additionally, the repetitive nature of delivery work can lead to a false sense of familiarity with routes, causing riders to underestimate potential dangers and engage in unsafe practices [14]. However, the specific role of riding distractions in exacerbating these behaviors has not been fully explored, particularly in the context of p-hailing riders in Malaysia. This study seeks to provide new insights into how distractions influence risky riding behavior among these riders.

3.4 Moral Disengagement

Moral disengagement is a psychological mechanism that allows individuals to justify unethical or unsafe behavior, enabling them to act in ways that conflict with their moral standards without experiencing guilt [8]. This concept has been widely studied in various contexts, including corporate misconduct, military behavior, and sports, but is increasingly recognized as relevant in road safety research [10, 16]. Moral disengagement involves cognitive processes such as minimizing the consequences of one's actions, displacing responsibility, and dehumanizing others, which allow individuals to rationalize behaviors that would typically be considered unacceptable [9].

For p-hailing riders, moral disengagement may manifest as justifications for behaviors that compromise safety, such as using mobile phones while riding or ignoring traffic rules, under the belief that these actions are necessary to meet job demands [17]. When faced with the pressures of time-sensitive deliveries, riders might convince themselves that speeding or disregarding traffic signals is acceptable if it helps them achieve their objectives. Research has shown that individuals under stress or facing significant job demands are more likely to engage in moral disengagement as a coping mechanism [16]. However, while moral

disengagement has been extensively studied in other contexts, its role as a mediator between riding distractions and risky riding behavior in the context of p-hailing remains underexplored. This study aims to address this gap by examining how moral disengagement influences the relationship between distractions and risky riding behavior.

3.5 Relationship Between Riding Distraction, Moral Disengagement and Risky Riding Behavior

The interaction between riding distraction, moral disengagement, and risky riding behavior can be understood through established psychological and occupational theories. The Job Demand-Resources (JD-R) model posits that high job demands, such as the need to manage multiple distractions, can lead to stress and burnout, particularly when there are insufficient resources to manage these demands [5]. In such situations, individuals may resort to maladaptive coping mechanisms, such as moral disengagement, to justify behaviors that alleviate the pressure but compromise safety [6]. Similarly, Bandura's [8] theory of moral disengagement provides a framework for understanding how cognitive restructuring allows individuals to engage in risky behaviors without experiencing moral conflict.

In the context of p-hailing, these theories suggest that riding distractions act as significant job demands that can lead to risky riding behaviors. Moral disengagement serves as a cognitive mechanism that mediates this relationship, enabling riders to rationalize unsafe practices as necessary responses to the demands of their work. This study contributes to the literature by exploring these dynamics in the specific context of p-hailing in Malaysia, an area that has not been extensively studied.

3.6 Research Gaps

Despite the growing body of literature on distractions, moral disengagement, and risky behavior, there remain significant gaps in understanding these dynamics within the p-hailing industry. While some studies have explored the impact of distractions on general driving behavior, there is limited research focusing specifically on how distractions influence p-hailing riders in Malaysia. Additionally, the role of moral disengagement as a mediator between riding distractions and risky riding behavior is underexplored, particularly in the context of gig economy jobs like p-hailing. This study addresses these gaps by providing empirical evidence on the relationships between these variables, offering new insights into how p-hailing riders navigate the demands of their work and the implications for road safety.

4. METHODOLOGY

4.1 Research Design

This study employs a quantitative research design to investigate the relationships between riding distractions, moral disengagement, and risky riding behavior among p-hailing riders in Malaysia. A self-administered questionnaire was used to collect data from the respondents. The quantitative approach allows for the systematic examination of the hypothesized relationships and provides a robust framework for statistical analysis [18].

4.2 Sample and Data Collection

The target population for this study comprises p-hailing riders in Malaysia, specifically those affiliated with major delivery platforms such as GrabFood and Foodpanda. A total of 200 respondents were selected using stratified random sampling to ensure a representative sample. Data collection was conducted through face-to-face interactions at popular eateries frequented by p-hailing riders. The researchers approached riders during their breaks and requested their participation in the study. Respondents were assured of the confidentiality and anonymity of their responses [19].

4.3 Measurement Instruments

The questionnaire consisted of three sections: demographic information, constructs measuring riding distractions, moral disengagement, and risky riding behavior. Each construct was measured using a Likert scale, with items adapted from existing validated scales in the literature.

Table 4.1 Research Instruments

Construct	Source	Number of Items
Riding Distractions	Klauer et al. [3]	6
Moral Disengagement	Bandura [8]; adapted by Nguyen et al. [4]	8
Risky Riding Behavior	Qian et al. [20]	10

Riding distractions were measured using a 6-item scale adapted from Klauer et al. [3], which focused on various types of distractions experienced by riders. Moral disengagement was assessed using an 8-item scale adapted from Bandura [8] and Nguyen et al. [4], which examined the cognitive mechanisms that justify risky behaviors. Risky riding behavior was evaluated using a 10-item scale adapted from Qian et al. [20], covering behaviors such as speeding, running red lights, and using mobile phones while riding.

4.4 Data Analysis

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the hypothesized relationships and the mediating effect of moral disengagement. PLS-SEM is suitable for this study due to its ability to handle complex models and its robustness with smaller sample sizes [21]. PLS-SEM was used to assess the structural model (inner model) and measurement model (outer model).

5. RESULTS AND DISCUSSION

5.1 Demographic Analysis

Table 5.1 Demographic Findings

Demographic Variable	Category	Frequency (n = 200)	Percentage (%)
Age	18-24 years	100	50%
	25-34 years	60	30%
	35-44 years	30	15%
	45 years and above	10	5%
Education Level	High School	90	45%
	Diploma/Technical Cert	60	30%
	Bachelor's Degree	40	20%
	Postgraduate	10	5%
Riding Experience	Less than 1 year	40	20%
	1-2 years	110	55%
	3-5 years	40	20%
	More than 5 years	10	5%
Average Working Hours	Less than 4 hours/day	30	15%
	4-6 hours/day	50	25%
	6-8 hours/day	80	40%
	More than 8 hours/day	40	20%

The age distribution of the p-hailing riders in the sample shows a strong skew towards younger individuals. The largest age group is the 18-24 years category, which constitutes 50% of the sample. This dominance of

younger riders is consistent with the nature of p-hailing work, which often appeals to individuals who are seeking flexible job opportunities, such as students or those early in their careers. The 25-34 years age group makes up 30% of the sample, indicating that a significant portion of riders are in their mid-20s to early 30s, potentially balancing the demands of this work with other life responsibilities. The older age groups, 35-44 years and 45 years and above, represent 15% and 5% of the sample, respectively, suggesting that p-hailing is less commonly pursued as a long-term career by older individuals.

The education level of the riders reveals that nearly half of the sample (45%) has only a high school education. This indicates that p-hailing is a viable job option for individuals with lower educational qualifications, offering them a way to earn income with relatively low entry barriers. The next largest group, with 30%, holds a Diploma or Technical Certificate, which suggests that some riders have pursued vocational training or higher education but may not yet be utilizing those qualifications in their current employment. Additionally, 20% of the riders have a Bachelor's degree, highlighting that some individuals with higher education are also engaging in p-hailing, possibly due to the flexible nature of the work or as a temporary employment solution. Only 5% of the sample has postgraduate qualifications, indicating that highly educated individuals are less likely to be involved in p-hailing.

The riding experience data shows a substantial portion of the sample (75%) has less than three years of experience, with 20% having less than 1 year and 55% having between 1-2 years. This high percentage of relatively inexperienced riders suggests that many individuals are new to p-hailing or have only recently entered the field. This lack of experience can contribute to increased vulnerability to risky riding behaviors, as less experienced riders may not have fully developed the skills or judgment necessary to navigate the challenges of the job safely. The remaining riders have more experience, with 20% having 3-5 years of riding experience and only 5% having more than 5 years, indicating that long-term engagement in p-hailing is relatively uncommon.

The data on average working hours per day indicates that p-hailing riders typically work between 4 to 8 hours daily, with 40% of the sample working 6-8 hours and 25% working 4-6 hours. This suggests that for many riders, p-hailing represents a significant daily commitment, potentially contributing to fatigue and time pressure, which are critical factors influencing risky riding behaviors. Another 20% of the sample works more than 8 hours per day, likely representing those who rely heavily on p-hailing as their primary source of income. Lastly, 15% of the sample works less than 4 hours a day, possibly indicating part-time involvement or using p-hailing as supplementary income.

5.2 Assessment of Measurement Model

The assessment of the measurement model is critical to ensure that the constructs are measured accurately and reliably.

5.2.1 Outer Loadings

The outer loadings for each indicator were examined to assess the reliability of the indicators in measuring their respective constructs. As shown in Table 5.2, all outer loadings exceed the recommended threshold of 0.70, indicating strong correlations between the indicators and their constructs [22]. For example, the outer loadings for "Riding Distraction" range from 0.778 to 0.876, demonstrating that these indicators reliably measure the construct. Similarly, "Moral Disengagement" (0.794 to 0.864) and "Risky Riding Behavior" (0.781 to 0.877) also exhibit strong outer loadings, supporting the robustness of the measurement model.

Table 5.2 Outer Loadings

Indicator	Riding Distraction	Moral Disengagement	Risky Riding Behavior
RD1	0.809		
RD2	0.842		
RD3	0.798		
RD4	0.876		

Indicator	Riding Distraction	Moral Disengagement	Risky Riding Behavior
RD5	0.778		
MD1		0.811	
MD2		0.864	
MD3		0.838	
MD4		0.794	
MD7		0.832	
MD8		0.799	
RRB1			0.877
RRB2			0.849
RRB3			0.858
RRB5			0.826
RRB6			0.781
RRB8			0.789
RRB10			0.796

Note: Notes: Indicators below than 0.70 were deleted

5.2.2 Composite Reliability and AVE

Composite reliability and average variance extracted (AVE) were used to assess the internal consistency and convergent validity of the constructs. As indicated in Table 5.3, the composite reliability values for all constructs are above the threshold of 0.70, with "Riding Distraction" at 0.871, "Moral Disengagement" at 0.893, and "Risky Riding Behavior" at 0.908. The AVE values for all constructs are above 0.50, confirming that the constructs capture a sufficient amount of variance from their indicators, thus supporting convergent validity [22].

Table 5.3 Composite Reliability and AVE

Construct	Composite Reliability	AVE
Riding Distraction	0.871	0.64
Moral Disengagement	0.893	0.73
Risky Riding Behavior	0.908	0.72

5.2.3 Discriminant Validity

Discriminant validity was assessed using the Fornell and Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio.

5.2.3.1 Fornell and Larcker Criterion

The Fornell and Larcker criterion compares the square root of the AVE for each construct with the correlations between constructs. As shown in Table 5.4, the square root of the AVE for each construct is greater than its correlation with any other construct, indicating good discriminant validity [22]. For instance, the square root of the AVE for "Riding Distraction" is 0.806, which is higher than its correlations with "Moral Disengagement" (0.531) and "Risky Riding Behavior" (0.567), confirming that each construct is distinct.

Table 5.4 Fornell and Larcker Criterion

Construct	Riding Distraction	Moral Disengagement	Risky Riding Behavior
Riding Distraction	0.806		
Moral Disengagement	0.531	0.85	
Risky Riding Behavior	0.567	0.62	0.85

5.2.3.2 HTMT Criterion

The HTMT ratio was also used to assess discriminant validity. As shown in Table 5.5, all HTMT values are below the threshold of 0.85, indicating that the constructs are distinct from one another [23]. The HTMT value between “Riding Distraction” and Moral Disengagement” is 0.693, “Riding Distraction” and Risky Riding Behavior” is 0.661, and "Moral Disengagement" and "Risky Riding Behavior" is 0.698, which is well within the acceptable range, further supporting discriminant validity.

Table 5.5 HTMT Criterion

Construct	Riding Distraction & Moral Disengagement	Riding Distraction & Risky Riding Behavior	Moral Disengagement & Risky Riding Behavior
HTMT	0.693	0.661	0.698

5.3 Assessment of Structural Model

The structural model was assessed to evaluate the relationships between the constructs and to test the hypotheses.

5.3.1 Multicollinearity Analysis (VIF)

Multicollinearity was assessed by examining the variance inflation factor (VIF) values for the constructs. As shown in Table 5.6, all VIF values are below the threshold of 5, indicating that multicollinearity is not an issue in the model [22]. For example, the VIF values for "Riding Distraction," "Moral Disengagement," and "Risky Riding Behavior" are 1.397, 1.424, and 1.416, respectively, suggesting that the constructs are not excessively correlated and can be reliably interpreted.

Table 5.6 Multicollinearity Analysis (VIF)

Construct	VIF
Riding Distraction	1.397
Moral Disengagement	1.424
Risky Riding Behavior	1.416

5.3.2 Path Coefficients

The path coefficients were analyzed to test the hypothesized relationships between the constructs. As shown in Table 5.7, all path coefficients are positive and significant at the $p < 0.01$ level. Specifically, the relationship between "Riding Distraction" and "Risky Riding Behavior" is significant (path coefficient = 0.469, t-value = 7.583), indicating that higher levels of distraction are associated with increased risky riding behavior. "Riding Distraction" also has a significant positive effect on "Moral Disengagement" (path coefficient = 0.491, t-value = 7.962), and "Moral Disengagement" significantly influences "Risky Riding Behavior" (path coefficient = 0.448, t-value = 7.056). These findings support the proposed hypotheses and demonstrate the critical role of distraction and moral disengagement in influencing risky riding behavior among p-hailing riders as depicted in Figure 5.1.

Table 5.7 Path Coefficient

Path	Coefficient	t-value	p-value
Riding Distraction -> Risky Riding Behavior	0.469	7.583	<0.001
Riding Distraction -> Moral Disengagement	0.491	7.962	<0.001
Moral Disengagement -> Risky Riding Behavior	0.448	7.056	<0.001

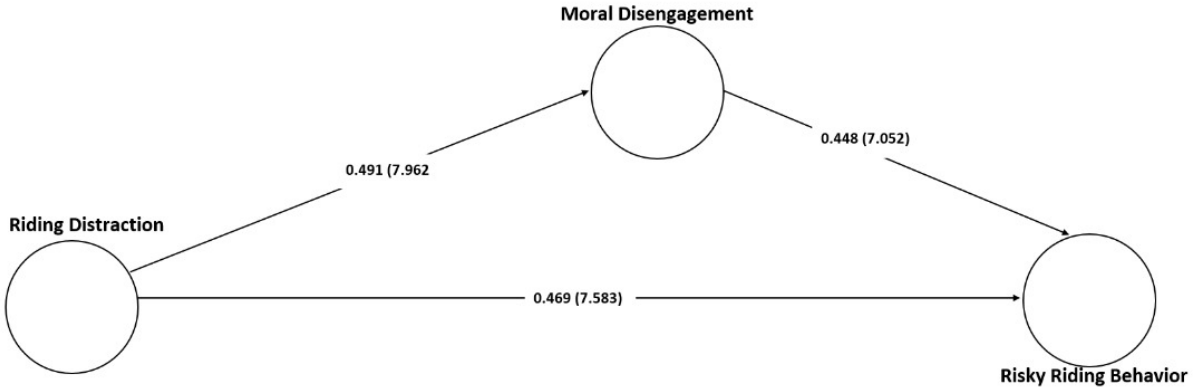

Figure 5.1 Measurement Model

5.3.3 Indirect Effect

The indirect effect of "Riding Distraction" on "Risky Riding Behavior" through "Moral Disengagement" was also examined. As indicated in Table 5.8, the indirect effect is significant (coefficient = 0.229, t-value = 6.50, $p < 0.001$), confirming that moral disengagement mediates the relationship between riding distraction and risky riding behavior. This finding highlights the importance of cognitive mechanisms, such as moral disengagement, in explaining how distractions can lead to unsafe practices among riders.

Table 5.8 Indirect Effect

Indirect Path	Coefficient	t-value	p-value
Riding Distraction -> Moral Disengagement -> Risky Riding Behavior	0.229	6.50	<0.001

5.3.4 Coefficient of Determination (R2) and Effect Size (f2)

The explanatory power of the model was assessed using R^2 and f^2 values. As presented in Table 5.9, the R^2 value for "Moral Disengagement" is 0.446, indicating that riding distraction explains 44.6% of the variance in moral disengagement. The R^2 value for "Risky Riding Behavior" is 0.467, suggesting that riding distraction and moral disengagement together explain 46.7% of the variance in risky riding behavior. The f^2 values indicate moderate to large effect sizes, with "Riding Distraction" having an f^2 of 0.334 on "Moral Disengagement" and 0.312 on "Risky Riding Behavior." These results demonstrate the substantial impact of riding distraction and moral disengagement on risky riding behavior.

Table 5.9 Coefficient of Determination (R2) and Effect Size (f2)

Construct	R^2	f^2
Moral Disengagement	0.446	0.334
Risky Riding Behavior	0.467	0.312

5.3.5 Predictive Relevance (Q^2)

Predictive relevance was assessed using Q^2 values, as shown in Table 5.10 The Q^2 values for "Moral Disengagement" (0.175) and "Risky Riding Behavior" (0.348) are both above zero, indicating that the model has good predictive relevance [23]. This means that the model can accurately predict the outcomes of the constructs, reinforcing the robustness of the findings.

Table 5.10 Predictive Relevance (Q^2)

Construct	Q^2
Moral Disengagement	0.175
Risky Riding Behavior	0.348

5.4 Hypothesis Testing

5.4.1 Research Objective 1: To examine the relationship between riding distraction and risky riding behavior among p-hailing riders in Malaysia.

H1: Riding distraction significantly influences risky riding behavior.

The analysis shows a significant positive relationship between riding distraction and risky riding behavior (path coefficient = 0.469, $p < 0.01$). This finding suggests that as the level of distraction increases, riders are more likely to engage in risky behaviors. The demographic data support this finding, as younger riders, who dominate the sample, may be more prone to distractions, such as mobile phone usage, leading to unsafe practices like lane weaving and delayed reaction times [2, 3].

5.4.2 Research Objective 2: To investigate the impact of riding distraction on moral disengagement among p-hailing riders in Malaysia.

H2: Riding distraction significantly influences moral disengagement.

The results indicate a significant positive relationship between riding distraction and moral disengagement (path coefficient = 0.491, $p < 0.01$). This suggests that higher levels of distraction lead to greater moral disengagement among riders. The high percentage of riders with less than three years of experience (75%) may contribute to this finding, as less experienced riders might lack the coping mechanisms to manage distractions, resorting to cognitive justifications for their risky behaviors [16, 17].

5.4.3 Research Objective 3: To explore the relationship between moral disengagement and risky riding behavior among p-hailing riders in Malaysia.

H3: Moral disengagement significantly influences risky riding behavior.

The analysis shows a significant positive relationship between moral disengagement and risky riding behavior (path coefficient = 0.448, $p < 0.01$). This indicates that riders who employ moral disengagement are more likely to engage in risky behaviors. The demographic data reveal that a substantial portion of the sample has only a high school education (45%), which may influence their moral reasoning and susceptibility to disengagement mechanisms [9, 10].

5.4.4 Research Objective 4: To evaluate the mediating role of moral disengagement in the relationship between riding distraction and risky riding behavior among p-hailing riders in Malaysia.

H4: Moral disengagement mediates the relationship between riding distraction and risky riding behavior.

The mediation analysis indicates that moral disengagement partially mediates the relationship between riding distraction and risky riding behavior (indirect effect = 0.229, $p < 0.01$). This finding highlights the role of cognitive mechanisms in explaining how distractions lead to risky riding. The younger age group, which dominates the sample, may be more prone to cognitive justifications for their behaviors when distracted, enhancing the indirect effect of moral disengagement [4, 16].

6. RECOMMENDATIONS

6.1 Theoretical Recommendations:

Future research should integrate moral disengagement into existing traffic safety models to better understand the cognitive mechanisms that justify risky riding behaviors. This integration can provide a more comprehensive framework for examining how external distractions like mobile phone usage lead to unsafe practices.

Next, The Job Demand-Resources (JD-R) model should be expanded to include moral disengagement as a mediator in occupational safety research. This expansion can help explain how job demands, such as riding distractions, influence safety behaviors through cognitive justifications, providing a deeper understanding of the interplay between job stressors and safety outcomes.

Lastly, Researchers should explore other cognitive mechanisms that might mediate the relationship between job demands and risky behaviors. Understanding these mechanisms can enrich theoretical models and provide more targeted intervention strategies.

6.2 Practical Recommendations:

Implementing strict mobile phone usage policies can reduce distractions among riders, allowing them to focus on safe riding. Delivery companies should enforce rules that limit phone usage to essential communication and navigation, mitigating the risk of distraction-related accidents. For instance, companies could integrate hands-free communication systems that allow riders to communicate without taking their eyes off the road, reducing the risk of distraction.

Secondly, providing training programs focusing on managing distractions and safe riding practices can equip riders with the skills needed to handle job pressures safely. These programs should include modules on identifying and minimizing distractions, safe phone usage, and stress reduction strategies, addressing both the external and cognitive factors influencing risky behaviors. Additionally, incorporating real-life scenarios in training, where riders can practice avoiding distractions in controlled environments, can reinforce safe riding habits.

Next, developing policies to monitor and manage rider workload effectively can prevent distraction-induced fatigue and reduce the likelihood of risky behaviors. Companies should implement systems to track rider hours and ensure that riders are not overworked, promoting a safer working environment. Implementing a digital monitoring system that alerts riders and managers when fatigue thresholds are reached could be an effective way to prevent accidents related to overwork.

Finally, implement awareness campaigns aimed at reducing moral disengagement among riders. These campaigns should educate riders about the dangers of distractions and the cognitive justifications they may use to excuse risky behaviors, encouraging them to adopt safer practices. For example, visual reminders and slogans on riders' gear or in-app notifications could constantly reinforce the importance of staying focused and resisting distractions while on the road.

7. LIMITATIONS AND FUTURE RESEARCH

While this study provides valuable insights into the relationship between riding distractions, moral disengagement, and risky riding behavior among p-hailing riders in Malaysia, it is not without limitations. First, the study's reliance on self-reported data may introduce response biases, as riders might underreport their engagement in risky behaviors or overestimate their ability to manage distractions. Future research could address this limitation by incorporating observational methods or using tracking technologies to gather objective data on rider behavior.

Second, the study's cross-sectional design limits the ability to infer causality between the variables. Longitudinal studies would be beneficial in examining how these relationships evolve over time, particularly in response to interventions aimed at reducing riding distractions and promoting safer practices.

Additionally, the study's focus on p-hailing riders in Malaysia may limit the generalizability of the findings to other contexts. Future research should explore whether the identified relationships hold in different cultural or occupational settings, such as among delivery riders in other countries or among other types of motorcyclists.

Finally, while this study highlights the role of moral disengagement as a mediator, there may be other cognitive or psychological factors that influence the relationship between riding distractions and risky riding behavior. Future studies could explore additional mediators or moderators, such as stress levels, personality traits, or organizational support, to gain a more comprehensive understanding of the factors that contribute to risky riding behaviors.

8. **CONCLUSION**

This study provides critical insights into the impact of riding distractions on risky riding behavior among p-hailing riders in Malaysia, emphasizing the mediating role of moral disengagement. The findings underscore the need for targeted interventions to enhance rider safety and well-being. By addressing both the external distractions and the internal cognitive justifications, policymakers and companies can develop comprehensive strategies to improve road safety for p-hailing riders.

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