

THE REASONED, REACTIVE, AND HABITUAL ENGAGEMENT IN SOCIAL
MEDIA DISTRACTED DRIVING: EXPLORATION OF BEHAVIORAL
PROCESSES AND THEIR INTEGRATION

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BEHAVIORAL PROCESSES AND THEIR INTEGRATION**

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ABSTRACT

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Social Media Distracted Driving (SMDD), defined as drivers engaging with content and notifications from social media apps while driving, presents a unique hazard. Understanding the behavioral processes that contribute to SMDD is vital for developing effective interventions and policies. However, no prior study has specifically investigated these processes. To address this gap, the current study proposes a novel approach to examining the behavioral processes of SMDD with three frameworks and their integration: the Theory of Planned Behavior (TPB), the Prototype Willingness Model, and habitual strength. A sample of 416 drivers, with a mean age of 31.9 years, participated in the study. The findings indicated a positive relationship between social media habits and SMDD engagement, suggesting that SMDD can be somewhat automatic. The analysis of the TPB model showed that intention was the strongest predictor, underscoring the strength of the reasoned process in SMDD. The PWM model revealed that willingness had a smaller direct effect on SMDD but a stronger indirect effect through intention, highlighting the impact of reactive responses on the reasoned process. Finally, the integrated model

suggested that SMDD is not an automatic behavior; however, habits can shape deliberate behavioral processes. The study highlights the necessity of a multi-framework approach to understanding the underlying factors of SMDD. The discussion section includes the theoretical and practical implications of the results.

Keywords: Distracted Driving, Social Media, Theory of Planned Behavior, Prototype Willingness Model, Habitual Strength



ÖZ

SÜRÜŞ SIRASINDA SOSYAL MEDYA KAYNAKLI DİKKAT DAĞINIKLIĞININ AKILCI, TEPKİSEL VE ALIŞKANLIK TEMELLİ DAVRANIŞSAL SÜREÇLERİNİN KEŞFİ VE ENTEGRASYONU

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Sürücülerin araç kullanırken sosyal medya uygulamalarından gelen içerik ve bildirimlerle meşgul olması olarak tanımlanabilen Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı (SMKSDD), her an sürücünün kendisi tarafından başlatılabilen görsel, bilişsel, fiziksel ve işitsel talepler içerdiği için özgün bir tehlike arz etmektedir. SMKSDD'ye katkıda bulunan davranışsal süreçleri anlamak, etkili müdahaleler ve politikalar geliştirmek için hayati önem taşımaktadır. Ancak, daha önce hiçbir çalışma bu süreçleri özel olarak araştırmamıştır. Bu eksikliği gidermek amacıyla mevcut çalışma, SMKSDD'nin davranışsal süreçlerinin üç ayrı kuramsal çerçeve ve bunların bütünleştirilmesiyle incelenmesine yönelik özgün bir yaklaşım sunmaktadır: rasyonel süreçler için Planlı Davranış Teorisi (PDT), tepkisel süreçler için Prototip İsteklilik Modeli (PİM) ve alışkanlık (otomatik) süreçleri için alışkanlık gücü. Çalışmaya, yaş ortalaması 31.9 olan 416 sürücünden oluşan bir örneklem katılmıştır. Bulgular, demografik özellikler ve günlük sosyal medya kullanımı kontrol edildikten sonra dahi sosyal medya alışkanlıkları ile SMKSDD eylemi arasında pozitif bir ilişki olduğunu göstermiş, bu da SMKSDD'nin bir dereceye kadar

otomatik olabileceğini düşündürmüştür. PDT modelinin analizi, niyetin en güçlü yordayıcı olduğunu ortaya koymuş ve SMKSDĐ'ye yönelik davranışta gerekçeli sürecin gücünün altını çizmiştir. PİM modelinin incelenmesi, istekliliğin SMKSDĐ üzerinde daha küçük bir doğrudan etkiye sahip olduğunu, ancak niyet aracılığıyla güçlü bir dolaylı etkisi olduğunu göstermiş. Bu bulgu, tepkisel yanıtların gerekçeli süreç üzerindeki etkisini vurgulamıştır. Son olarak, alışkanlık, PDT ve PİM'i birleştiren bütünleşik model; SMKSDĐ'nin otomatik bir davranış olmadığını; ancak alışkanlıkların, bilinçli davranışsal süreçleri şekillendirebileceğini veya tetikleyebileceğini öne sürmüştür. Mevcut çalışma, SMKSDĐ'nin altında yatan faktörleri anlamak için çoklu çerçeveye dayalı bir yaklaşımın gerekliliğini vurgulamaktadır. Çalışmanın tartışma bölümü, sonuçların kuramsal ve pratik önerileri içermektedir.

Anahtar Kelimeler: Sürücü Dikkat Dağınıklığı, Sosyal Media, Planlı Davranış Teorisi, Prototip İsteklilik Teorisi, Alışkanlık Gücü



To my big family

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CHAPTER 1

INTRODUCTION

Driving is such a complex and demanding task that even a slight diversion of attention from the task at hand may bring serious consequences. Thus, driver distraction is considered as the one of the significant causes of traffic accidents (WHO, 2023; Dingus et al., 2016). According to NHTSA (2022), approximately 3308 people died on the road in the USA due to driver distraction-related accidents. European Commission (2018) stated that the estimated rate of 5-25% of crashes in Europe is attributed to driver distraction, where Austria reported it as the leading cause of road fatalities (ITF, 2024). Even though these statistics show the importance of this problem, the actual numbers are considered higher because some drivers' distracting behaviors are difficult to detect, such as hands-free talking on the phone while driving (WHO & NHTSA, 2011).

With the rapidly growing technological world, in-vehicle technologies (e.g., infotainment systems, etc.) or communication technologies (e.g., smartphones, etc.) carry significant risks for driver distraction, besides their advantages in daily life. Particularly, mobile phone use while driving was highlighted in almost every report on driver distraction (e.g., WHO, 2011; NHTSA, 2022; EGM, 2017, etc.). Mobile phones have transcended their role as mere communication tools and have become an important instrument with various functions, such as social networking, job-related functions, health-tracking, navigation, photography, web search, etc. As a result, avoiding mobile phone use while driving has become difficult, making it one of the most prominent and commonly recognized sources of driver distraction. The evolving functions and formats of mobile phone use have also contributed to changes in its effect on driver distraction. While earlier use was limited primarily to basic communication, such as making calls or sending texts, these functions are considered

the most concerning functions of mobile phones related to driver distraction (Caird et al., 2008). Today, more complex activities, such as social networking via apps, have introduced new and maybe more demanding forms of distraction (RAC, 2024; Xydianou et al., 2019).

In summary, the factors that lead to driver distraction can be influenced by changes in our daily lives. Thus, it is likely that distraction will continue to rise as modern technologies have become a natural part of everyday life, even while driving. For this reason, it is essential to understand driver distraction, especially the underlying factors behind mobile phone use and its various forms, to develop more effective strategies and future policies.

1.1. Driver Distraction

There is a lack of consistency in the definitions of driver distraction across the literature. Pettitt et al. (2005) defined driver distraction as:

Driver distraction is a delay by the driver in the recognition of information necessary to safely maintain the lateral and longitudinal control of the vehicle (the driving task) due to some event, activity, object or person, within or outside the car that compels or tends to induce the driver's shifting attention away from fundamental driving tasks by compromising the driver's auditory, biomechanical, cognitive or visual faculties, or combinations thereof. (p.11)

This comprehensive definition emphasizes distraction as a delay in the driver's reaction time. On the other hand, Regan et al. (2011) referred to driver distraction as "driver diverted attention" and defined it as the diversion of a driver's attention away from activities critical for safe driving. In this definition, distraction is characterized not by delayed responses but by a shift in focus from safety-critical driving tasks.

In the literature, driver distraction is commonly categorized into four types of distractions (WHO, 2011). Visual distractions lead drivers to take their eyes off the road for a certain period. Cognitive distraction involves mind-wandering activities

that shift drivers' cognitive focus away from the driving task. Physical distractions occur when drivers take their hands off the steering wheel. Auditory distractions occur when drivers focus on external auditory stimuli. Later, Regan and Hallett (2011) suggested two additional types of driver distraction. Gustatory distractions divert drivers' attention to the taste of things, whereas tactile distractions lead drivers to divert their attention to the sensations in their bodies. The attention competing activities leading to driver distraction may not encompass all types of distraction. For example, drinking a coffee while driving may have physical distraction (holding a cup), looking at the cup to pick it up (visual distraction), and gustatory distraction (taste of coffee).

Regan and Hallett (2011) identified six categories of attention-competing sources of driver distraction: objects (e.g., mobile phone), events (e.g., crash scene), passengers, other road users (e.g., motorcyclists), animals (e.g., cats), and internal stimuli (e.g., boredom). Even though each of these sources contains risk for accidents if drivers engage with them, the mobile phone-related driver distraction uniquely stands out as a significant factor on its own (Dingus et al., 2016; NHTSA, 2022), not just because its widespread use, but also it contains several distraction types at once. For example, talking on the phone, the most common mobile phone-related driver distraction (RAC, 2024) is likely to lead to three types of distractions: physical distraction (picking up the phone), auditory distraction (listening to the voice of the respondent), and cognitive distraction (understanding/comprehending the context of the conversation). The more complex the type of mobile phone use is, the more distracted it is likely to be. Considering its potential to distract, widespread daily use, and evolving functions and forms, mobile phone use while driving poses an increasingly serious threat to road safety. Therefore, it is essential to conduct further research on this issue and to deepen our understanding of how different patterns of mobile phone use impact road safety.

1.1.1. Mobile Phone-Related Driver Distraction

Numerous studies have demonstrated the relationship between mobile phone distracted driving and accident involvement (NHTSA, 2022; Yannis et al., 2014). In

the UK, the rate of drivers admitting to using their mobile phones while driving increased from 10% in 2022 to 12% in 2023, despite the introduction of new regulations and increased fines (RAC, 2024). The casualties attributed to mobile phone distracted driving in the EU appear to be increasing annually, despite a high number of EU drivers acknowledging that using mobile phones, either handheld or hands-free, is a contributing factor to road crashes (75.5% and 50.9%, respectively) (European Commission, 2022).

Many studies have presented evidence of the detrimental effects of mobile phone distracted driving on driver performance. Mobile phone distracted driving has been shown to increase crash risk (Ige et al., 2016; Dingus et al., 2016), delay reaction times (Caird et al., 2008; Lyngsie, et al., 2013), degrade drivers' visual scanning ability, and drivers' vehicle control (Caird et al., 2008; Rudin-Brown et al., 2013; Yannis et al., 2016), and increase workload of drivers (Caird et al., 2008). Chee et al. (2021) also demonstrated that the presence of mobile phones significantly impacts driver performance, even when the phone is turned off. For drivers highly dependent on their phones, the mere presence effect on performance was even higher. In summary, mobile phone-related distractions extend beyond the actual usage time span.

The types of mobile phone use while driving are similar to those in daily life, such as making calls, texting, navigation, web browsing, and social media use. Among them, making calls and texting have been the most extensively studied factors contributing to driver distraction. Although both activities degrade driver performance, texting while driving has emerged as a primary concern due to its significantly greater negative impact (Singh et al., 2024; Choudhary & Velaga, 2017). Texting while driving encompasses at least three types of driver distraction: cognitive, visual, and physical distraction (Caird et al., 2014), and thus has more severe adverse effects compared to other mobile phone-related distractions (Choudharya & Velaga, 2017). For example, in a study on the post-effects of conversation and texting while driving, Thapa et al. (2015) found that conversation did not have a significant post-effect on driver performance; however, texting while driving continued to affect vehicle control for an additional 3.38 seconds after texting ended.

Among other types of mobile phone use, social media-related distractions while driving have recently caught the attention of road safety professionals. As social media has become an integral part of daily life for individuals worldwide, its influence on other aspects of life, including driving, has become a significant area of study. According to the RAC Report on Motoring (2024), 25% of UK drivers admitted to using apps to text and post on social media, as well as to check notifications from social media apps, which makes it the second-highest type of mobile phone use while driving, after making calls. This statistic highlights the need to explore social media use behavior behind the wheel in depth.

1.1.2. Social Media Distracted Driving

Social media is defined as “*a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of user-generated content*” (Kaplan & Haenlein, 2010). Social media platforms vary in their types of usage and intended purposes, including social networking forums (e.g., Reddit, Facebook), microblogs (e.g., X [formerly Twitter]), picture-sharing platforms (e.g., Instagram, Pinterest), video-sharing platforms (e.g., YouTube), and instant messaging platforms (e.g., WhatsApp, Telegram) (Kircaburun et al., 2020).

The Digital Report 2024 (Kemp, 2025) shows that social media use increases significantly each year and has become a common point of interest for people worldwide. According to the report, there were 5.04 billion active social media accounts in 2024, corresponding to 62.3% of the world’s population. Additionally, 94.2% of internet users use social media. On average, people spend 2 hours and 23 minutes daily on social media applications. In Türkiye, the numbers are slightly higher. At the beginning of 2024, Türkiye had 54.30 million active social media accounts for individuals aged 18 and older, accounting for 86.8% of the country’s total population in that age group. Since the number of social media accounts does not necessarily represent unique individuals, the actual numbers might be slightly lower. However, they still reflect the widespread adoption of social media in many people's daily lives.

The use of social media can be considered as browsing through social media apps in general (Hashash et al., 2019). The checking behavior was also considered as a key component of social media use, especially for social media use habits and problematic social media use (Sidnam-Mauch & Monge, 2024; Meier et al., 2023). Oulasvirta et al. (2011) defined the checking habit as *a gateway* to using other smartphone applications. They suggested that checking behavior is reinforced by informational rewards that are readily available, which in turn increases the rate of social media usage. This makes checking behavior an essential component of social media use.

The rewards of social media use are not always informational. Social media use has several rewarding aspects, motivating people to be more engaged, as mentioned in the literature. They include staying in touch with friends and family, passing spare time (Kemp, 2025), socializing, seeking new information (Brandtzæg & Heim, 2009), experiencing enjoyment (Turel & Serenko, 2017), and self-promotion (Park, Kee, & Valenzuela, 2009). The diverse motivations and functions of social media use make it a pervasive behavior, increasing its impact on individuals' lives and well-being in various domains (Andreassen & Pallesen, 2014), including driver safety, such as driver distraction (Xydianou et al., 2019).

The current study coined this issue as *Social Media Distracted Driving (SMDD)*. SMDD is defined as a driver's engagement with the content and/or alerts provided by social media applications during driving, consisting both using social apps to connect and react notifications/alerts from social media apps. It may pose a greater danger than other types of mobile phone use due to its diversity and ease of distraction. It often involves diverting cognitive attention to read, comprehend, and interact with the content (cognitive distraction), requires constant visual attention to view the content (visual distraction), and phone handling while interacting or browsing within apps (physical distraction) and, listening the auditory signals of contents (auditory distraction) (Regan & Hallett, 2011). Moreover, unlike texting or calling, social media-related distractions do not necessarily require responses from others to maintain engagement, making them predominantly self-paced distractions. Drivers can choose to engage with social media apps whenever and however they decide.

A few studies have investigated SMDD. Xydianou et al. (2019) studied SMDD among young Greek drivers. They reported that more than half of the drivers stay online while driving and receive multiple notifications from various social media applications. Furthermore, 15.1% of the participants read and respond to notifications on their smartphones, and 36.3% of the drivers admit to feeling intensely dependent on their phones while driving. Considering the high prevalence of SMDD, its impact on driver performance has become a further concern for researchers. McNabb and Gray (2016) demonstrated that using social media platforms while driving affects drivers' time-headway variability and gaze behavior, while also increasing their mental workload. Hashhash et al. (2019) reported that social media use negatively affects drivers' attention allocation as severely as texting while driving, which is considered the most dangerous driver distraction (Caird et al., 2014). They also reported that participants do not believe that social media use is as harmful as texting while driving. Later, D'Amico et al. (2020) found that SMDD increased the number of accidents, prolonged reaction times, and caused a significant decline in driver performance. Consequently, the SMDD was highlighted as a hazardous driver distraction induced by mobile phone use while driving.

Although recent studies have demonstrated the prevalence and detrimental effects, the antecedents related to SMDD have not yet been thoroughly explored in the literature. However, an overwhelming number of studies have investigated the antecedent factors of general mobile phone use while driving or specific types of mobile phone use while driving, such as texting. Several demographic variables, personality, and socio-cognitive factors have been shown to predict the frequency of mobile phone use while driving. Since social media use is a subtype of mobile phone use, the following sections will mention antecedent factors of general and other types of mobile phone use while driving. It can be assumed that the factors mentioned below are likely to exhibit similar relationships to SMDD.

1.1.3. The Determinants of Mobile Phone-Related Driver Distraction

The antecedents of mobile phone use while driving have been overwhelmingly studied over the years. The factors related to mobile phone-related driver distraction

can be categorized into two main sections: factors related to individual differences, such as demographic and personality characteristics; and socio-cognitive factors, including risk perception, attitudes, beliefs, and norms related to mobile phone use while driving. While individual factors have been investigated to explain who is more likely to use mobile phones while driving, socio-cognitive factors have shed light on the psychological reasons behind such behaviors.

1.1.3.1. Factors related to individual differences

Brusque and Alauzet (2008) stated that age is the most frequently associated factor with mobile phone use while driving. Young drivers are disproportionately represented in the relationship between accidents and mobile phone use while driving (Lipovac et al., 2017; Bener et al., 2006). They are also reported to be more prone to mobile phone use, such as texting while driving, than older drivers (Li et al., 2018; Slepicka, 2018). On the other hand, older drivers' performance degrades more by mobile phone distractions than young drivers' (Liang & Yang, 2022)

For experience and exposure, Oviedo-Trespalacios et al. (2017) reported that the odds of engaging in texting while driving increased by 1.23 and 1.66, respectively, with every additional hour of driving experience and every ticket received in the last three years. It was also reported that driving experience, as measured by the year the driver obtained their license, increased the frequency of texting while driving among college students. The increased routinization of driving activity might explain these findings. This routinization can lead drivers to perceive driving as less demanding. Thus, secondary task engagement can be seen as less risky and more enjoyable (Slepicka, 2018).

In terms of gender differences, nearly all researchers agreed that males and females did not differ in terms of the frequency of texting while driving (Nemme & White, 2010; Struckman-Johnson et al., 2015; Hallett et al., 2012; Cook et al. 2018; Slepicka, 2018). However, Struckman-Johnson and his colleagues (2015) argued that the motivations for texting while driving might differ between genders. They found that in male drivers, the highest variance of texting while driving (20% of the

variance) is explained by the lower levels of feeling distracted. On the other hand, female drivers' texting while driving engagement was mostly related to mobile phone dependence and risky behavioral tendencies (10.4% and 9.9% of the variance, respectively).

Relatively few studies have investigated the personality factors contributing to general mobile phone use and texting while driving. These limited studies have primarily focused on the Big Five personality traits (John & Srivastava, 1999) and impulsivity (Brown et al., 2021). Among the Big Five traits, openness to experience, extraversion, neuroticism, and conscientiousness have been associated with increased in making calls (Bianchi & Philips, 2005) and in texting while driving, especially in young drivers (Parr et al., 2016; Schroeder & Sims, 2015; Ehrenberg et al., 2008). In contrast, agreeableness has shown a negative relationship with this behavior (Parr et al., 2016; Ehrenberg et al., 2008). Impulsivity, another personality trait associated with driver distraction, has also been examined in the context of texting while driving. Impulsivity, characterized by a tendency to underestimate risks when taking action (Dawe et al., 2004), plays a significant role in other risky driving behaviors (Bıçaksız & Özkan, 2016) and was expected to increase engagement in texting while driving. Several studies have consistently supported this expectation (e.g., Brown et al., 2021; Struckman-Johnson et al., 2015 etc.).

1.1.3.2. Socio-cognitive factors

Although the risk associated with mobile phone use while driving is acknowledged by almost all drivers, it does not appear to deter them from engaging in this behavior (Prat et al., 2015). Many studies have shown that risk perception yields controversial results. For example, some studies showed that high perceived risk may discourage drivers from texting and driving (Beck et al., 2016), whereas other studies reported insignificant or even positive relationship between risk perception and texting while driving, indicating that evaluation of risk does not predict drivers' texting while driving behavior (Prat et al., 2015; Dillow et al., 2015). These findings highlight the complexity of mobile phone use while driving.

Understanding this complexity, researchers have examined numerous socio-cognitive factors to identify the underlying factors influencing the decision-making process in mobile phone use while driving. The attitudes, normative beliefs, control beliefs, and image perceptions were thoroughly examined as predictors of intention, willingness, and behavior related to mobile phone use while driving. The two well-known behavioral models are utilized to test these factors: the theory of planned behavior (TPB; Ajzen, 1991) and the prototype willingness model (PWM; Gibbons et al., 1998). In general, these factors were found to explain the psychological process behind mobile phone use while driving. TPB studies showed that favorable attitudes and peer approval/acceptance were the most important factors leading to the intention to use mobile phones while driving. On the other hand, the findings of perceived behavioral control as a control belief were controversial. Nemme and White (2010) stated that even though drivers believe in their capability to use a mobile phone while driving, this belief does not predict the actual behavior. It may point to the fact that the psychological process behind the behavior of mobile phone use while driving could be a more reactive or automatic process, rather than rational.

In PWM studies, in addition to attitudes and normative beliefs, prototype perceptions were found to be another important factor behind the psychological process of mobile phone use while driving. Positive prototype images (favorable images and similar to oneself) were significantly related to the willingness (openness to engage in behavior in certain circumstances) to use a mobile phone while driving. This finding can also explain the inconsistent findings between perceived behavioral control and actual behavior. According to PWM studies, mobile phone use while driving could have a more reactive psychological process, rather than reasoned (Preece et al., 2018). Thus, beliefs on capability and self-efficacy do not necessarily predict actual behavior.

In addition to these models, one factor was considered to predict mobile phone engagement in driving: the habit. In early studies, past behavior was used as a measure of habit. These studies have shown that the frequent repetition of mobile phone use predicts engagement in mobile phone-distracted driving (Shevlin & Goodwin, 2019; Bazargan-Hejazi et al., 2017). Recent studies conceptualized the

habit as automatic behavior. They demonstrated that the habit of mobile phone use is also a predictor of mobile phone use while driving (Demir et al., 2023; Hansma et al., 2020), indicating that mobile phone distracted driving can become somewhat automatic. Overall, earlier studies emphasize the complexity of understanding engagement in mobile phone-related driver distractions. They suggest that the use of mobile phones while driving can be analyzed through various frameworks and models, each indicating a distinct behavioral process behind this behavior. Therefore, further examination of these processes is essential to develop an effective countermeasure against this issue.

1.2. The Behavioral Models and Approaches

Several theoretical frameworks have been extensively used in psychological research to explain the cognitive, social, and psychological mechanisms underlying human behavior. Among them, the Theory of Planned Behavior (TPB; Ajzen, 1991) is one of the most widely used models, demonstrating the reasoned and intentional process of human behavior. In response to debates about whether all behaviors are rational, the Prototype Willingness Model (PWM; Gibbons et al., 1995) introduced a dual-process model by incorporating both reasoned and reactive (spontaneous, socially influenced) pathways. While both models have been applied to various behaviors across different domains (McEachen et al., 2011; Lettow et al., 2016), they primarily assume that behaviors are consciously performed. This assumption may neglect the role of habitual processes, which operate automatically and outside of conscious awareness. Studies have shown that strong behavioral habits can bypass intentional processes (Mazar & Wood, 2018), highlighting the importance of automaticity in understanding everyday behavior, including risky behaviors in driving (Demir et al., 2023). Understanding whether behavior is driven by rational, reactive, or automatic processes is crucial for creating effective intervention strategies. Such differentiation allows researchers and policymakers to develop more targeted approaches aligned with the underlying processes of specific behaviors; a notion further elaborated in the following section through the introduction of relevant theoretical frameworks and a review of studies applying them to the context of mobile phone use while driving.

1.2.1. Theory of Planned Behavior as a Framework for Reasoned Behavior

In 1980, Ajzen and Fishbein introduced the Theory of Reasoned Action (TRA). This model posits that intention is the most immediate factor influencing behavior and represents an individual's plan or readiness to perform a specific action (Ajzen & Fishbein, 2011). According to the model, intention is influenced by two primary factors: attitudes and subjective norms. Attitudes refer to an individual's overall evaluation of behavior as either positive or negative, while subjective norms reflect the perceived social pressure or approval from close others regarding the behavior (Ajzen & Fishbein, 1980).

In 1991, Ajzen expanded the TRA to develop the Theory of Planned Behavior (TPB; Ajzen, 1991). This revised model introduced perceived behavioral control (PBC) as an additional determinant. PBC refers to an individual's perception of their ability to control the performance of a behavior, combining both actual control over the behavior and the self-efficacy needed to carry it out. In TPB, PBC serves as an additional predictor of intention alongside attitudes and subjective norms, and it also acts as a direct predictor of behavior.

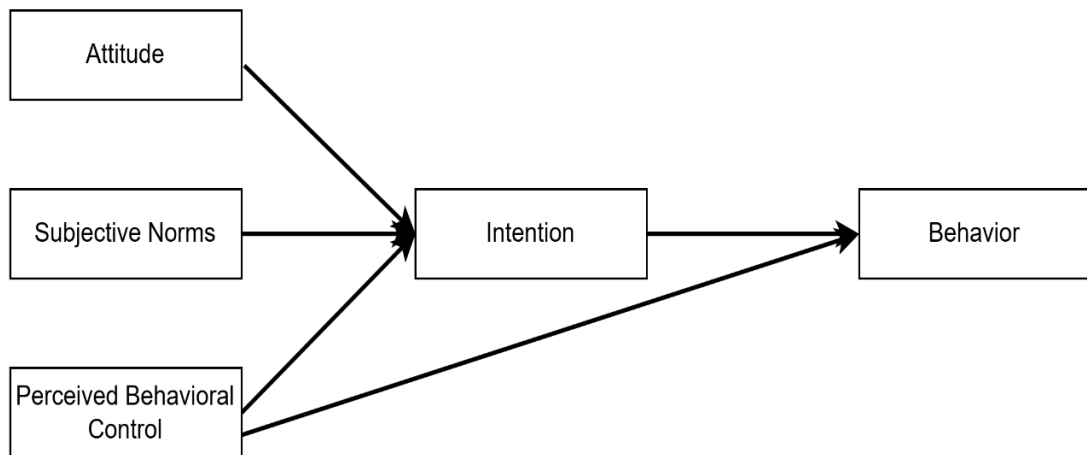


Figure 1. The visual representation of the TPB

The TPB is widely regarded as a strong framework for explaining reasoned behaviors across various domains. Armitage and Conner (2001) conducted a meta-analysis to assess TPB's effectiveness in predicting health-related behaviors. Their

findings indicated that TPB accounted for 27% of the variance in actual behavior and 39% of the variance in behavioral intention. Similarly, another study demonstrated that PBC and intention collectively explained 19% of the variance in various behaviors, while attitudes, subjective norms, and PBC together explained 44% of the variance in intentions (McEachen et al., 2011).

Several research expanded the TPB to improve its explanatory power for certain behaviors. One notable addition was the inclusion of past behavior. For example, Xu et al. (2013) found that the frequency of past behavior influenced both road users' crossing behaviors and their future intentions. Ajzen (2011) later discussed how, although past behavior has the potential to explain intention, beyond attitudes, subjective norms, and perceived behavioral control, it still fails to meet one criterion for inclusion in the TPB model, which the included variable requires to constitute a causal relationship with intention. However, it is theoretically difficult to argue that past behavior directly causes current intention (Ajzen, 2011). He also pointed out that latent variables, at least in part, captured by adding past behavior could be the determinants of intention, such as habitual strength, which are formed by frequently performed past behavior in a stable context. Some researchers supported this argument by stating that past behavior reflects the habitual aspects of actions and could help explain the gap between attitudes and behaviors (And et al., 1983; Rothengatter, 1993). In summary, Ajzen (2011) emphasized that examining habit formation and various background factors, as incorporated within TPB models, can enhance our understanding of human behavior, as the original model has been validated through numerous studies.

1.2.1.1. Utilizing TPB to understand mobile phone use while driving

As one of the widely used models to explain health behaviors, both the original and extended models of the Theory of Planned Behavior (TPB) have been utilized numerous times to investigate mobile phone distracted driving. Attitudes and subjective norms have been found to predict drivers' intentions (Okati-Aliabad et al., 2024; Nemme & White, 2010; Tian & Robinson, 2017; Wang, 2016) and engagement in mobile phone distracted driving (Okati-Aliabad et al., 2024; Demir et

al., 2023; Hansma, 2020). They showed that the approvability and acceptability of texting while driving and mobile phone use while driving by others significantly increase the drivers' likelihood of engaging in these behaviors. Similarly, perceived behavioral control was related to intention to use a mobile phone and text while driving (Demir et al., 2023; Okati-Aliabad et al, 2024; Prat et al., 2015; Przepiorka et al., 2018). However, Nemme and White (2010) argued that despite the predictive power of perceived behavioral control on texting while driving, it was not related to actual texting while driving behavior after a week because texting while driving is a volitional behavior. Thus, even though drivers believe that they have behavioral control over it, they could have refused to engage.

Shevlin and Goodwin (2019) extended the theory of planned behavior by adding past behavior, self-efficacy, and moral norms to the model. They argued that past behavior is the strongest predictor of actual texting while driving behavior, compared to drivers' intention and any other constructs of the theory of planned behavior. Bazargan-Hejazi et al. (2017) also extended the TPB model by adding past behavior and willingness to investigate college students' texting while driving behavior. The full TPB model was found to be related to the intention to text while driving among college students, where attitude was identified as the strongest predictor of intention. They also found that past behavior was a significant predictor of willingness and intention. This means that if drivers have engaged in texting while driving in the past, they are more likely to do so in the future, suggesting the impact of habit on texting while driving.

1.2.2. The Prototype Willingness Model as a Framework for Reactive Behavior

Gibbons et al. (1998) proposed the Prototype Willingness Model (PWM) to explain that not all risky behaviors result from reasoned decision making, particularly among adolescents who often judge risky situations poorly (Gibbons et al., 1998). According to this model, individuals may act spontaneously and reactively in some contexts when opportunities for risky behavior arise. PWM operates as a dual-process model, incorporating two distinct behavior pathways: the reasoned and socially reactive pathways. The reasoned pathway aligns with the TPB, where

attitudes and subjective norms influence intentions, which are the primary determinants of behavior. The socially reactive path, however, introduces attitudes, prototype perceptions, and willingness as key components.

With the PWM, the perception of prototypical images was introduced as a critical construct in people's reactive decision-making process. Prototypes are mental representations of the typical person who performs a given behavior, shaped by perceptions of how favorable and similar the prototype is to oneself. Willingness is influenced by favorable perceptions of prototypes. For instance, if someone has a positive image of a speeding driver (prototype favorability) and perceives themselves as similar to that driver (prototype similarity), they may be more likely to exceed speed limits on an empty road, even if they typically do not intend to speed. In summary, PWM suggests that positive attitudes and favorable prototype perceptions increase willingness, while positive attitudes and greater social approval enhance intention. Both willingness and intention, in turn, predict the likelihood of engaging in the behavior. However, some studies suggest that prototype images are also related to intention, suggesting an additional path from prototype images to intention. van Lettow et al. (2016) conducted a meta-analysis with 80 studies. They stated that prototype images are significant predictors of intention and that adding a path from prototype image to intention can improve the PWM model. Several studies have proven this idea by demonstrating the relationship between prototype images and intention (Demir et al., 2019; Hyde & White, 2010; Ravis et al., 2006).

The effectiveness of PWM in explaining risky behaviors has been demonstrated across various domains, including unprotected sex (Thornton et al., 2002), smoking (Hukkelberg & Dykstra, 2009), alcohol and drug use (Gibbons et al., 2004), and organ donation (Hyde & White, 2010). In the meta-analysis study by Todd et al. (2016), PWM explained 20.5% of the variance in behaviors overall. Willingness explained 4.9% of the variance in behavior, in addition to the variance explained by intention. They argued that the strength of PWM varies based on the given behavior. For example, PWM did not add to the prediction of alcohol use above intention, whereas willingness was the strongest predictor of cigarette use. It highlights the importance of utilizing PWM to understand various high-risk behaviors.

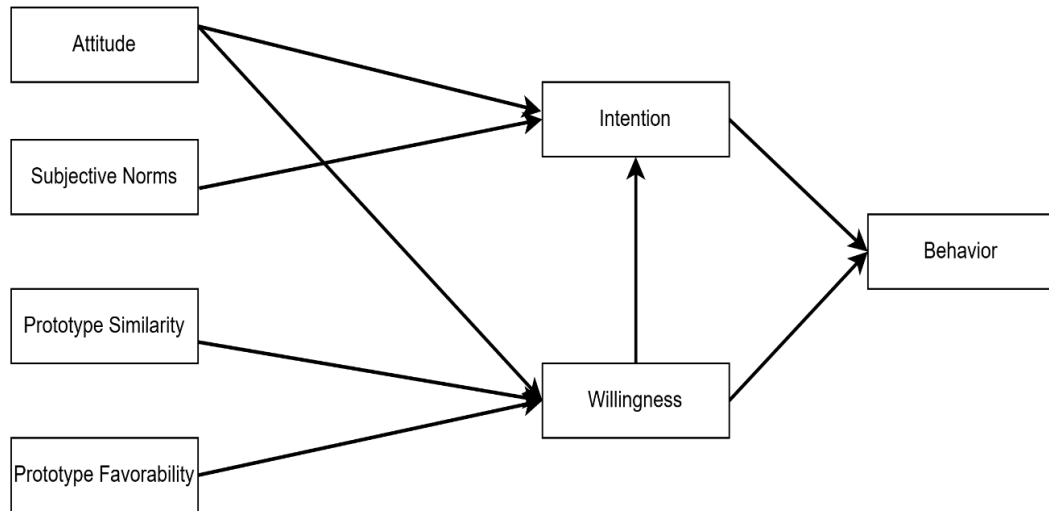


Figure 2. The visual representation of the original PWM

PWM was utilized to understand the risky behaviors in driving. Elliott et al. (2017) found that PWM accounted for 89% of the variance in speeding behavior, which exceeds the variance explained by TPB. They found that willingness had a greater impact on speeding behavior. In line with theory, attitude and subjective norms had an indirect effect through both intention and willingness, whereas prototype images had an indirect effect through willingness. They concluded that speeding behavior can be governed by a reactive decision-making rather than a rational one. Harbeck and Glendon (2018) investigated prototype images of risky behavior, young drivers' willingness to engage in risky driving, risk perception, and their actual driving behavior. They found that prototype similarity and favorability of risky drivers predict behavioral willingness. The behavioral willingness, in turn, predicts the perceived risk of engaging in risky driving and the actual engagement in such behavior. Wang and Xu (2021) tested young drivers' willingness to continue lane-changing behaviors. They found that attitude, subjective norms, and prototype similarity predict drivers' willingness to engage in continuous lane-changing behavior.

1.2.2.1. Utilizing PWM to understand mobile phone use while driving

The PWM was proven to be a useful model for understanding mobile phone use while driving. Preece et al. (2018) showed that behavioral willingness predicts

texting while driving and texting while stopping in the vehicle, while positive attitudes and favorable prototype images increase the behavioral willingness of young drivers. Bazargan-Hejazi et al. (2017) also investigated the willingness to text while driving among young drivers. They found that intention significantly predicted willingness and was a significant mediator between perceived behavioral control and intention. Rozario et al. (2010) utilized behavioral willingness in the TPB model. They stated that subjective norms predict the willingness to engage in mobile phone use when driving with friends rather than when driving alone. Overall, the above studies indicate that mobile phone use while driving may be more of a reactive behavior than a rational one, consistent with Walsh and White's (2006) proposal that mobile phone use is generally more spontaneous than planned behavior.

1.2.3. The Habitual Strength as an Indicator of Habitual Behavior

William James (1899) stated, "99%, or, possibly, 99.9% of our activity is purely automatic and habitual, from our rising in the morning to our lying down each night. Our dressing and undressing, our eating and drinking, our greetings and partings...even most of the forms of our common speech, are things of a type so fixed by repetition as almost to be classed as reflex actions" (p. 48). William James' enthusiastic approach gave rise to studies on habit in psychology. In early research on habit, Triandis (1977) proposed the model of interpersonal behavior, which describes habitual behaviors as actions repeatedly performed in the past, often without intention. The statement that well-learned behaviors are carried out without conscious control laid the groundwork for the dual-process decision-making model (Evans & Stanovich, 2013). In addition to behaviorist researchers, cognitive psychology researchers have explored habitual processes, demonstrating that behaviors are guided by "a learned sequence of elements in long-term memory initiated by consistent stimuli" (Shiffrin & Schneider, 1977, p. 1). In cognitive psychology studies, automaticity was posed as the key defining feature of the habit.

Later, the habit was defined by the cue-response associations formed as people repeated the behavior and received a reward in a stable context (Gardner, 2015; Wood & R nger, 2016). The association between the cue and the response can begin

to form through intention and goals. Eventually, the stable context can trigger the response independent of intention or conscious goal representation (Mazar & Wood, 2018).

Wood and Neal (2007) proposed the three principles of habit formation. The first principle describes the association between contextual cues and habitual behavior. Habitual behavior is triggered by cues that have been contiguous with the behavior in the past. These cues can take two forms: a direct form where habits are triggered by straightforward cognitive associations between cues and behavior (e.g., notification sound or physical location), or a motivated form where repeated rewards for responding to contextual cues create a diffuse motivation linked to the performance context (e.g., pleasure or boredom) (Mazar & Wood, 2018; Anderson & Wood, 2021). The second principle emphasizes that habits form cue–response associations without goal mediation. While habits often originate from goal-directed actions, once established, they operate independently of any specific goal or intention (e.g., opening a social media app without intending to). Repeatedly performing rewarding actions (e.g., checking messages in response to notifications) strengthens the memory of these behavior patterns (Mazar & Wood, 2018; Wood & R  nger, 2016). The third principle highlights the interaction between habits, goals, and related dispositions. Habits develop through repeated context-response learning and are not easily influenced by current goals or occasional deviations. This gives habits a conservative nature, limiting their alignment with goals. However, habits and goals can influence each other. Goals may shape habit formation, while habits can help infer goals. When habits and goals guide behavior simultaneously, they may compete, leading habitual responses or intentional actions to take control over behavior. In brief, these principles suggest that the strength of habit increases with rewarding experiences and directly affects intention or behavior, without a clear goal, and there may be competition between deliberate and habitual responses for resources, echoing dual-process models (Smith & DeCoster, 2000).

Although repetition is a prerequisite for habit formation (Lally et al., 2010; Schnauber-Stockmann & Naab, 2019), it does not solely account for the strength of a habit. Habits are distinct from mere frequency; they involve automaticity rather than

simply repeating actions (LaRose, 2010; Mazar & Wood, 2018). For example, Brijs et al. (2011) demonstrated that seatbelt usage among Belgian drivers was more closely associated with the frequency of past behavior than with habitual tendencies, highlighting the distinction between repeated actions and automatic habits. This automatic nature of habit is described as the "active ingredient" (Gardner et al., 2012). In addition to the first and second principles of Wood and Neal (2007), automaticity is argued to have several characteristics: acting without full awareness (e.g., mindlessly scrolling through social media), exerting minimal mental effort (e.g., casually browsing), quick processing (e.g., rapidly reading posts or messages). However, these features do not always coincide (Mazar & Wood, 2018). Habitual strength increases as behaviors are performed more automatically. Strong habits are more likely to be triggered by cues, increasing the frequency of future behaviors (Mazar & Wood, 2018; Wood & Rünger, 2016).

The most common measurements of habit combine the two characteristics of habit: frequency of the given behavior and a stable context. These measurements are based on the assumption that repeated behavior in a stable context turns into a habit. However, relying on past behavior to measure habit was argued to capture other factors that do not reflect the habit (Ajzen, 2002). They also fail to capture the most crucial factor of habit: automaticity. Verplanken and Orbell (2003) developed the Self-Reported Habit Index to capture the automaticity of habit behavior and self-identification with the action. This index is designed to account for other hidden factors that may be inherent in measuring past behavior. At the first development of the scale, Verplanken and Orbell (2003) designed the scale based on the features of habit: the history of repetition, difficulty in behavioral control, lack of awareness, efficiency, and self-identification with the behavior. The original scale did not include the independence of intention feature of the habit. Later, by the critique of LaRose (2010), the authors excluded the frequency of past behavior items and added the lack of intention to act item. The final version of the scale was proven to be useful in capturing the habitual side of the behaviors in many domains, such as smoking and drinking (Orbell & Verplanken, 2010), eating and physical activity behaviors (Gardner et al., 2012), risky driver behaviors (Demir et al., 2023; Lheureux et al., 2016), etc.

Unlike deliberate behaviors, habitual behaviors are performed via impulse systems, where cues trigger pre-learned cue-behavior relationships (Strack & Deustch, 2024). After the cue-behavior association strengthens, the effect of intention on behavior is expected to diminish (Mazar & Wood, 2018), resulting in the behavior becoming completely automatic in the presence of cues. However, some researchers question whether habitual behaviors are entirely or partly automatic.

Gardner et al. (2016) coined this distinction as habitual execution, where behavior is performed automatically to completion, and habitual instigation, where cues trigger impulses toward cued behavior, and unless the impulses are overridden, the behavior can be initiated. The completion of a behavior in habitual instigation proceeds through sub-actions, which can be habitual or non-habitual. To exemplify the distinction, a notification sound from a mobile phone may trigger the checking behavior. If habitually executed, all sub-actions (e.g., picking up the phone, unlocking it, reading the message) occur automatically unless interrupted. If habitually instigated, the notification sound triggers the urge to act, but additional effort may be required to complete the behavior.

Gardner et al. (2016) demonstrated that habitual instigation is the strongest predictor of exercise frequency compared to habitual execution. This indicates that the automatic activation of behavior by cues predicts behavior frequency more effectively than the automaticity of action sequences required to perform the behavior. Interestingly, they also discovered that habitual execution strengthens the relationship between intention and behavior. They concluded that because habitual execution resembles the skills needed to perform a behavior and its repeated practice, it likely enhances perceived self-efficacy. This increased self-efficacy may, in turn, reinforce the effect of intention on behavior (Gardner et al., 2016).

Many researchers have highlighted the habit of mobile phone use and its effects. Oulasvirta et al. (2012) explored how mobile phone habits are formed. They identified that checking behavior was the primary source of the formation of a mobile phone use habit because it is a brief and repetitive behavior that engages the dynamic content. Moreover, they found that the checking habit is a gateway to other

applications, leading to browsing other applications on the mobile phone. This gateway habit of checking mobile phones was also stated as increasing the use of different applications, especially the most frequently checked ones. This study shows that habitual mobile phone use is formed more easily than other technological devices, such as laptops or tablets, due to mobile phones' availability as a physical cue across time and context.

Meier et al. (2023) demonstrated that habitual mobile phone use can negatively impact adolescents, particularly by delaying task completion, such as homework. Adolescents whose self-control skills are still developing and who are sensitive to social rewards (Blakemore & Mills, 2014) face challenges in resisting the urge to check apps like WhatsApp, Snapchat, TikTok, or Instagram while working. Executing self-control over urges to check the phone becomes difficult (Reinecke & Meier, 2021).

1.2.3.1. The role of habit in mobile phone-related driver distractions

Even though there is extensive evidence that mobile phone use while driving is related to one's intention (e.g., Demir et al., 2023), some studies pointed out the effect of mobile phone use habits can translate into mobile phone use while driving, raising the question whether the mobile phone use while driving can be automatic, also. In one of the first studies on this issue, Bayer and Campbell (2012) found that young adults who text automatically tend to text more frequently while driving. These findings highlight the automaticity of mobile phone distraction while driving. Similarly, Panek et al. (2015) investigated the effect of automaticity and mindfulness on texting while driving and texting while walking. Automatic testing behavior was positively associated with the frequency of texting while driving and walking, whereas the "acting with awareness" facet of mindfulness was negatively associated. It shows that these behaviors are performed outside of awareness, providing evidence that the habit plays a role in dangerous texting behavior via its element of "lack of awareness" (Bargh, 1992; Gardner et al., 2012). Furthermore, Moore and Brown (2019) also investigated habitual texting behavior, trait self-regulation, trait mindfulness, and texting while driving. The habitual texting behavior was revealed

as a mediator factor between trait self-regulation and texting while driving, indicating that drivers with low self-regulatory capacity are more likely to develop habitual texting behavior and are more likely to engage in texting while driving. Moreover, mindfulness moderated the relationship between habituality and texting while driving, showing that drivers with low trait mindfulness are more likely to text habitually while driving.

The recent studies focused on habits of general mobile phone use. Hansma et al. (2020) investigated the impact of habitual strength on mobile phone use while driving. They found a significant effect of habitual strength on mobile phone distracted driving after controlling for TPB constructs: attitude, subjective norms, perceived behavioral control, and self-efficacy. This suggests that mobile phone use while driving may involve an automatic process beyond rational cognitive processes. Considering how the automatic process can override or interact with the reasoned process of mobile phone use while driving, Demir et al. (2023) demonstrated the pathway of the automatic process. Similar to previous findings, habitual strength predicts behavior beyond the TPB constructs, indicating that mobile phone use while driving may not be entirely rational but can be automatic. Moreover, habitual strength positively affected attitudes, subjective norms, and perceived behavioral control. This may also suggest that habits contribute to behavior by influencing reasoned processes, even when the behavior does not appear fully automatic.

These findings highlight the complexity of mobile phone-distracted driving and the importance of habitual tendencies in mobile phone use while driving in conjunction with other approaches. Thus, understanding how a given behavior, such as social media distracted driving, is performed requires a more comprehensive and integrated approach involving different behavioral theories and approaches.

1.3. Integration of Behavioral Process

Given the similar aim, several studies have adopted an integrative approach combining the TPB and the PWM. For example, Ravis et al. (2006) studied the integrative model across health-protective behaviors (exercise, sleep, and having

breakfast) and health-risk behaviors (drinking, eating fatty food, and smoking). Adding PWM variables (prototype images and descriptive norms) into the TPB model increased the explained variance by 5% on average in each of the six health behaviors. They concluded that PWM variables are also important predictors of intention. In the following study, Rivis et al. (2011) added the behavioral willingness factor to the model of TPB to understand younger and older drivers' drinking and driving behavior. They concluded that the model explained 59% and 23% of the variance in younger and older drivers' willingness to engage in drunk driving, respectively. They also showed that perceived behavior was a significant predictor of willingness and subjective norms, which are not proposed in the original PWM model (Gibbons et al., 1998). These two studies highlighted that integrating two different behavioral models allowed authors to understand the psychological process of each given behavior in detail and demonstrate how socio-cognitive factors shape decision-making, which enables researchers to make explicit assumptions and more appropriate interventions targeting the given behaviors.

Thus, a similar approach is required for the studies on road safety. Several studies integrated the constructs of these models to test risky driving behavior. Demir et al. (2019) utilized each model to examine pedestrian violations. They found that the integrative model explained an additional 23% variance in violation behavior compared to standard TPB. They also stated that willingness has better predictive power on pedestrian violations than intentions, showing violations are more spontaneous than intentional, further expanding the knowledge of violations. Later, Wang and Xu (2021) tested young drivers' willingness and intention to continue lane-changing behaviors. Similarly, they found that PBC was also a significant predictor of willingness. PBC has also been shown to be an important indicator of willingness. Even though self-efficacy was the critical predictor of intention and behavior in the TPB model (Ajzen et al., 2011), it also triggered spontaneous decision-making. These studies emphasize the importance of investigating a behavior with a comprehensive approach to an in-depth understanding of its mechanisms.

As mentioned previously, the behavior cannot be only rational or reactive, but also automatic. Therefore, adding habitual sides of behaviors into study models allows

researchers to capture a more comprehensive side of any given behavior. In the traditional approach to habit, it was suggested that habits consistently elicit behaviors by overriding any counter-habitual intentions, as noted in early discussions (Hall & Fong, 2007). However, studies of habit in health behaviors raised controversial questions by showing contradicting findings (de Bruijn et al., 2009; Gardner, 2015). For example, in a dairy study by Quinn et al. (2010), participants reported that they successfully inhibited unwanted actions performed in a stable context by using vigilant monitoring of cues and behavior. It shows that habits can be inhibited with sufficient willpower or self-regulation abilities (Neal et al., 2012).

Gardner (2015), then, suggested that in order to understand habit-related behaviors, a wide range of paradigms, designs, and methods should be incorporated into the habitual formation of behavior, based on the idea that since habit is a process by which stimulus (or context) generates impulses toward a cue-learned behavior. This process can be compete or combined with other impulses or inhibitions arising from other sources. Therefore, it can be concluded that even highly habitual behaviors can shift to rational control if interrupted by other forces in some conditions. Integrating habit into rational behavioral models, such as the Theory of Planned Behavior (TPB) and the Prototype Willingness Model (PWM), is likely to provide evidence of a shift in control from an automatic process to a rational one.

Two studies incorporating the habitual strength of mobile use while driving within TPB models suggest that habitual strength can interact with reasoned processes to predict mobile phone use while driving, eliminating the predictive power of other constructs (Hansma et al., 2020; Demir et al., 2023). However, these studies had some limitations in their approach. Hansma et al. (2020) examined the effect of habitual strength on mobile phone use while driving, controlling for the constructs of the Theory of Planned Behavior (TPB), except for the intention. They did not show any findings related to the effect of habit on other constructs. Also, the lack of intention in the analysis raises the question of whether the reported effect of habit on mobile phone use while driving was indeed independent of intention. Demir et al. (2020) addressed the first limitation by demonstrating the effect of habit on TPB constructs, revealing that habit predicts behavior both directly and indirectly through

attitude, subjective norms, and perceived behavioral control. However, they also did not include the intention factor in their study, which still leaves the second question of habits' independence of intention unanswered. To suggest that mobile phone use while driving is not always an intentional behavior, the effect of habit on intention should be considered in the context of integrating habit into the complete TPB model.

Even though habit and willingness are distinct concepts, the former involves automatic, cue-triggered impulses to act (Gardner, 2015), while the latter refers to spontaneous reactions to specific conditions (Strack et al., 2004); both share the element of reactivity. The habits' negative effect on the inability to delay gratification and control impulses (Wilmer & Chein, 2016) and the positive relationship between impulsivity (Yeomans et al., 2023) may influence people's reactive behaviors in specific conditions, particularly those similar to where habits are formed. Ohtomo (2013) presented supportive findings that unhealthy eating habits directly affect people's willingness and behavior, but their intention. They suggest that habitual strength changes the action control process. The strong habitual tendencies of unhealthy eating may inhibit intentional control, leading people to behave automatically or reactively in response to certain conditions. However, health studies also present some controversial findings. Ohtomo and Kimura (2022) stated that habitual preventive behavior in response to COVID-19 is not related to behavioral willingness but intention. This study measured the willingness to engage in counter-preventive behaviors and the habitual strength and intention to engage in preventive behaviors. Thus, the results cannot state that habitual strength is not related to willingness; however, it may indicate that habitual strength of behavior does not predict counter-behavior inhibition.

Studies integrating willingness and habitual strength have not been conducted in the domain of road safety. Within the scope of the current study, it is assumed that the habitual strength of social media use may be related to the willingness to engage in it while driving. The highly habitual nature of social media use (Meier et al., 2023; Turel & Serenko, 2017) may be pervasive, reflected in people's tendency to behave in specific conditions. For example, the sound of a notification or feeling bored may

trigger the impulse to engage with the most frequently used (or rewarding) social media application while driving. People would like to act upon these impulses in less risky traffic situations.

1.4. The Present Study

The present study aims to investigate what extent SMDD is rational, reactive, and habitual by exploring each process separately and within an integrated framework (see Figure 3).

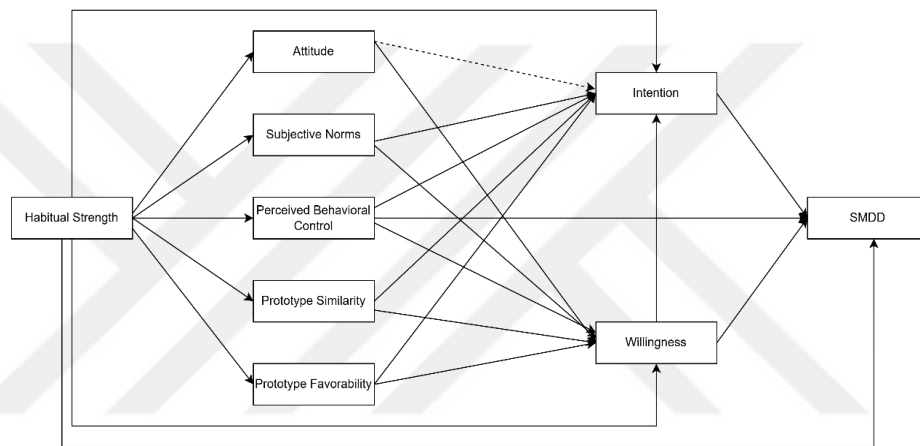


Figure 3. The visual representation of the integrated model

To achieve this aim, the study incorporates three theoretical frameworks in explaining SMDD: (1) the Theory of Planned Behavior (TPB) to examine the reasoned process, (2) the Prototype Willingness Model (PWM) to capture the reactive process, and (3) habitual strength as a measure of automatic and non-deliberative engagement in SMDD.

CHAPTER 2

METHOD

2.1. Participants & Procedure

A total of 673 individuals completed the survey. After the data were assessed for accuracy and completeness, 257 participants were excluded due to incomplete responses or inaccurate data entries. The final analysis included data from 416 participants. The average age of the participants was 31.9 years ($SD = 10.9$). Gender distribution was nearly equal, with 49% female ($N = 204$) and 51% male ($N = 212$) participants. Most participants reported driving almost daily ($N = 199$; 47.8%). The majority indicated they had not been involved in active accidents (63%) or passive accidents (72.6%). Thirty-nine percent of participants reported using their mobile phone 3-5 hours daily. Half of the participants ($N = 208$) reported spending 1–3 hours on social media, while 24.5% ($N = 102$) reported spending 3–5 hours daily.

The study's ethical approval was obtained from the Ethics Committee of the Middle East Technical University. Participants were recruited through an online survey link, social media platforms, and the SONA system, a platform used by the Psychology Department at Middle East Technical University, which offers students bonus course credits for participation.

Participants provided informed consent prior to commencing the study. They then completed a questionnaire package, which included a demographic information form, a measure of habitual strength for social media use, the frequency of social media use while driving, and constructs from the Theory of Planned Behavior (TPB) and Prototype Willingness Model (PWM): attitudes, subjective norms, perceived behavioral control, prototype similarity, prototype favorability, intention and

willingness regarding social media use while driving. After completing the questionnaire, participants received a debriefing form.

2.2. Measures

2.2.1. TPB and PWM Constructs

2.2.1.1. Attitudes:

According to Robinson et al. (1991), attitude items should be designed to reflect the meaning and content of the concept being measured. Therefore, we selected five semantic differential items that align with attitudes toward social media use while driving. Participants rated their attitudes toward using social media and checking notifications while driving on a 5-point Likert scale using the following adjective pairs: 'dangerous to beneficial,' 'non-distracting to distracting,' 'boring to exciting,' 'stressful to relaxing,' and 'annoying to enjoyable.' The scale demonstrated strong reliability (Cronbach's $\alpha = .89$). (see Appendix F)

2.2.1.2. Subjective norms:

Subjective norms were measured using four items that captured descriptive and injunctive norms (Nemme & White, 2010). For descriptive norms, participants responded to statements such as, "The majority of people important to me use social media apps while driving" and "The majority of people important to me check social media notifications while driving." Injunctive norms were measured with items like, "The majority of people important to me approve/accept my checking social media notifications while driving" and "The majority of people important to me approve/accept my using social media apps while driving." A mean score of the four items was calculated, with good reliability (Cronbach's $\alpha = .85$) (see Appendix F).

2.2.1.3. Perceived behavioral control (PBC):

PBC was assessed using four items, such as "Browsing social media while driving is easy for me," "Checking social media notifications while driving is easy for me,"

(Demir et al., 2019) and “Whether or not checking social media notifications while driving is up to me” and “Whether or not I browse social media while driving is up to me.” (Nemme & White, 2010) The scale’s reliability was satisfactory (Cronbach’s $\alpha = .76$) (see Appendix F).

2.2.1.4. Intention:

Participants’ intention to use social media while driving was measured with two items (Nemme & White, 2010): “Within the next month, I plan to check social media notifications while driving when I see a notification” and “Within the next month, I plan to browse social media while driving.” The reliability was acceptable (Cronbach’s $\alpha = .71$) (see Appendix F).

2.2.1.5. Prototype similarity and favorability:

Participants were instructed to think of an image of a typical person who scrolls through social media apps while driving or checks their phone when they see a notification from social media apps while driving. Prototype similarity was measured using items such as “The typical person who browses social media while driving is very similar to me” and “The typical person who checks social media notifications while driving is very similar to me,” rated on a 7-point Likert scale. The reliability was satisfactory (Cronbach’s $\alpha = .78$) (see Appendix F).

Prototype favorability was assessed using items like “I favor typical people who browse social media apps while driving” and “I favor typical people who check social media notifications while driving,” which were also rated on a 7-point Likert scale. Reliability was strong (Cronbach’s $\alpha = .80$) (see Appendix F).

2.2.1.6. Willingness:

Willingness was assessed with two items. In line with the previous studies in other domains (Gerrard et al., 2008), the items were constructed to measure participants’ willingness to engage in SMDD when confronted by situations that provide an

opportunity or encouragement to do so. Participants rated their willingness to browse social media or check notifications while driving under specific conditions. Items included, “If I see an interesting or important notification while driving on a calm road, I would want to check it by opening the app,” and “If I am very bored in slow-moving traffic, I would want to browse social media apps.” Responses were rated on a 7-point Likert scale, with acceptable reliability (Cronbach’s alpha = .73) (see Appendix F).

2.2.2. Self-Reported Habitual Strength Index (SRHI):

The Self-reported Habitual Strength Index (SRHI) was used to assess people’s habitual tendencies toward general social media use. Consistent with the definition of SMDD, the habitual strength of overall social media use was evaluated through two dimensions: browsing content within social media apps and checking notifications in response to alerts. 10 items including statements such as “Spending time on social media apps by picking up my phone is something I do automatically” or “Picking up my phone to check notifications is something I do automatically” was measured on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The researcher and the dissertation advisor carried out the Turkish adaptation of the scale. After the translation, a researcher from the Psychology department, an engineer, and a person with no higher education were asked to complete the translated measures and provide feedback on the clarity and comprehensibility of the items. Based on their feedback, the researcher and the dissertation advisor finalized the measurement. The scale’s reliability was satisfactory (Cronbach’s alpha was .95) (see Appendix F).

2.2.3. Frequency of SMDD:

To assess the frequency of social media use while driving (SMDD), participants answered two questions: “How often do you pick up your phone to spend time on social media apps while driving?” and “How often do you pick up your phone to check notifications while driving?” Responses were rated on a 5-point Likert scale

ranging from 1 (never) to 5 (always). Reliability was acceptable (Cronbach's alpha = .76) (see Appendix F).

2.2.4. Demographic Information Form:

Participants provided demographic details, including age, gender, frequency of driving, years of licensure, kilometers driven in the past year, and the number of active and passive accidents, traffic tickets received, and daily usage frequency of mobile phones and social media. The driving frequency was measured using a 5-point scale, ranging from 1 (almost every day) to 5 (rarely). The frequency of mobile phone and social media use per day was measured with a 5-point scale, from 1 (less than 1 hour) to 5 (more than 7 hours) (see Appendix F).

CHAPTER 3

RESULTS

3.1. Data Analytics Plan

Before analyzing the data, the dataset was organized and cleaned. The string variables, such as age, annual kilometers, lifetime kilometers, number of accidents and tickets, etc., are converted to numerical format. After cleaning the data, the factors are computed. This procedure was. Factor analysis, bivariate correlational analysis, and hierarchical regression were done in SPSS version 23. The path analyses were conducted using the respective modules of JAMOVI version 2.3. (The jamovi project, 2022). Some variables exhibited some skewness and kurtosis, whereas the majority did not. Based on the central limit theorem (Gravetter & Wallnau, 2009), a large number of samples produces appropriate standard error estimates. Thus, assuming normality while conducting statistical tests was reasonable. All variables were transformed into standardized z-scores to control for the effect of different scaling.

The factor structure of the Turkish translation of the SRHI was examined to determine whether the translated version aligned with the original factor structure. Second, bivariate correlational analyses were conducted to understand the characteristics of the sample population. Then, hierarchical regression analysis was conducted to test the relationship between habitual strength and SMDD.

Lastly, a series of path analyses was conducted to explore SMDD by utilizing models of TPB and PWM and a model integrating them with habitual strength. Model fits were evaluated by the values of the chi-square test, root-mean-square error of approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis Index (TLI).

3.2. The Factor Analysis

A Principal Axis Factoring (PAF) analysis examined the SRHI's underlying structure. Before conducting the factor analysis, the suitability of the data for factorization was assessed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .934, indicating excellent sampling adequacy. Additionally, Bartlett's test of sphericity was significant ($\chi^2(190) = 7677.63, p < .001$), supporting the factorability of the correlation matrix.

Four eigenvalues greater than one were observed: 11.04, 2.00, 1.5, and 1.1. However, the sharp drop in the sizes of eigenvalues and the scree plot clearly supported the one-factor structure. Thus, the one-factor structure was fixed to analyze the factor structure further, namely, the habitual strength. The habitual strength explained 55.2% of the variance. The factor loadings ranged from .63 to .84. The highest loaded item was "Picking up my phone to check notifications is something I do without realizing." The lowest loaded item was "Spending time on social media apps by picking up my phone is something that belongs to my routine." The factor had high reliability ($\alpha=.96$) (see Table 1.).

Overall, these results confirm that the scale demonstrates a strong unidimensional structure and matches the original scale in which an explained variance ranges between 47.32% and 65.56% (Verplanken & Orbell, 2003). It also has high internal consistency and factor loadings, making it a reliable instrument for assessing automatic and habitual aspects of mobile phone-based social media engagement in the Turkish population.

Table 1. Factor Loadings from the principal axis factoring (PAF) for one-factor structure for the SRHI

Items	Habitual Strength
Checking notifications from social media apps on my phone is something I do without even realizing it.	0.84

Table 1. (continued)

Checking notifications from social media apps on my phone is something I do without even realizing when I picked up my phone.	0.82
Checking notifications from social media apps on my phone is something I do without meaning to do it.	0.80
Checking notifications from social media apps on my phone is something I do without thinking.	0.79
Checking notifications from social media apps on my phone is something I do without having to consciously remember.	0.78
Browsing social media apps on my phone is something I do without having to consciously remember when I picked up my phone and opened the apps.	0.77
Browsing social media apps on my phone is something I do without thinking.	0.75
Browsing social media apps on my phone is something I do without even realizing it	0.75
Browsing social media apps on my phone is something that is typically “me”	0.75
Checking notifications from social media apps on my phone is something that I would find hard not to do.	0.72
Checking notifications from social media apps on my phone is something that would require effort not to do it.	0.71
Checking notifications from social media apps on my phone is something that is typically “me”.	0.71
Browsing social media apps on my phone is something I have no need to think about doing.	0.69
Browsing social media apps on my phone is something I do without meaning to do it.	0.68
Checking notifications from social media apps on my phone is something I do automatically.	0.67
Browsing social media apps on my phone is something that I would find hard not to do.	0.67

Table 1. (continued)

Browsing social media apps on my phone is something I do automatically.	0.65
Browsing social media apps on my phone is something that would require effort not to do it.	0.65
Checking notifications from social media apps on my phone is something that belongs to my daily routine.	0.65
Browsing social media apps on my phone is something that belongs to my daily routine.	0.64
Eigenvalues	11.04
% of Variance	55.18
Cronbach's Alpha	0.96

3.3. Bivariate Correlation Analysis

Bivariate correlation analysis among SMDD, habitual strength of social media use, the constructs of TPB and PWM, and demographic variables, e.g., age, gender, duration of license ownership, mileage in past year, and daily frequency of social media use.

The results showed that SMDD has a significant and positive correlation with all TPB and PWM constructs and habitual strength (habitual strength, $r = .19$; attitude, $r = .40$; subjective norms, $r = .33$; perceived behavioral control, $r = .49$; prototype similarity, $r = .43$; prototype favorability, $r = .45$; intention, $r = .76$; willingness, $r = .59$). Of demographic variables, mileage in the past year ($r = -.16$) and of daily social media use ($r = .13$)

A similar result was found for intention. Of demographic variables, mileage in the past year was found to be positively correlated with intention to engage in SMDD ($r = .12$). Other study constructs were also significantly and positively related to intention (habitual strength, $r = .21$; attitude, $r = .44$; subjective norms, $r = .42$; perceived behavioral control, $r = .52$; prototype similarity, $r = .51$; prototype favorability, $r = .52$; willingness, $r = .64$).

Table 2. Bivariate Correlations between Study Variables

	1	2	3	4	5	6	8	9	10	11	12	13	14	15
1. Age	1													
2. Gender	.098*	1												
3. Licence Year	.943**	.124*	1											
4. 1-year Mileage	.157**	.259**	.164**	1										
5. Lifetime Mileage	.393**	.177**	.436**	.437**	1									
6. Daily Social Media Use	-.209**	-.212**	-.209**	-.123*	-.105*	1								
8. SMDD	-.061	.090	-.007	.158**	-.027	.128**	1							
9. Intention	-.047	.069	.014	.115*	.016	.100*	.759**	1						
10. Willingness	-.123*	.026	-.077	.037	-.059	.086	.594**	.637**	1					
11. Habitual Strength	-.260**	-.202**	-.261**	-.212**	-.135**	.373**	.189**	.209**	.236**	1				
12. Attitude	-.120*	.069	-.083	-.043	-.121*	.009	.405**	.438**	.517**	.165**	1			
13. PBC	.011	.156**	.074	.030	.004	.102*	.487**	.520**	.495**	.090	.399**	1		
14. Subjective Norms	.094	-.061	.094	-.024	-.006	.053	.330**	.417**	.354**	.131**	.216**	.297**	1	
15. Prototype Similarity	-.013	.039	.025	.062	.002	.118*	.433**	.507**	.424**	.191**	.286**	.459**	.380**	1
16. Prototype Favorability	-.042	.077	.017	.137**	.059	.045	.447**	.524**	.371**	.053	.222**	.443**	.396**	.624**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed). For Gender; Male:1 and Female:2

Willingness, on the other hand, showed a significant correlation with age ($r = -.12$), indicating that as drivers age, they exhibit less willingness to engage in SMDD. Other constructs showed similar results. Willingness was significantly and positively correlated to habitual strength ($r = .24$), attitude ($r = .52$), subjective norms ($r = .35$), perceived behavioral control ($r = .50$), prototype similarity ($r = .42$), and prototype favorability ($r = .37$) (see Table 2).

3.4. Hierarchical Regression Analysis

A hierarchical regression analysis was conducted to investigate whether habitual strength predicts SMDD, which indicates the degree to which SMDD is habitual (automatic). Age, gender, duration of license ownership, mileage in the past year, and daily social media use were included in the first step of the models to control for their effects on the SMDD. As shown in Table 3, age, gender, duration of license ownership, mileage in the past year, and daily social media use were included in the first step of the model. In the second step, the habitual strength of social media use was added to the model. The first step explained 7.7% of the variance in SMDD ($F(5, 410) = 6.87, p < .001$). Age ($\beta = -.46, SE = .01, t = -3.25, p = .001, 95\% CI [-0.05, -0.01]$), duration of license ownership ($\beta = 0.43, SE = .01, t = 2.99, p = .003, 95\% CI [0.01, 0.05]$), mileage in past year ($\beta = 0.19, SE = 2.700 \times 10^{-6}, t = 3.25, p = .001, 95\% CI [3.707 \times 10^{-6}, 1.429 \times 10^{-5}]$), daily social media use ($\beta = 0.16, SE = .04, t = 3.13, p = .002, 95\% CI [0.05, 0.21]$) were found significantly related to SMDD. The second step explained the 11.4% variance in SMDD ($F(6, 409) = 7.33, p < .001$) and showed that habitual strength has a function in increasing SMDD ($\beta = .21, SE = .03, t = 4.11, p < .001, 95\% CI [.06, .17]$). This finding suggests that drivers may engage in SMDD to some degree automatically.

3.5. Path Analyses

Three path analyses were conducted using the SEM module of JAMOOVI (Version 2.3) (Jamovi Project, 2022). The TPB model was tested to explain the SMDD in the first model. In the second model, the function of PWM on SMDD was tested. In the last model, habitual strength was utilized as an exogenous variable in an integrated TPB and PWM.

Table 3. Hierarchical Regression Analysis for the Relationship between Habitual Strength and SMDD

	R ²	F for change in R ²	B	SE	β	t	p	95% CI for B	
								Low	High
Step 1	.077	6.87***							
Constant			1.74	0.27		6.45	< .001	1.21	2.27
Age			-0.03	0.01	-0.46	-3.25	.001	-0.05	-0.01
Gender			0.11	0.07	0.07	1.46	.145	-0.04	0.25
License Ownership (year)			0.03	0.01	0.43	2.99	.003	0.01	0.05
Mileage in past year			8.999×10 ⁻⁶	2.700×10 ⁻⁶	0.16	3.25	.001	3.707×10 ⁻⁶	1.429×10 ⁻⁵
Daily Social Media Use			0.13	0.04	0.16	3.13	.002	0.05	0.21
Step 2	.114	16.88***							
Constant			1.28	0.29		4.48	< .001	0.72	1.85
Age			-0.03	0.01	-0.44	-3.16	.002	-0.05	-0.01
gender			0.14	0.07	0.09	1.86	.064	-0.01	0.28
Duration of License Ownership			0.03	0.01	0.44	3.15	.002	0.01	0.05
Mileage in Past Year			1.049×10 ⁻⁵	2.700×10 ⁻⁶	0.19	3.83	< .001	5.198×10 ⁻⁶	1.578×10 ⁻⁵
Daily Social Media Use			0.07	0.04	0.09	1.76	.079	-0.01	0.16
Habitual Strength			0.11	0.03	0.21	4.11	< .001	0.06	0.17

3.5.1. Model 1: The role of the theory of planned behavior in explaining social media distracted driving

In the first model, the TPB model was utilized to understand SMDD. The model demonstrated a good fit to the data ($\chi^2/df = 3.35/2$, RMSEA = .040, CFI = .998, TLI = .990, GFI = .997). The explained variances in intention and SMDD behavior were 39.6% and 58.8%, respectively (see Table 4 in Appendix A).

According to the results, the TPB model was confirmed in SMDD behavior. SMDD was predicted by intention ($\beta = .694$, $SE = .041$, $p < .001$, 95% CI [.613, .774]) and perceived behavioral control ($\beta = .126$, $SE = .035$, $p < .001$, 95% CI [.057, .195]). Intention was predicted by attitude ($\beta = .244$, $SE = .057$, $p < .001$, 95% CI [.132, .356]), subjective norms ($\beta = .262$, $SE = .043$, $p < .001$, 95% CI [.175, .348]), and perceived behavioral control ($\beta = .345$, $SE = .046$, $p < .001$, 95% CI [.254, .435]) (see Figure 4).

The indirect effect of TPB constructs on SMDD was observed in parallel to the theoretical background. The highest indirect effect through intention was the effect of perceived behavioral control on SMDD ($\beta = .239$, $SE = .036$, $p < .001$, 95% CI [.118, .245]) (for all direct and indirect effects, see Table 5 in Appendix B).

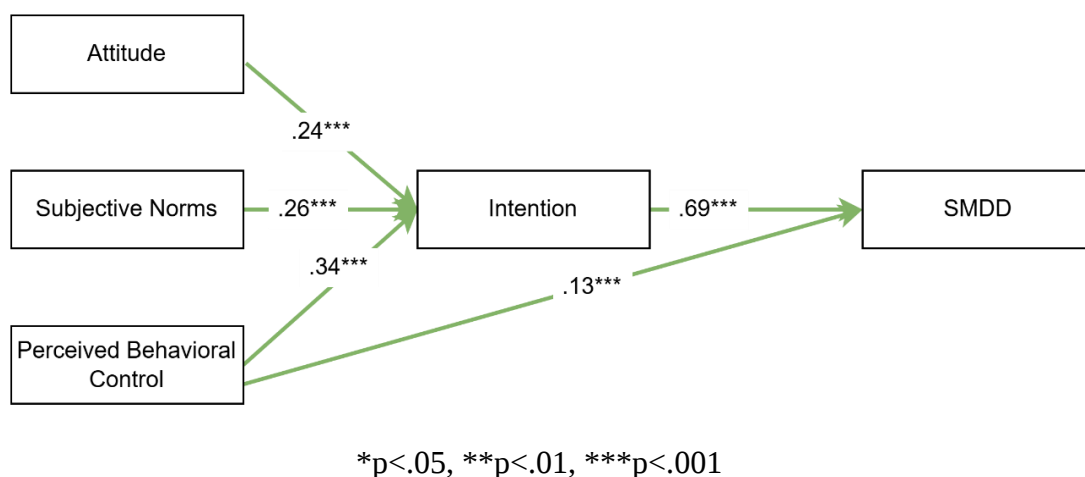
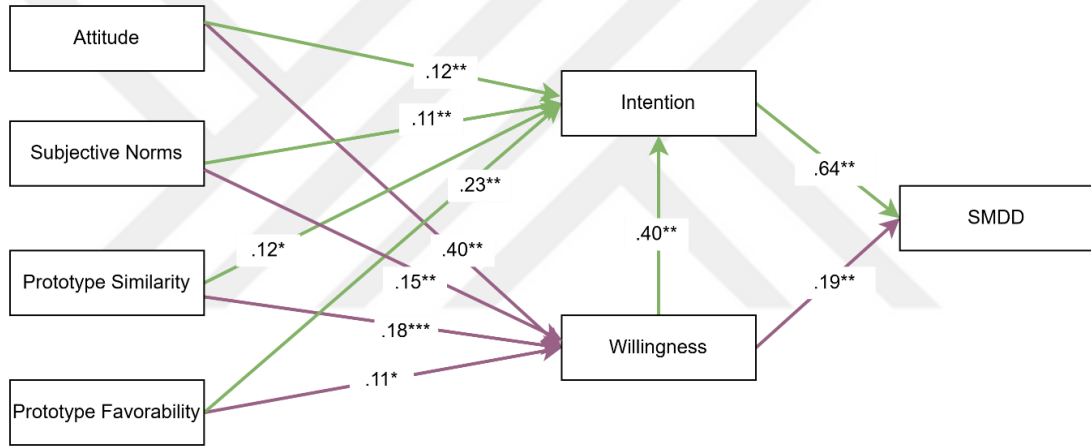


Figure 4. The TPB model for social media distracted driving

3.5.2. Model 2: The role of the prototype willingness model in explaining social media distracted driving

The second model utilized PWM to investigate the SMDD. The original model did not initially provide a good fit to the data ($\chi^2/df = 77.7/7$, RMSEA = .156, CFI = .94, TLI = .82, GFI = .95). Based on suggested modification indices, some paths were added to the model, considering their theoretical relevance such as a path from prototype perceptions to intention. After these modifications, the model fit the data well ($\chi^2/df = 4.20/4$, RMSEA = .011, CFI = 1.00, TLI = 0.999, GFI = .997). The model explained 53.5% of the variance in intention, 38.2% in willingness, and 59.7% in SMDD behavior (see Table 4 in Appendix A).



* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5. The PWM for social media distracted driving

The paths suggested by the theory revealed significant results. SMDD was predicted by willingness ($\beta = .18$, $SE = .041$, $p < .001$, 95% CI [.104, .267]) and intention ($\beta = .64$, $SE = .048$, $p < .001$, 95% CI [.735, .641]). Furthermore, intention was predicted by attitude ($\beta = .12$, $SE = .045$, $p = .006$, 95% CI [.035, .213]), subjective norms ($\beta = .11$, $SE = .037$, $p = .003$, 95% CI [.039, .188]) and willingness ($\beta = .39$, $SE = .055$, $p < .001$, 95% CI [.287, .507]). Willingness was predicted by attitude ($\beta = .40$, $SE = .063$, $p < .001$, 95% CI [.283, .532]), prototype similarity ($\beta = .18$, $SE = .053$, $p < .001$, 95% CI [.077, .289]), and marginally predicted by prototype favorability ($\beta = .10$, $SE = .053$, $p = .051$, 95% CI [.00, .211]). Among the modified

paths, subjective norms predicted willingness ($\beta = .15$, $SE = .046$, $p < .001$, 95% CI [.064, .245]), prototype favorability predicted intention ($\beta = .23$, $SE = .058$, $p < .001$, 95% CI [.117, .345]) and prototype similarity ($\beta = .11$, $SE = .056$, $p < .001$, 95% CI [.005, .226]) (see Figure 5). According to the indirect effects, the highest value was observed in the relationship between willingness and SMDD with a mediation of intention ($\beta = .313$, $SE = .042$, $p < .001$, 95% CI [.231, .395]) (for all direct and indirect effects, see Table 6 in Appendix C).

3.5.3. Model 3: The integrated model of habitual strength, theory of planned behavior and prototype willingness model to explore social media distracted driving

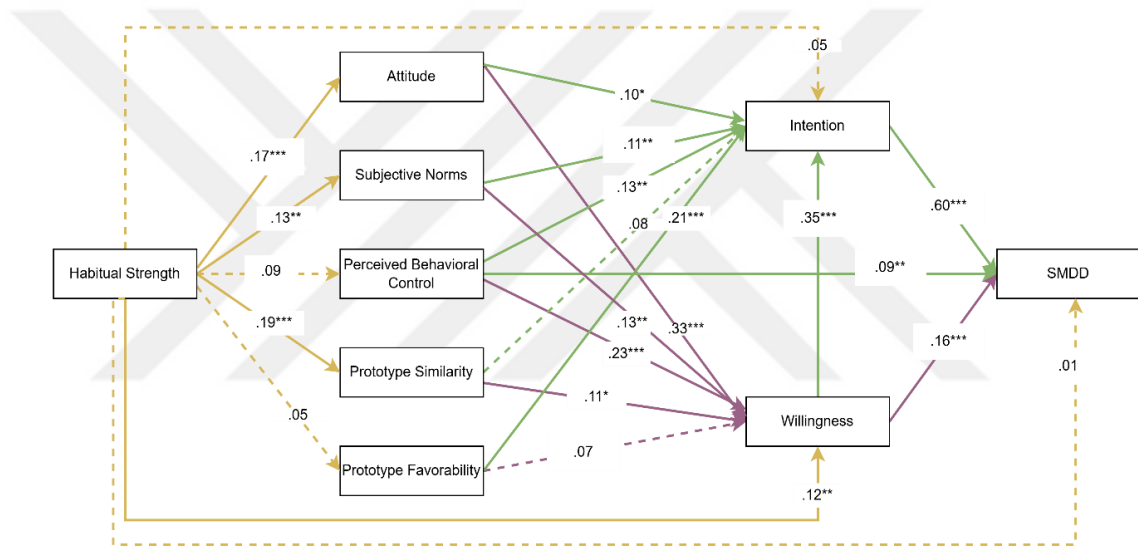
The final model incorporated all the paths examined in Model 1 and Model 2, along with additional paths and habitual strength as an exogenous variable. The initial model did not provide an adequate fit to the data ($\chi^2/df = 28.5/5$, RMSEA = 0.106, CFI = 0.984, TLI = 0.883, GFI = 0.984). To improve the model's goodness of fit, modification indices were reviewed, and a path from perceived behavioral control to willingness was added. The modified model showed a better fit to the data ($\chi^2/df = 2.19/4$, RMSEA = .000, CFI = 1.00, TLI = 1.01, GFI = .999). The explained variances in intention, willingness, and SMDD behavior were 54.8%, 43.1%, and 60.3%, respectively (see Table 4 in Appendix A).

The habitual strength significantly predicted attitude ($\beta = .165$, $SE = .051$, $p < .001$, 95% CI [.063, .266]), subjective norms ($\beta = .130$, $SE = .046$, $p = .005$, 95% CI [.040, .221]), prototype similarity ($\beta = .191$, $SE = .051$, $p < .001$, 95% CI [.089, .292]), and willingness ($\beta = .119$, $SE = .038$, $p = .002$, 95% CI [.044, .194]).

The relationship between other constructs was similar to previous results. Intention was predicted by attitude ($\beta = .097$, $SE = .042$, $p = .022$, 95% CI [.014, .181]), subjective norms ($\beta = .107$, $SE = .037$, $p = .004$, 95% CI [.034, .179]), perceived behavioral control ($\beta = .137$, $SE = .042$, $p < .001$, 95% CI [.054, .219]), prototype favorability ($\beta = .213$, $SE = .056$, $p < .001$, 95% CI [.103, .324]), and willingness ($\beta = .352$, $SE = .054$, $p < .001$, 95% CI [.247, .458]). Willingness was predicted by

attitude ($\beta = .329$, $SE = .062$, $p < .001$, 95% $CI [.206, .452]$), subjective norms ($\beta = .128$, $SE = .045$, $p = .004$, 95% $CI [.040, .217]$), perceived behavioral control ($\beta = .234$, $SE = .051$, $p < .001$, 95% $CI [.134, .334]$), and prototype similarity ($\beta = .106$, $SE = .051$, $p = .039$, 95% $CI [.005, .207]$) (see Figure 7).

In addition to direct effects, the analysis revealed several indirect effects of habitual strength on SMDD. The highest indirect effect of habitual strength on SMDD was thorough willingness and intention ($\beta = .026$, $SE = .010$, $p = .007$, 95% $CI [.007, .044]$) and thorough willingness ($\beta = .019$, $SE = .007$, $p = .011$, 95% $CI [.004, .033]$) (for all direct and indirect effects, see Table 7 in Appendix D).



* $p < .05$, ** $p < .01$, *** $p < .001$. Dashed lines indicate insignificant paths.

Figure 6. The integrated model for social media distracted driving

CHAPTER 4

DISCUSSION

4.1. General Discussion

Due to its increasing frequency and popularity, using social media while driving has become increasingly noticeable (RAC, 2024). While it offers many advantages in daily life, it has also introduced new concerns. One such concern has emerged in the domain of driver safety, where an increasing number of drivers are engaging in social media while driving. In the current study, this issue is referred to as social media distracted driving (SMDD).

Previous research has shown that SMDD is common and negatively impacts driver performance (D'amico et al., 2020; Hashhash et al., 2019). Given its prevalence and harmful impact on safe driving, it is crucial to develop effective prevention methods. To create effective interventions, the underlying factors and processes should be explored. However, there is a lack of explanation for why and how people engage in this distracting activity while driving. To address this gap in the literature, the present study seeks to explore the processes underlying SMDD. Specifically, it investigates the extent to which SMDD is driven by reasoned, reactive, or habitual (automatic) processes, as well as how these behavioral pathways interact. The findings offer critical insights for developing more effective regulations and interventions that aim to reduce SMDD by targeting its underlying cognitive and psychological factors.

The reasoned process of SMDD was tested using the Theory of Planned Behavior model (Ajzen, 1991). The reactive process was modeled with the Prototype Willingness Model (Gibbons et al., 1998). The relationship between habitual strength of social media use (Verplanken & Orbell, 2003) and SMDD provided insight into

the extent of the habitual (automatic) side of the behavior. To address the integration of each behavioral process, the habitual strength, the Theory of Planned Behavior, and the Prototype Willingness Model were integrated within a comprehensive model.

4.2. Factor Structure of Self-Reported Habitual Index

Principal Axis Factoring analysis was utilized to examine the factor structure of the Self-Reported Habitual Strength Index (SRHI). In line with the definition of SMDD, the habitual strength of general social media use was assessed in terms of two components: engaging with content by browsing social media apps and responding to alerts by checking notifications from social media apps. A similar approach was taken in previous studies investigating mobile phone use while driving (Hansma et al., 2020; Demir et al., 2023). The findings strongly support the one-factor structure of habitual social media use, as measured by the Self-Reported Habit Index (SRHI). It was revealed that although four eigenvalues exceeded one, the significant drop from 11.04 to 2.00 after the first eigenvalue, coupled with the interpretability of the factor structure, clearly justified a one-factor solution. This aligns with the original conceptualization by Verplanken and Orbell (2003), who proposed that habit strength is understood as a unidimensional construct. The high internal consistency ($\alpha = .96$), substantial explained variance (55.2%), and meaningful factor loadings (ranging from .64 to .84) indicated that the scale reliably captures habitual social media use.

The items with the highest loading highlight the automaticity of social media use, such as checking the notifications by picking up the phone is something I do without realizing, or checking the notifications by picking up the phone is something I do not need to remember doing. This indicates that SRHI highly reflects automaticity in social media use, as suggested by Verplanken and Orbell (2010).

4.3. Bivariate Correlations among Study Variables

According to the results, individuals who use social media more frequently were found to engage more in SMDD. This pattern suggests that frequent social media use may foster a sense of familiarity with the platforms, increasing the likelihood of such

behaviors extending into other contexts, such as driving. On the other hand, drivers' mileage in the past year was positively associated with SMDD, whereas drivers' lifetime mileage was not significantly related. Thus, the former relationship cannot be fully explained by experience. This contradiction may result from the fact that mileage in the last year shows active driving, rather than experience (Kaneko & Kagawa, 2021). The active drivers are more prone to engage in SMDD. Considering predictors of SMDD, it was positively associated with attitude, subjective norms, perceived behavioral control, prototype perception, intention, and willingness. Specifically, individuals who held favorable attitudes toward SMDD, perceived social approval, and high prevalence of the behavior, believed in their ability to control it, identified with the typical person who engages in SMDD, and expressed both intention and willingness to perform the behavior were more likely to report SMDD engagement. These findings align with the assumptions of TPB (Ajzen et al., 2001) and PWM (Gibbons et al., 1998), indicating the relationships between the frequency of SMDD and its reasoned and reactive behavioral processes. In detail, intention was the strongest correlate of SMDD. According to TPB, intention is the most proximal predictor of behavior, which supports the view that SMDD may often be a rational and deliberate act. Willingness showed the second strongest correlation, followed by other constructs with relatively similar effect sizes, reflecting TPB and PWM pathways. Notably, habitual strength had the weakest yet still significant correlation with SMDD, suggesting that the habitual (automatic) component of the behavior might be less dominant compared to other processes.

Considering intention and willingness, the correlation pattern was similar to that of SMDD, which was expected given the strong association between these two variables. Interestingly, willingness was negatively correlated only with age among the demographic variables, suggesting that younger drivers are more prone to engage in SMDD under specific conditions and may be more susceptible to situational temptations. It indicates that SMDD, like other health-risk behaviors, may have a significant nonintentional component for young individuals (Gibbons et al., 1998)

Finally, habitual strength was significantly related to all demographic variables, particularly being female and younger, and using social media longer in a day was

related to higher habitual strength of social media use. Moreover, habitual tendencies were positively associated with SMDD-related intentions and willingness, favorable attitudes, perceived social approval, and identification with typical SMDD users. These findings suggest that habitual use of social media may shape individuals' cognitive evaluations of SMDD, potentially lowering psychological barriers to performing the behavior in high-risk contexts, such as driving.

4.4. The Relationship between Habitual Social Media Use and SMDD

The extent to which SMDD functions as an automatic (habitual) behavior was examined by assessing its relationship with the habitual strength of social media use. The findings shows that the higher habitual tendencies can lead to higher engagement in social media while driving after controlling age, gender, experience and daily social media use. These results highlight the habitual (automatic) aspect of SMDD, which, in line with previous studies, suggests that mobile phone use while driving may be automatic to some degree (Demir et al., 2023; Hansma et al., 2020). In other words, SMDD can manifest cognitively with minimal effort, irrespective of intentions, deliberate control, or conscious awareness (Gardner et al., 2012). To note that, the significant relationship after controlling for duration of daily social media use shows that SMDD was more related to habitual strength than repetition or familiarity with the behavior. This finding aligns with the idea that the habits are independent of the repetition; they are more representative of automaticity (LaRose, 2010; Mazar & Wood, 2018).

4.5. The Reasoned Process of SMDD

A path analysis was conducted to test TPB model in explaining the reasoned behavioral process of SMDD. According to the results, the TPB explained 58.8% of the variance in SMDD. Attitude, subjective norms, and perceived behavioral control were significant predictors of the intention to engage in SMDD, whereas intention and perceived behavioral control were significant predictors of SMDD. The results were in line with the previous studies on TPB (e.g., Okati-Aliabad et al, 2024; Nemme & White, 2010; Demir et al., 2023). Among these constructs, intention was

seen as having the highest predictive value in SMDD, whereas perceived behavioral control emerged as one of the most critical factors in predicting SMDD, considering both direct and indirect effects. These findings indicate that the intention to engage in SMDD is highly likely to turn into actual action, whereas having self-efficacy beliefs and perceived ease of behavior increases the probability of one's engagement in SMDD. If a driver perceives that they can successfully manage both social media use and driving, they are more likely to engage in SMDD. High self-efficacy and perceived ease may lead to overconfidence in multitasking abilities, even though human cognitive resources are limited, particularly in complex and high-risk environments, such as driving (Strayer & Drews, 2007).

In line with the TPB (Ajzen, 2012), favorable attitudes toward SMDD, as well as its perceived approval and acceptance, also increased the drivers' intention to engage in SMDD. As social media becomes an inseparable part of daily life, it is reasonable to expect an increase in the value attributed to it and its growing acceptance across various domains. Moreover, given that individuals frequently engage with social media applications in their daily routines, it is logical to assume that they may develop confidence in their ability to perform this behavior successfully in different contexts. Consequently, drivers' intention to use social media will extend to complex and high-risk environments, such as traffic.

4.6. The Reactive Process of SMDD

The PWM model has been proven to be a valuable tool for explaining SMDD. The model explained 59.7% of the variance in SMDD. Across all constructs, the intention was again revealed as the most important factor for SMDD. According to PWM, the reasoned pathway operates when individuals deliberately plan and decide to engage in a behavior. It is indicated that SMDD is mainly intentional, meaning that individuals engage in it with conscious awareness rather than being impulsively drawn into it by situational or social influences. The reactive pathway in PWM explains behaviors that occur spontaneously, without premeditation, often in response to social or contextual cues (Gibbons & Gerrard, 1995). Since intention was

the strongest determinant of SMDD, this suggests that reactive influences (e.g., peer influence, spontaneous urges) play a less dominant role in this context.

The findings suggest that while willingness has a significant but relatively low direct effect on SMDD, its strong influence on intention indicates that situational cues and spontaneous inclinations play a crucial role in shaping rational engagement in SMDD. This aligns with the dual-process nature of the Prototype-Willingness Model (PWM) (Gibbons et al., 1998), which posits that behaviors can emerge from both reasoned and reactive pathways. In this case, willingness may act as a catalyst for forming an intention. The reasoned process behind SMDD is not entirely separated from reactive influences. Instead, situational cues such as phone notifications, spare time in traffic, or observing others using social media while driving may trigger a reactive willingness to engage in the behavior.

These results can contradict Walsh and White's (2006) proposal that mobile phone use is generally more spontaneous than planned behavior. However, the evolution of mobile phone technology and its increasing integration into daily life since 2007 may explain this contradiction. Earlier, mobile phone use could primarily revolve around reactive behaviors, such as answering incoming calls or replying to messages. In contrast, the expansion of mobile phone functionalities, such as social media browsing, entertainment apps, etc., might have transformed phone use into a more intentional and goal-directed activity, even while driving. These changes suggest that drivers no longer engage with their phones solely in response to external cues but also as a deliberate means of filling free time, reducing boredom, or maintaining social connection.

Similarly, previous studies on risky driving behaviors have emphasized that reactive processes dominate over intentional processes (Demir et al., 2020; Elliott et al., 2017), which contradicts the current findings. This discrepancy may stem from the fact that SMDD is a secondary task in driving, whereas behaviors such as speeding or (not) following traffic rules are primary driving tasks. External conditions can often trigger primary tasks; for example, a driver may speed in response to traffic congestion or time pressure. In contrast, secondary tasks like SMDD are more likely

to be performed when a driver has a prior intention or underlying cognitive predispositions that shape this intention.

Considering intention and willingness to engage in SMDD, all constructs significantly predicted both intention and willingness, except that prototype favorability was marginally significant in predicting willingness. Attitude emerged as the strongest predictor of willingness, while also significantly predicting intention, which supports previous findings (e.g., Wang & Xu, 2021; Elliott et al., 2017). It suggests that drivers' positive evaluations of SMDD play a dual role in reactive and reasoned processes. This suggests that individuals with favorable attitudes toward SMDD are not only more likely to engage in it impulsively when the opportunity arises but also more likely to form an intention to do so before driving.

Subjective norms were found to predict both intention and willingness, indicating that the perceived approval and acceptance of SMDD by significant others can influence drivers in both deliberate and reactive ways. When individuals believe that peers, family, or society in general approve or engage in SMDD, they may be more likely to form a conscious intention to engage in it as part of their routine behavior. At the same time, these norms can also increase the willingness of drivers to engage in SMDD impulsively when the situation allows. Additionally, some drivers may be particularly susceptible to the influence of subjective norms. Subjective norms may refer to societal expectations of maintaining a constant connection (Bayer et al., 2016). Thus, drivers may be more susceptible to peer pressure and a stronger desire for social connection. This desire to stay connected may lead drivers to intentionally and reactively engage in SMDD.

The prototype similarity and favorability significantly predicted the intention, whereas prototype favorability was the strongest predictor of intention in the model. It shows that when individuals favorably perceive a prototype associated with SMDD (e.g., "always online" people), they are more likely to align their self-concept with that prototype and develop a stronger intention to engage in the behavior. The relationship between similarity and intention also suggests that people are more likely to engage in SMDD if they perceive themselves as similar to those who

typically do so. Identifying oneself with a typical person who engages in SMDD may lead people to perceive this behavior as a part of their identity (Gerrard et al., 2008). Although the original PWM did not suggest the link between intention and perceived prototype images (Gerrard et al., 2008), recent studies have provided empirical support for this link (e.g., Demir et al., 2020; Van Lettow et al., 2016; Hyde & White, 2010). Gibbons et al. (2020) suggested that this relationship is not inconsistent with the model. One possible explanation is that risk-related prototypes do not always function as deterrents; instead, they may serve as desired images, particularly in contexts where risk-taking behaviors carry social value or symbolic meaning. For example, SMDD can convey a meaning of staying connected with social groups, even while driving, as a means of aligning with a particular social identity. This type of meaning could shape drivers' intentions (Gibbons et al., 2020).

In line with the theory of PWM (Gerrard et al., 2008), prototype similarity was found to predict willingness to engage in SMDD, whereas prototype favorability was marginally significant. This finding suggests that willingness to engage in SMDD is influenced by self-relevant social comparisons. The fact that prototype favorability was the strongest predictor of intention while it was a nearly insignificant predictor of willingness contradicts the previous findings (e.g., Demir et al., 2020; Elliott et al., 2007; Harbeck & Glendon, 2018; Gerrard et al., 2008, etc.). Prototype favorability is more about evaluating the typical person, whereas similarity is about comparing oneself to the typical person. Accordingly, drivers' self-identity may influence reactive engagement in SMDD under specific conditions. For example, their immediate decision to respond to or ignore social media notifications could be influenced by whether they see themselves as a risky driver engaging in distracted driving or as a safe driver who prioritizes attention on the road. On the other hand, the perceived favorability of individuals who engage in SMDD could lead drivers to adopt SMDD as a routine behavior in order to align with a desired social image.

4.7. The Integration of Reasoned, Reactive and Habitual Process of SMDD

The previous analyses have shown that the TPB and PWM frameworks can highly explain SMDD, concluding that it is a combination of reasoned and reactive behavior

to some extent. Additionally, a significant relationship between the habitual strength and SMDD suggests that this behavior can also be a habitual (automatic) behavior to some degree. In order to understand the extent of the intentionality, reactivity, and automaticity of this behavior, the current study further integrated the habitual strength and constructs of TPB and PWM.

The integrated model explained 60% of the variance in SMDD. The highest variance in SMDD was explained by intention, willingness, and perceived behavioral control, respectively. The direct effect of habitual strength on SMDD was diminished when other constructs of the TPB and PWM were taken into account. This insignificant direct relationship between habitual strength and SMDD suggests that the goals associated with driving may compete with the impulses to perform habitual behaviors, allowing intentional process to take control over SMDD behavior. This result aligns with the third principle of habit formation proposed by Wood and Neal (2007), which states that when habits and goals are simultaneously activated, they may compete. Either automatic or intentional processes ultimately dominate the behavior. The findings also may suggest that drivers are so calculating in their responses and vigilant in monitoring the task and the environmental factors that they prevent themselves from acting mindlessly to cues.

Despite of lack of direct effect, the integrated model showed that there are several indirect effects of habitual strength on SMDD were thorough 1) willingness, 2) prototype similarity and willingness, 3) attitude and willingness, 4) prototype similarity, willingness, and intention, 5) attitude, willingness, and intention and 6) subjective norms, intention and willingness. These findings align with Ajzen's (2012) proposition that variables beyond attitudes, subjective norms, and perceived behavioral control should be conceptualized as antecedents of these core constructs, rather than as direct predictors of intention or behavior. Individuals with strong habitual tendencies toward social media use tend to have highly positive attitudes toward SMDD, perceive SMDD as socially approved and acceptable, view others who engage in SMDD as similar to themselves, and report a high willingness and intention to engage in SMDD. Further in this section, the indirect paths from habitual

strength to SMDD are discussed by debunking each relationship between the given constructs and the habitual strength.

The habitual strength of social media use was found to increase the behavioral willingness for SMDD. Drivers with strong social media habits may either inhibit or react to urges triggered by contextual cues, such as notification sounds, while considering the task. It can be assumed that the goals of driving (e.g., safe mobility) may compete with habitual impulses to pick up the phone when these impulses become active. This aligns with the idea that habitual impulses can be overridden by deliberative cognitive control when situational factors demand it (Gardner et al., 2016). The lack of a significant relationship between habitual strength and intention further supports this argument, indicating that habitual social media use does not necessarily predict a deliberate plan to engage in SMDD but rather an increased likelihood of reacting impulsively when conditions are seen as appropriate.

Moreover, the strongest relationship was observed between habitual strength and prototype similarity. According to Verplanken and Orbell (2003), habits serve as a way to organize one's life and, therefore, reflect one's sense of identity. This function of habits aligns with the concept of a prototypical image, representing the characteristics of a typical person engaging in the given behavior (Gibbons & Gerrard, 1995). This finding suggests that individuals with strong habitual tendencies toward social media use may perceive their self-identity as being closely tied to frequent and pervasive social media engagement. Consequently, they may perceive others who engage in this behavior, even in risky situations like driving, as similar to themselves. This perception of similarity can lead to an increased willingness to engage in SMDD.

The habitual strength was positively related to the attitudes toward SMDD. The strong habitual tendencies may lead people to perceive SMDD as favorable. The rewarding function of habits can explain this finding. Habits are formed strongly when cue-learned associations are linked to reward mechanisms in cognition (Gardner, 2015; Mazar & Wood, 2018). Neural reactions to rewarding behaviors construct the tie between the context and behavior (Wood and R nger, 2016). To

clarify, rewarding experiences in a stable context tend to become habits. According to Klimmt et al. (2018), heavy smartphone use enhances individuals' sense of empowerment, resulting from positive experiences obtained by feelings of connectedness. Since this empowerment has a function of reducing negative feelings, such as loneliness, it is anticipated that people will act to continuously experience this empowerment by incorporating this behavior into routine and novel situations. Furthermore, the reward from social media use could also be related to enjoyment, as suggested by Turel and Serenko (2017), who state that enjoyment is one of the key factors behind social media habits and addictions. The positive relationship between the habitual strength of social media use and attitudes toward SMDD could be the result of the rewarding feelings obtained from social media use. As these memories of reward become stronger with habit formation, individuals perceive SMDD in a more positive light. This favorable attitude toward SMDD resulted in a higher willingness to engage in it, but not in intention. It can be suggested that favorable attitudes formed through habits can influence drivers' spontaneous and reactive decisions to engage in SMDD. Furthermore, this effect was demonstrated by the increase in the frequency of SMDD and intention. Interestingly, although attitude was significantly related to habitual strength and intention, it did not mediate their relationship. It could be due to differences in the strength of particular relationships. Although there is a strong relationship between attitude and habitual strength, the weak relationship between attitude and intention may not accurately reflect the effect of changes in habitual strength. On the other hand, the willingness was found to be both directly translated into SMDD behavior and intention to engage in it.

Another indirect effect of habitual strength on willingness, intention, and SMDD was found through subjective norms. According to Bayer et al. (2016), the habitual strength to stay online and connected reflects implicit societal expectations placed on an individual. Societal expectations for staying connected may lead individuals to develop strong habitual tendencies toward checking and interacting with their mobile phones. Thus, the positive relationship between habitual strength and subjective norms regarding SMDD may be linked to individuals' implicit perceptions of societal expectations. Habitual social media users may perceive that their social

environment expects them to stay connected. In that case, they are also more likely to believe that they approve of and engage in this behavior, even while driving.

Finally, intention did not significantly relate to habitual strength. The habitual strength of social media use does not translate into an intention to engage in SMDD. However, the indirect effect of SMDD on intention suggests that habitual strength shapes the underlying beliefs and perceptions that indirectly influence intention. This suggests that habitual behaviors do not override intentional control but instead shape the motivational and perceptual factors that lead to deliberate behavioral processes.

4.8. Critical Remarks and Suggestions for Future Studies

One of the issues of this study is its reliance on self-reported data to assess SMDD engagement, habitual strength, and the psychological constructs underlying decision-making processes. Self-reports are inherently susceptible to biases, including social desirability bias, including impression management, and self-deception (Yılmaz et al., 2022). This may lead participants to underreport their engagement in SMDD due to its socially undesirable nature. Although efforts were made to minimize these biases, such as ensuring anonymity and emphasizing the importance of honest responses, future research could benefit from using objective measures, such as in-vehicle monitoring systems or mobile applications that observe actual SMDD.

Although the current study provides valuable insights into the socio-cognitive and habitual determinants of SMDD, it does not directly measure participants' actual driving behaviors in real-world contexts. The reliance on self-reported intentions and willingness to engage in SMDD does not capture situational factors that may influence actual behavior, such as road conditions, traffic density, or momentary cognitive workload. Future research could incorporate naturalistic driving studies, eye-tracking methodologies, or smartphone-based tracking applications to objectively assess real-time engagement in SMDD.

Due to the cross-sectional nature of the study, the extent to which habits interact with deliberative and reactive processes over time remains unclear. Future research should

employ experimental or longitudinal designs to examine the dynamic interactions between these decision-making pathways and determine how they influence SMDD in varying driving conditions.

While this study primarily focused on habitual and socio-cognitive determinants of SMDD, future research should explore the situational and contextual factors that may trigger engagement in this behavior. Specifically, real-world observational studies and driving simulation experiments could be employed to examine how environmental factors, such as traffic congestion, long commutes, and extended waits at traffic lights, influence drivers' tendency to use social media while driving. Additionally, the presence of passengers, the level of urgency associated with social media notifications, and the levels of boredom and stress should be investigated as potential triggers. Identifying the specific contextual cues that increase the likelihood of SMDD could help in the development of targeted interventions aimed at minimizing such situational risks.

Given the significant role of habitual strength in shaping SMDD behavior, future research should focus on designing and evaluating interventions aimed at disrupting habits. Potential strategies could include habit-reversal training programs that encourage drivers to establish competing habits that reinforce road safety. Additionally, digital interventions, such as smartphone applications that temporarily restrict social media access while driving or provide real-time feedback on distracted driving behavior, could be explored for their efficacy in breaking the habit of engaging in SMDD. Experimental research should compare different intervention techniques to determine their effectiveness in reducing habitual tendencies and promoting sustained behavior change.

While current research has focused on socio-cognitive factors, the influence of emotional states on engagement in this behavior remains an underexplored area. Future studies should investigate the extent to which transient emotional states, such as stress, boredom, loneliness, FOMO, or frustration, serve as motivators for SMDD. Self-report surveys and experience sampling methods could be utilized to capture emotional triggers that lead drivers to use social media while driving. Additionally,

experimental research could investigate whether interventions aimed at promoting emotion-regulation strategies, such as mindfulness or cognitive reappraisal techniques, can mitigate the impulse to engage in SMDD under emotionally charged conditions.

As shown in the study, social norms and image perceptions have been shown to play a crucial role in shaping engagement in distracted driving behaviors. Future research should investigate methods to mitigate the effectiveness of social influence and reduce SMDD engagement. A potential solution is the use of peer-driven interventions, where individuals who have successfully refrained from SMDD serve as role models or advocates in their social networks. Additionally, public service announcements and digital campaigns that emphasize the social unacceptability of SMDD could be tested for their impact on reducing willingness and intention to engage in this behavior. Further studies should investigate whether social accountability mechanisms, such as passengers reminding drivers to stay off their phones, can serve as effective deterrents against SMDD in real-world driving scenarios.

4.9. Practical Implications

The findings have several implications for road safety policies and intervention strategies to reduce SMDD. Given that intention emerged as the strongest predictor of SMDD, public awareness campaigns should focus on reshaping intention or its predecessors. For example, campaigns targeting attitudes toward SMDD should emphasize its risks and social unacceptability. Highlighting the cognitive limitations of multitasking while driving may also help counteract overconfidence in drivers' perceived ability to manage social media use and driving simultaneously. Additionally, interventions should address subjective norms by promoting social accountability mechanisms, such as encouraging passengers to discourage drivers from engaging in SMDD.

Considering the role of habitual strength in SMDD, even though habits are not directly translated into behavior, they still have the potential to influence behavior

through situational assessment of the driver. Thus, technological solutions to enhance drivers' situational awareness could help protect against habitual urges triggered by cues that lead to risky behavior. In addition, technological solutions, such as smartphone applications that block social media access while driving, could be effective interventions by completely inhibiting the most prominent contextual cue triggering habitual mobile phone use, e.g., notification sounds.

From a policy perspective, stricter enforcement of distracted driving laws and advancements in monitoring technology could inhibit drivers' readiness to engage in SMDD and other types of mobile phone use while driving. Increased penalties for SMDD, combined with publicized enforcement efforts, may deter drivers from engaging in this risky behavior. Mandatory technological interventions, such as integrating phone-disabling features in vehicles, particularly for commercial and high-risk drivers, may also promote distraction-free driving.

Reducing SMDD requires a multi-faceted approach that integrates behavioral science, technological advancements, and legislative enforcement. A coordinated effort among policymakers, researchers, the automotive industry, and technology developers will be necessary to create an environment where distracted driving is significantly minimized, thereby contributing to overall road safety.

CHAPTER 5

CONCLUSION

This study provides a novel and integrated perspective on social media distracted driving (SMDD) by examining rational, reactive, and automatic processes. It demonstrates that drivers' decisions to use social media while driving are shaped not only by reasoned process but also by situational triggers and deeply ingrained habits. This comprehensive framework fills a crucial gap in the literature: complex behaviors, such as driver distraction, can be better explained by integrating different cognitive models, rather than focusing on a single model. By identifying the pathways to SMDD, the current study provides critical insights into the underlying mechanisms that shape drivers' decisions to engage in such distracted behavior.

The results emphasize the importance of intention on SMDD. Drivers' preparedness to engage in SMDD can be disrupted by changing their intention, making them more prone to safe driving. However, intention is not the only key factor in this problem. The study also highlighted that drivers sometimes engage with social media based on situational conditions. Internal conditions (e.g., boredom) or external conditions (e.g., very light traffic) can prompt drivers to use social media even when they had no earlier plan to do so. Drivers' immediate perceptions of their environment can lead them to engage in this risky behavior.

A key highlight of this research is that social media use while driving does not develop as an entirely automatic response. Instead, habitual tendencies, such as the urge to pick up one's phone and check social media or incoming notifications, first lead drivers to evaluate their situational context. Only after this appraisal, drivers decide whether to perform the behavior. Therefore, programs designed to improve

drivers' ability to recognize and respond to immediate risks will directly challenge these habitual urges.

Overall, this study advanced the understanding of mobile phone-related driver distraction. As a distinct form of mobile phone use while driving, SMDD can be explained by using a multi-framework approach. The integrated model provided clear intervention pathways to address and mitigate this multifaceted risky behavior.



REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology and Health*, 26(9), 1113–1127. <https://doi.org/10.1080/08870446.2011.613995>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood-Cliffs, NJ: Prentice-Hall.
- And, J.W., Gibbs, B.L. and Kahle, L.R. (1983). Seat Belt Attitudes, Habits, and Behaviors: An Adaptive Amendment to the Fishbein Model. *Journal of Applied Social Psychology*, 13, 406–421. <https://doi.org/10.1111/j.1559-1816.1983.tb01748.x>.
- Anderson, I. A., & Wood, W. (2021). Habits and the electronic herd: The psychology behind social media's successes and failures. *Consumer Psychology Review*, 4(1), 83–99. <https://doi.org/10.1002/arcp.1063>
- Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287–293. <https://doi.org/10.1016/j.addbeh.2016.03.006>
- Armitage, C.J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40, 471–499. <https://doi.org/10.1348/014466601164939>

- Bargh, J. A. (1992). The ecology of automaticity: toward establishing the conditions needed to produce automatic processing effects. *The American Journal of Psychology*, 105(2), 181–199. <https://doi.org/10.2307/1423027>
- Başar Demir. (2017). *The Social psychological predictors of pedestrian behaviors*. May, 138. <http://library.metu.edu.tr/search~S9?/Xpedestrian+&searchscope=9&SORT=DZ/Xpedestrian+&searchscope=9&SORT=DZ&extended=0&SUBKEY=pedestrian+/1%2C3%2C3%2CB/frameset&FF=Xpedestrian+&searchscope=9&SORT=DZ&1%2C1%2C>
- Bayer, J. B., & Campbell, S. W. (2012). Texting while driving on automatic: Considering the frequency-independent side of habit. *Computers in Human Behavior*, 28(6), 2083–2090. <https://doi.org/10.1016/j.chb.2012.06.012>
- Bazargan-Hejazi, S., Teruya, S., Pan, D., Lin, J., Gordon, D., Krochalk, P. C., & Bazargan, M. (2017). The theory of planned behavior (TPB) and texting while driving behavior in college students. *Traffic Injury Prevention*, 18(1), 56–62. <https://doi.org/10.1080/15389588.2016.1172703>
- Beck, K. H., & Watters, S. (2016). Characteristics of college students who text while driving: Do their perceptions of a significant other influence their decisions? *Transportation Research Part F: Traffic Psychology and Behaviour*, 37, 119–128. <https://doi.org/10.1016/j.trf.2015.12.017>
- Bener, A., Lajunen, T. I. M. O., Özkan, T., & Haigney, D. (2006). The effect of mobile phone use on driving style and driving skills. *International Journal of Crashworthiness*, 11(5), 459-465. <https://doi.org/10.1533/ijcr.2005.0116>
- Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *Cyberpsychology & behavior : the impact of the Internet, multimedia and virtual reality on behavior and society*, 8(1), 39–51. <https://doi.org/10.1089/cpb.2005.8.39>
- Biçaksiz, P., & Özkan, T. (2016). Impulsivity and driver behaviors, offences and accident involvement: A systematic review. *Transportation Research Part F: Traffic Psychology and Behaviour*, 38, 194–223. <https://doi.org/10.1016/j.trf.2015.06.001>

- Blakemore, S.-J., & Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural processing? *Annual Review of Psychology*, 65, 187–207. <https://doi.org/10.1146/annurev-psych-010213-115202>
- Brandtzæg, P. B., & Heim, J. (2009). *Why people use social networking sites*. In Online Communities and Social Computing: Third International Conference, OCSC 2009, Held as Part of HCI International 2009, San Diego, CA, USA, July 19-24, 2009. Proceedings 3 (pp. 143-152). Springer Berlin Heidelberg.
- Brijs, K., Daniels, S., Brijs, T., & Wets, G. (2011). An experimental approach towards the evaluation of a seat belt campaign with an inside view on the psychology behind seat belt use. *Transportation Research Part F: Traffic Psychology and Behaviour*, 14(6), 600–613. <https://doi.org/10.1016/j.trf.2011.07.003>
- Brown, P. M., George, A. M., & Rickwood, D. J. (2021). Rash impulsivity, reward seeking and fear of missing out as predictors of texting while driving: Indirect effects via mobile phone involvement. *Personality and Individual Differences*, 171, 110492. <https://doi.org/10.1016/j.paid.2020.110492>
- Brusque, C., & Alauzet, A. (2008). Analysis of the individual factors affecting mobile phone use while driving in France: Socio-demographic characteristics, car and phone use in professional and private contexts. *Accident Analysis & Prevention*, 40(1), 35-44. <https://doi.org/10.1016/j.aap.2007.04.004>
- Caird, J. K., Johnston, K. A., Willness, C. R., Asbridge, M., & Steel, P. (2014). A meta-analysis of the effects of texting on driving. *Accident Analysis and Prevention*, 71, 311–318. <https://doi.org/10.1016/j.aap.2014.06.005>
- Caird, J. K., Willness, C. R., Steel, P., & Scialfa, C. (2008). A meta-analysis of the effects of cell phones on driver performance. *Accident Analysis and Prevention*, 40(4), 1282–1293. <https://doi.org/10.1016/j.aap.2008.01.009>
- Chee, P., Irwin, J., Bennett, J. M., & Carrigan, A. J. (2021). The mere presence of a mobile phone: Does it influence driving performance? *Accident Analysis and Prevention*, 159. <https://doi.org/10.1016/j.aap.2021.106226>

- Choudhary, P., & Velaga, N. R. (2017). Modelling driver distraction effects due to mobile phone use on reaction time. *Transportation Research Part C: Emerging Technologies*, 77, 351–365. <https://doi.org/10.1016/j.trc.2017.02.007>
- Chung, Y. S. (2015). Seemingly irrational driving behavior model: The effect of habit strength and anticipated affective reactions. *Accident Analysis and Prevention*, 82, 79–89. <https://doi.org/10.1016/j.aap.2015.05.003>
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464. <https://doi.org/10.1111/j.1559-1816.1998.tb01685.x>
- Cook, S., Boak, A., Hamilton, H. A., Mann, R. E., Manson, H. E., & Wickens, C. M. (2018). The prevalence and correlates of texting while driving among a population-based sample of Ontario students. *Traffic Injury Prevention*, 19(7), 722–727. <https://doi.org/10.1080/15389588.2018.1491038>
- D'Amico, F., Calvi, A., Ferrante, C., & Bianchini Ciampoli, L. (2020). Assessment of Driver Distraction Caused by Social Networking Activities Using the Smartphone: A Driving Simulator Study. *Advances in Intelligent Systems and Computing*, 1212, 24–31. https://doi.org/10.1007/978-3-030-50943-9_4
- Dawe, S., Gullo, M. J., & Loxton, N. J. (2004). Reward drive and rash impulsiveness as dimensions of impulsivity: Implications for substance misuse. *Addictive behaviors*, 29(7), 1389–1405. <https://doi.org/10.1016/j.addbeh.2004.06.004>
- de Bruijn, G. J., Kremers, S. P. J., Singh, A., van den Putte, B., & van Mechelen, W. (2009). Adult Active Transportation. Adding Habit Strength to the Theory of Planned Behavior. *American Journal of Preventive Medicine*, 36(3), 189–194. <https://doi.org/10.1016/j.amepre.2008.10.019>
- Demir, B., Du, J., Hansma, B. J., Chen, H. Y. W., Gu, H., & Donmez, B. (2023). Cell phone-related driver distraction: Habits predict behavior over and above the theory of planned behavior variables. *Accident Analysis and Prevention*, 192. <https://doi.org/10.1016/j.aap.2023.107200>

- Demir, B., Özkan, T., & Demir, S. (2019). Pedestrian violations: Reasoned or social reactive? Comparing theory of planned behavior and prototype willingness model. *Transportation Research Part F: Traffic Psychology and Behaviour*, 60, 560–572. <https://doi.org/10.1016/j.trf.2018.11.012>
- Dillow, M. R., Walsh, A. G., Spellman, F., & Quirk, M. (2015). Testing the Risk Perception Attitude Framework in the Context of Texting While Driving. *Communication Research Reports*, 32(2), 132–142. <https://doi.org/10.1080/08824096.2015.1016144>
- Dingus, T. A., Owens, J. M., Guo, F., Fang, Y., Perez, M., McClafferty, J., Buchanan-King, M., & Fitch, G. M. (2019). The prevalence of and crash risk associated with primarily cognitive secondary tasks. *Safety Science*, 119, 98–105. <https://doi.org/10.1016/j.ssci.2019.01.005>
- Ehrenberg, A., Juckes, S., White, K. M., & Walsh, S. P. (2008). Personality and self-esteem as predictors of young people's technology use. *Cyberpsychology and Behavior*, 11(6), 739–741. <https://doi.org/10.1089/cpb.2008.0030>
- Elliott, M. A., McCartan, R., Brewster, S. E., Coyle, D., Emerson, L., & Gibson, K. (2017). An application of the prototype willingness model to drivers' speeding behaviour. *European Journal of Social Psychology*, 47(6), 735–747. <https://doi.org/10.1002/ejsp.2268>
- European Commission (2022). *Road safety thematic report – Driver distraction*. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport.
- European Commission. (2019). *Europe on the move. New safety features in your car*. <https://ec.europa.eu/docsroom/documents/34588>
- Evans, J. S. B., & Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on psychological science*, 8(3), 223–241. <https://doi.org/10.1177/1745691612460685>

- Fishbein, M., & Ajzen, I. (2010). *Predicting and Changing Behavior: The Reasoned Action Approach* (1st ed.). Psychology Press.
<https://doi.org/10.4324/9780203838020>
- Gardner, B. (2015). A review and analysis of the use of 'habit' in understanding, predicting and influencing health-related behaviour. *Health Psychology Review*, 9(3), 277–295. <https://doi.org/10.1080/17437199.2013.876238>
- Gardner, B., Abraham, C., Lally, P., & de Bruijn, G. J. (2012). Towards parsimony in habit measurement: Testing the convergent and predictive validity of an automaticity subscale of the Self-Report Habit Index. *International Journal of Behavioral Nutrition and Physical Activity*, 9. <https://doi.org/10.1186/1479-5868-9-102>
- Gardner, B., Phillips, L. A., & Judah, G. (2016). Habitual instigation and habitual execution: Definition, measurement, and effects on behaviour frequency. *British Journal of Health Psychology*, 21(3), 613–630. <https://doi.org/10.1111/bjhp.12189>
- Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review*, 28(1), 29–61. <https://doi.org/10.1016/j.dr.2007.10.001>
- Gibbons, F. X., & Gerrard, M. (1995). Predicting young adults' health risk behavior. *Journal of personality and social psychology*, 69(3), 505. <https://doi.org/10.1037//0022-3514.69.3.505>
- Gibbons, F. X., Gerrard, M., Blanton, H., & Russell, D. W. (1998). Reasoned action and social reaction: Willingness and intention as independent predictors of health risk. *Journal of Personality and Social Psychology*, 74(5), 1164–1180. <https://doi.org/10.1037/0022-3514.74.5.1164>
- Gibbons, F. X., Gerrard, M., Vande Lune, L. S., Wills, T. A., Brody, G., & Conger, R. D. (2004). Context and Cognitions: Environmental Risk, Social Influence, and Adolescent Substance Use. *Personality and Social Psychology Bulletin*, 30, 1048–1061. <https://doi.org/10.1177/0146167204264788>

Gibbons, F. X., Stock, M. L., & Gerrard, M. (2020). *The Prototype-Willingness Model*. In *The Wiley Encyclopedia of Health Psychology* (pp. 517–527). Wiley. <https://doi.org/10.1002/9781119057840.ch102>

Gravetter, F. J., & Wallnau, L. B. (2009). *Statistics for the behavioral sciences 8th edition*. Belmont, CA: Wadsworth.

Hall, P. A., & Fong, G. T. (2007). Temporal self-regulation theory: A model for individual health behavior. *Health Psychology Review*, 1(1), 6-52. <https://doi.org/10.1080/17437190701492437>

Hallett, C., Lambert, A., & Regan, M. A. (2012). Text messaging amongst New Zealand drivers: Prevalence and risk perception. *Transportation Research Part F: Traffic Psychology and Behaviour*, 15(3), 261–271. <https://doi.org/10.1016/j.trf.2011.12.002>

Hashash, M., Abou Zeid, M., & Moacdieh, N. M. (2019). Social media browsing while driving: Effects on driver performance and attention allocation. *Transportation Research Part F: Traffic Psychology and Behaviour*, 63, 67–82. <https://doi.org/10.1016/j.trf.2019.03.021>

Hansma, B. J., Marulanda, S., Chen, H. Y. W., & Donmez, B. (2020). Role of habits in cell phone-related driver distractions. *Transportation Research Record*, 2674(12), 254–262. <https://doi.org/10.1177/0361198120953157>

Harbeck, E. L., & Glendon, A. I. (2018). Driver prototypes and behavioral willingness: Young driver risk perception and reported engagement in risky driving. *Journal of Safety Research*, 66, 195–204. <https://doi.org/10.1016/j.jsr.2018.07.009>

Hukkelberg, S. S., & Dykstra, J. L. (2009). Using the Prototype/Willingness model to predict smoking behaviour among Norwegian adolescents. *Addictive behaviors*, 34(3), 270-276. <https://doi.org/10.1016/j.addbeh.2008.10.024>

Hyde, M. K., & White, K. M. (2010). Are organ donation communication decisions reasoned or reactive? A test of the utility of an augmented theory of planned behaviour with the prototype/willingness model. *British Journal of Health Psychology*, 15(2), 435-452. <https://doi.org/10.1348/135910709x468232>

Ige, J., Banstola, A., & Pilkington, P. (n.d.). Mobile phone use while driving: Underestimation of a global threat. *Journal of Transport and Health*, 3(1), 4–8. <https://doi.org/10.1016/j.jth.2015.11.003>

International Transport Forum (ITF) (2024). *Austria: Road Safety Country Profile 2023*. OECD Publishing. Retrieved from <https://www.itf-oecd.org/road-safety-annual-report-2023>

ohn, O. P., & Srivastava, S. (1999). The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality: Theory and Research* (2nd ed., pp. 102–138). Guilford Press.

Kaneko, M., & Kagawa, S. (2021). Driving propensity and vehicle lifetime mileage: A quantile regression approach. *Journal of Environmental Management*, 278, 111499. <https://doi.org/10.1016/j.jenvman.2020.111499>

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59-68. <https://doi.org/10.1016/j.bushor.2009.09.003>

Kemp, S. (2025). Digital 2024: Global Overview Report — DataReportal – Global Digital Insights. DataReportal – Global Digital Insights. Retrieved January 7, 2025, from <https://datareportal.com/reports/digital-2024-global-overview-report>

Kircaburun, K., Alhabash, S., Tosuntaş, Ş. B., & Griffiths, M. D. (2020). Uses and Gratifications of Problematic Social Media Use Among University Students: a Simultaneous Examination of the Big Five of Personality Traits, Social Media Platforms, and Social Media Use Motives. *International Journal of Mental Health and Addiction*, 18(3), 525–547. <https://doi.org/10.1007/s11469-018-9940-6>

- Klimmt, C., Hefner, D., Reinecke, L., Rieger, D., & Vorderer, P. (2017). The permanently online and permanently connected mind: Mapping the cognitive structures behind mobile internet use. In *Permanently Online, Permanently Connected* (pp. 18-28). Routledge.
- Lally, P., Van Jaarsveld, C. H., Potts, H. W., & Wardle, J. (2010). How are habits formed: Modelling habit formation in the real world. *European journal of social psychology*, 40(6), 998-1009. <https://doi.org/10.1002/ejsp.674>
- LaRose, R., Lin, C. A., & Eastin, M. S. (2003). Unregulated Internet usage: Addiction, habit, or deficient self-regulation? In *Media Psychology* (Vol. 5, Issue 3, pp. 225-253). Lawrence Erlbaum Associates Inc. https://doi.org/10.1207/S1532785XMEP0503_01
- Lheureux, F., Auzoult, L., Charlois, C., Hardy-Massard, S., & Minary, J. P. (2016). Traffic Offences: Planned or Habitual? Using the Theory of Planned Behaviour and habit strength to explain frequency and magnitude of speeding and driving under the influence of alcohol. *British Journal of Psychology*, 107(1), 52-71. <https://doi.org/10.1111/bjop.12122>
- Li, L., Shults, R. A., Andridge, R. R., Yellman, M. A., Xiang, H., & Zhu, M. (2018). Texting/Emailing While Driving Among High School Students in 35 States, United States, 2015. *Journal of Adolescent Health*, 63(6), 701-708. <https://doi.org/10.1016/j.jadohealth.2018.06.010>
- Liang, Y., Horrey, W. J., & Hoffman, J. D. (2015). Reading text while driving: Understanding drivers' strategic and tactical adaptation to distraction. *Human Factors*, 57(2), 347-359. <https://doi.org/10.1177/0018720814542974>
- Lipovac, K., Đerić, M., Tešić, M., Andrić, Z., & Marić, B. (2017). Mobile phone use while driving-literary review. *Transportation Research Part F: Traffic Psychology and Behaviour*, 47, 132-142. <https://doi.org/10.1016/j.trf.2017.04.015>

- Lyngsie, K., Pedersen, M. S., Stage, J., & Vestergaard, K. F. (2013). Don't text while driving: The effect of smartphone text messaging on road safety during simulated driving. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 8119, 546–563. https://doi.org/10.1007/978-3-642-40477-1_35
- Mazar, A., & Wood, W. (2018). Defining habit in psychology. In *The psychology of habit: Theory, mechanisms, change, and contexts* (pp. 13-29). Cham: Springer International Publishing.
- McEachan, R. R. C., Conner, M., Taylor, N. J., & Lawton, R. J. (2011). Prospective prediction of health-related behaviours with the theory of planned behaviour: a meta-analysis. *Health Psychology Review*, 5, 97-144. <https://doi.org/10.1080/17437199.2010.521684>
- McNabb, J., & Gray, R. (2016). Staying connected on the road: A comparison of different types of smart phone use in a driving simulator. *PLoS ONE*, 11(2). <https://doi.org/10.1371/journal.pone.0148555>
- Meier, A., & Reinecke, L. (2021). Computer-mediated communication, social media, and mental health: A conceptual and empirical meta-review. *Communication Research*, 48(8), 1182-1209. <https://doi.org/10.1177/0093650220958224>
- Meier, A., Beyens, I., Siebers, T., Pouwels, J. L., & Valkenburg, P. M. (2023). Habitual social media and smartphone use are linked to task delay for some, but not all, adolescents. *Journal of Computer-Mediated Communication*, 28(3). <https://doi.org/10.1093/jcmc/zmad008>
- Moore, M. M., & Brown, P. M. (2019). The association of self-regulation, habit, and mindfulness with texting while driving. *Accident Analysis and Prevention*, 123, 20–28. <https://doi.org/10.1016/j.aap.2018.10.013>
- Moyano Díaz, E. (2002). Theory of planned behavior and pedestrians' intentions to violate traffic regulations. *Transportation Research Part F: Traffic Psychology and Behaviour*. [https://doi.org/10.1016/S1369-8478\(02\)00015-3](https://doi.org/10.1016/S1369-8478(02)00015-3)

- Neal, D. T., Wood, W., Labrecque, J. S., & Lally, P. (2012). How do habits guide behavior? Perceived and actual triggers of habits in daily life. *Journal of Experimental Social Psychology*, 48(2), 492–498. <https://doi.org/10.1016/j.jesp.2011.10.011>
- Nemme, H. E., & White, K. M. (2010). Texting while driving: Psychosocial influences on young people's texting intentions and behaviour. *Accident Analysis and Prevention*, 42(4), 1257–1265. <https://doi.org/10.1016/j.aap.2010.01.019>
- Ofir Turel & Alexander Serenko (2012) The benefits and dangers of enjoyment with social networking websites, *European Journal of Information Systems*, 21(5), 512-528, DOI: 10.1057/ejis.2012.1
- Ohtomo, S. (2013). Effects of habit on intentional and reactive motivations for unhealthy eating. *Appetite*, 68, 69–75. <https://doi.org/10.1016/j.appet.2013.04.014>
- Ohtomo, S., & Kimura, R. (2022). The effect of habit on preventive behaviors: A two-wave longitudinal study to predict COVID-19 preventive behaviors. *Health Psychology and Behavioral Medicine*, 10(1), 480-497. <https://doi.org/10.1080/21642850.2022.2075876>
- Okati-Aliabad, H., Hashemi Habybabady, R., Sabouri, M., & Mohammadi, M. (2024). Different types of mobile phone use while driving and influencing factors on intention and behavior: Insights from an expanded theory of planned behavior. *PLoS one*, 19(3). <https://doi.org/10.1371/journal.pone.0300158>
- Orbell, S., & Verplanken, B. (2010). The automatic component of habit in health behavior: Habit as cue-contingent automaticity. *Health Psychology*, 29(4), 374–383. <https://doi.org/10.1037/a0019596>
- Oulasvirta, A., Rattenbury, T., Ma, L., & Raita, E. (2012). Habits make smartphone use more pervasive. *Personal and Ubiquitous Computing*, 16(1), 105–114. <https://doi.org/10.1007/s00779-011-0412-2>

- Oviedo-Trespalacios O, King M, Haque M. M, Washington S (2017) Risk factors of mobile phone use while driving in Queensland: Prevalence, attitudes, crash risk perception, and task-management strategies. *PLoS ONE* 12(9). <https://doi.org/10.1371/journal.pone.0183361>
- Panek, E. T., Bayer, J. B., Dal Cin, S., & Campbell, S. W. (2015). Automaticity, mindfulness, and self-control as predictors of dangerous texting behavior. *Mobile Media and Communication*, 3(3), 383–400. <https://doi.org/10.1177/2050157915576046>
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior*, 12, 729–733. <https://doi.org/10.1089/cpb.2009.0003>
- Parr, M. N., Ross, L. A., McManus, B., Bishop, H. J., Wittig, S. M. O., & Stavrinos, D. (2016). Differential impact of personality traits on distracted driving behaviors in teens and older adults. *Accident Analysis and Prevention*, 92, 107–112. <https://doi.org/10.1016/j.aap.2016.03.011>
- Pettitt, M., Burnett, G., & Stevens, A. (n.d.). Defining driver distraction. *Intelligent Transportation Society of America - 12th World Congress on Intelligent Transport Systems 2005*, 5(0), 2856–2867. <https://doi.org/10.1201/9781420007497.ch3>
- Prat, F., Planes, M., Gras, M. E., & Sullman, M. J. M. (2015). An observational study of driving distractions on urban roads in Spain. *Accident Analysis and Prevention*, 74, 8–16. <https://doi.org/10.1016/j.aap.2014.10.003>
- Preece, C., Watson, A., Kaye, S. A., & Fleiter, J. (2018). Understanding the psychological precursors of young drivers' willingness to speed and text while driving. *Accident Analysis and Prevention*, 117, 196–204. <https://doi.org/10.1016/j.aap.2018.04.015>
- Przepiorka, A. M., Błachnio, A. P., & Sullman, M. J. M. (n.d.). Factors influencing intentions to text while driving among Polish drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, 55, 306–313. <https://doi.org/10.1016/j.trf.2018.03.015>

- Quinn, J. M., Pascoe, A. M., Wood, W., & Neal, D. T. (2010). Can't help yourself? Monitor those bad habits. *Personality and Social Psychology Bulletin*, 36, 499–511. doi:10.1177/0146167209360665
- RAC. (2024). *Report on Motoring 2024*. RAC Motoring Services. Retrieved November 11, 2024, from <https://www.rac.co.uk/drive/news/report-on-motoring>
- Regan, M. A., Hallett, C., & Gordon, C. P. (2011). Driver distraction and driver inattention: Definition, relationship and taxonomy. *Accident Analysis and Prevention*, 43(5), 1771–1781. <https://doi.org/10.1016/j.aap.2011.04.008>
- Reinecke, L., & Meier, A. (2021). Media entertainment as guilty pleasure? The appraisal of media use, self-control, and entertainment (AMUSE) model. In P. Vorderer & C. Klimmt (Eds.), *The Oxford handbook of entertainment theory* (pp. 205–230). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190072216.013.12>
- Reyna, V. F., & Brainerd, C. J. (1995). Fuzzy-trace theory: An interim synthesis. *Learning And Individual Differences*, 7(1), 1–75. [https://doi.org/10.1016/1041-6080\(95\)90031-4](https://doi.org/10.1016/1041-6080(95)90031-4)
- Rivis, A., Abraham, C., & Snook, S. (2011). Understanding young and older male drivers' willingness to drive while intoxicated: The predictive utility of constructs specified by the theory of planned behaviour and the prototype willingness model. *British Journal of Health Psychology*, 16(2), 445–456. <https://doi.org/10.1348/135910710X522662>
- Rivis, A., Sheeran, P., & Armitage, C. J. (2006). Augmenting the theory of planned behaviour with the prototype/willingness model: Predictive validity of actor versus abstainer prototypes for adolescents' health-protective and health-risk intentions. *British Journal of Health Psychology*, 11(3), 483–500. <https://doi.org/10.1348/135910705X70327>
- Rothengatter, T. (1997). Psychological aspects of road user behaviour. *Applied Psychology: An International Review: Special Issue-Traffic Psychology*, 46(3). <https://doi.org/10.1080/026999497378331>

- Rozario, M., Lewis, I., & White, K. M. (n.d.). An examination of the factors that influence drivers' willingness to use hand-held mobile phones. *Transportation Research Part F: Traffic Psychology and Behaviour*, 13(6), 365–376. <https://doi.org/10.1016/j.trf.2010.07.002>
- Rudin-Brown, C. M., Young, K. L., Patten, C., Lenné, M. G., & Ceci, R. (2013). Driver distraction in an unusual environment: Effects of text-messaging in tunnels. *Accident Analysis and Prevention*, 50, 122–129. <https://doi.org/10.1016/j.aap.2012.04.002>
- Schnauber-Stockmann, A., & Naab, T. K. (2019). The process of forming a mobile media habit: Results of a longitudinal study in a real-world setting. *Media Psychology*, 22(5), 714-742. <https://doi.org/10.1080/15213269.2018.1513850>
- Schroeder, B. L., & Sims, V. K. (2015). Problematic texting behaviors: Individual differences in personality. *Proceedings of the Human Factors and Ergonomics Society*, (2015, January), 907–911. <https://doi.org/10.1177/1541931215591267>
- Shevlin, B. R. K., & Goodwin, K. A. (2019). Past behavior and the decision to text while driving among young adults. *Transportation Research Part F: Traffic Psychology and Behaviour*, 60, 58–67. <https://doi.org/10.1016/j.trf.2018.09.027>
- Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending and a general theory. *Psychological review*, 84(2), 127. <https://doi.org/10.1037//0033-295x.84.2.127>
- Sidnam-Mauch, E., & Monge, P. (2024). Individual Differences and Technology Afordances Combine to Predict Mobile Social Media Distraction Behaviors and Consequences. *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3613904.3641950>
- Singh, A., Srivastava, A., Pachamuthu, R., & Pawar, D. S. (2024). Impact of texting-induced distraction on driving behavior based on field operation tests. *Transportation Research Record*. <https://doi.org/10.1177/03611981241272091>

- Slepicka, J. (2018). Strain, boredom, and self-control: Extending general strain theory to texting while driving. *Criminology, Criminal Justice, Law and Society*, 19(3), 1–15.
- Smith, E. R., & DeCoster, J. (2000). Dual-process models in social and cognitive psychology: Conceptual integration and links to underlying memory systems. *Personality And Social Psychology Review*, 4(2), 108-131. https://doi.org/10.1207/s15327957pspr0402_01
- Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review*, 8(3), 220-247. https://doi.org/10.1207/s15327957pspr0803_1
- Strayer, D. L., & Drews, F. A. (2007). Cell-phone-induced driver distraction. *Current Directions in Psychological Science*, 16(3), 128-131. <https://doi.org/10.1111/j.1467-8721.2007.00489.x>
- Struckman-Johnson, C., Gaster, S., Struckman-Johnson, D., Johnson, M., & May-Shinagle, G. (2015). Gender differences in psychosocial predictors of texting while driving. *Accident Analysis and Prevention*, 74, 218–228. <https://doi.org/10.1016/j.aap.2014.10.001>
- Thapa, R., Codjoe, J., Ishak, S., & McCarter, K. S. (2015). Post and During Event Effect of Cell Phone Talking and Texting on Driving Performance—A Driving Simulator Study. *Traffic Injury Prevention*, 16(5), 461–467. <https://doi.org/10.1080/15389588.2014.969803>
- Thornton, B., Gibbons, F. X., & Gerrard, M. (2002). Risk perception and prototype perception: Independent processes predicting risk behavior. *Personality and Social Psychology Bulletin*, 28(7), 986-999. <https://doi.org/10.1177/01467202028007011>
- Tian, Y., & Robinson, J. D. (2017). Predictors of Cell Phone Use in Distracted Driving: Extending the Theory of Planned Behavior. *Health Communication*, 32(9), 1066–1075. <https://doi.org/10.1080/10410236.2016.1196639>

- Todd, J., Kothe, E., Mullan, B., & Monds, L. (2016). Reasoned versus reactive prediction of behaviour: a meta-analysis of the prototype willingness model. *Health Psychology Review*, 10(1), 1–24. <https://doi.org/10.1080/17437199.2014.922895>
- Triandis, H. C. (1977). Cross-cultural social and personality psychology. *Personality and Social Psychology Bulletin*, 3(2), 143–158. <https://doi.org/10.1177/014616727700300202>
- Trivedi, N., & Beck, K. H. (2018). Do significant others influence college-aged students texting and driving behaviors? Examination of the mediational influence of proximal and distal social influence on distracted driving. *Transportation Research Part F: Traffic Psychology and Behaviour*, 56, 14–21. <https://doi.org/10.1016/j.trf.2018.04.002>
- Turel, O., & Serenko, A. (2012). The benefits and dangers of enjoyment with social networking websites. *European Journal of Information Systems*, 21(5), 512–528. <https://doi.org/10.1057/ejis.2012.1>
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site?: Facebook use and college students' life satisfaction, trust, and participation. *Journal Of Computer-Mediated Communication*, 14(4), 875–901. <https://doi.org/10.1111/j.1083-6101.2009.01474.x>
- van Lettow, B., de Vries, H., Burdorf, A., & van Empelen, P. (2016). Quantifying the strength of the associations of prototype perceptions with behaviour, behavioural willingness and intentions: A meta-analysis. *Health Psychology Review*, 10(1), 25–43. <https://doi.org/10.1080/17437199.2014.941997>
- Verplanken, B., & Orbell, S. (2003). Reflections on Past Behavior: A Self-Report Index of Habit Strength. *Journal of Applied Social Psychology*, 33(6), 1313–1330. <https://doi.org/10.1111/j.1559-1816.2003.tb01951.x>
- Voorveld, H. A. M., van Noort, G., Muntinga, D. G., & Bronner, F. (2018). Engagement with Social Media and Social Media Advertising: The Differentiating Role of Platform Type. *Journal of Advertising*, 47(1), 38–54. <https://doi.org/10.1080/00913367.2017.1405754>

- Walsh, S. P., & White, K. M. (2006). Ring, ring, why did I make that call? Beliefs underlying Australian university students' mobile phone use. *Youth Studies Australia*, 25(3), 49–57.
- Wang, X. (2016). Excelling in multitasking and enjoying the distraction: Predicting intentions to send or read text messages while driving. *Computers in Human Behavior*, 64, 584–590. <https://doi.org/10.1016/j.chb.2016.07.026>
- Wang, X., & Xu, L. (2021). Factors Influencing Young Drivers' Willingness to Engage in Risky Driving Behavior: Continuous Lane-Changing. *Sustainability*, 13(11), 6459. <https://doi.org/10.3390/su13116459>
- Wilmer, H. H., & Chein, J. M. (2016). Mobile technology habits: patterns of association among device usage, intertemporal preference, impulse control, and reward sensitivity. *Psychonomic Bulletin and Review*, 23(5), 1607–1614. <https://doi.org/10.3758/s13423-016-1011-z>
- Wood, W., & Neal, D. T. (2007). A New Look at Habits and the Habit-Goal Interface. *Psychological Review*, 114(4), 843–863. <https://doi.org/10.1037/0033-295X.114.4.843>
- Wood, W., & Rünger, D. (2016). Psychology of Habit. *Annual Review of Psychology*, 67(1), 289–314. <https://doi.org/10.1146/annurev-psych-122414-033417>
- World Health Organization & NHTSA (U.S.). (2011). Mobile phone use: a growing problem of driver distraction. World Health Organization. <https://iris.who.int/handle/10665/44494>
- Xu, Y., Li, Y., & Zhang, F. (2013). Pedestrians' intention to jaywalk: Automatic or planned? A study based on a dual-process model in China. *Accident Analysis and Prevention*. <https://doi.org/10.1016/j.aap.2012.07.007>
- Xydianou, T., Kopelias, P., Polymeropoulos, C. M., & Demiridi, E. (2019). Social networking and driving. A study about young Greeks. *Advances in Intelligent Systems and Computing*, 879, 207–214. https://doi.org/10.1007/978-3-030-02305-8_25

Yannis, G., Laiou, A., Papantoniou, P., & Gkartzonikas, C. (2016). Simulation of texting impact on young drivers' behavior and safety on motorways. *Transportation Research Part F: Traffic Psychology and Behaviour*, 41, 10–18. <https://doi.org/10.1016/j.trf.2016.06.003>

Yeomans, M. R., Armitage, R., Atkinson, R., Francis, H., & Stevenson, R. J. (2023). Habitual intake of fat and sugar is associated with poorer memory and greater impulsivity in humans. *PLoS One*, 18(8), e0290308.

Yılmaz, Ş., Arslan, B., Öztürk, İ., Özkan, Ö., Özkan, T., & Lajunen, T. (2022). Driver social desirability scale: A Turkish adaptation and examination in the driving context. *Transportation Research Part F: Traffic Psychology and Behaviour*, 84, 53–64. <https://doi.org/10.1016/j.trf.2021.11.009>



APPENDICES

A. GOODNESS OF FIT TEST RESULTS FOR EACH MODEL

Table 4. Goodness of Fit Test Results for Each Model

<i>Models</i>	χ^2 (df)	<i>CFI</i>	<i>TLI</i>	<i>GFI</i>	<i>RMSEA</i>	R^2 (<i>Intention</i>)	R^2 (<i>Willingness</i>)	R^2 (<i>SMDD</i>)
TPB	3.35 (2)	.998	.990	.997	.040	.396		.588
PWM	4.20 (4)	1.00	.999	.997	.011	.535	.382	.597
The Integrated Model	2.19 (4)	1.00	1.011	.999	.000	.548	.431	.603

B. DIRECT AND INDIRECT PATHS OF THE TPB MODEL

Table 5. Direct and indirect paths of the TPB

	β	SE	95% Confidence Intervals		z	p
			Lower	Upper		
<i>Direct Paths</i>						
Attitude $\Rightarrow$ Intention	.244	.06	.13	.356	4.29	< .001
Subjective Norms $\Rightarrow$ Intention	.262	.04	.18	.348	5.96	< .001
Perceived Behavioral Control $\Rightarrow$ Intention	.345	.05	.25	.435	7.49	< .001
Intention $\Rightarrow$ SMDD	.694	.04	.61	.774	16.92	< .001
Perceived Behavioral Control $\Rightarrow$ SMDD	.126	.04	.06	.195	3.60	< .001
<i>Indirect Paths</i>						
Attitude $\Rightarrow$ Intention $\Rightarrow$ SMDD	.169	.041	.090	.249	4.157	< .001
Subjective Norms $\Rightarrow$ Intention $\Rightarrow$ SMDD	.182	.033	.118	.245	5.587	< .001
Perceived Behavioral Control $\Rightarrow$ Intention $\Rightarrow$ SMDD	.239	.036	.169	.309	6.666	< .001

C. DIRECT AND INDIRECT PATHS OF THE PWM MODEL

Table 6. Direct and indirect paths of PWM

	β	SE	95% Confidence Intervals		z	p
			Lower	Upper		
<i>Direct Paths</i>						
Attitude $\Rightarrow$ Intention	.124	.05	.04	.213	2.74	.006
Attitude $\Rightarrow$ Willingness	.408	.06	.28	.532	6.41	< .001
Subjective Norms $\Rightarrow$ Intention	.114	.04	.04	.188	3.02	.003
Subjective Norms $\Rightarrow$ Willingness	.154	.05	.06	.245	3.35	< .001
Prototype Similarity $\Rightarrow$ Intention	.116	.06	.01	.226	2.07	.039
Prototype Favorability $\Rightarrow$ Intention	.231	.06	.12	.345	3.98	< .001
Prototype Similarity $\Rightarrow$ Willingness	.183	.05	.08	.289	3.40	< .001
Prototype Favorability $\Rightarrow$ Willingness	.105	.05	.00	.211	1.95	.051
Willingness $\Rightarrow$ Intention	.397	.06	.29	.507	7.12	< .001
Intention $\Rightarrow$ SMDD	.641	.05	.55	.735	13.36	< .001
Willingness $\Rightarrow$ SMDD	.186	.04	.10	.267	4.49	< .001

Table 6. (continued)

Indirect Paths						
Willingness ⇒ Intention ⇒ SMDD	.255	.040	.176	.334	6.318	< .001
Attitude ⇒ Intention ⇒ SMDD	.079	.030	.021	.137	2.686	.007
Attitude ⇒ Willingness ⇒ SMDD	.076	.020	.037	.115	3.810	< .001
Attitude ⇒ Willingness ⇒ Intention ⇒ SMDD	.104	.022	.061	.147	4.709	< .001
Subjective Norms ⇒ Intention ⇒ SMDD	.073	.025	.024	.122	2.927	.003
Subjective Norms ⇒ Willingness ⇒ SMDD	.029	.011	.008	.050	2.660	.008
Subjective Norms ⇒ Willingness ⇒ Intention ⇒ SMDD	.039	.013	.014	.064	3.104	.002
Prototype Similarity ⇒ Willingness ⇒ SMDD	.034	.012	.011	.057	2.874	.004
Prototype Similarity ⇒ Intention ⇒ SMDD	.074	.031	.014	.135	2.411	.016
Prototype Similarity ⇒ Willingness ⇒ Intention ⇒ SMDD	.047	.016	.016	.077	3.006	.003
Prototype Favorability ⇒ Willingness ⇒ SMDD	.020	.009	.002	.037	2.206	.027
Prototype Favorability ⇒ Intention ⇒ SMDD	.148	.031	.088	.209	4.781	< .001
Prototype Favorability ⇒ Willingness ⇒ Intention ⇒ SMDD	.027	.011	.005	.049	2.386	.017

D. DIRECT AND INDIRECT PATHS OF THE INTEGRATED MODEL

Table 7. Direct and indirect paths of the Integrated Model

	β	SE	95% Confidence Intervals		z	p
			Lower	Upper		
<i>Direct Paths</i>						
Habitual Strength⇒ Prototype Similarity	.191	.052	.090	.292	3.697	< .001
Habitual Strength⇒ Prototype Favorability	.053	.044	-.033	.139	1.203	.229
Habitual Strength⇒ SMDD	.016	.034	-.051	.084	0.469	.639
Willingness⇒ SMDD	.158	.042	.076	.240	3.760	< .001
Intention⇒ SMDD	.608	.048	.513	.703	12.547	< .001
Perceived Behavioral Control⇒ SMDD	.091	.033	.026	.157	2.740	.006
Prototype Similarity⇒ Willingness	.106	.051	.006	.208	2.067	.039
Prototype Favorability⇒ Willingness	.070	.052	-.031	.172	1.359	.174
Attitude⇒ Willingness	.329	.063	.206	.452	5.244	< .001
Perceived Behavioral Control⇒ Willingness	.235	.051	.135	.335	4.599	< .001

Table 7. (continued)

Subjective Norms⇒ Willingness	.129	.045	.040	.218	2.843	.004
Habitual Strength⇒ Willingness	.119	.038	.045	.194	3.134	.002
Habitual Strength⇒ Attitude	.165	.052	.064	.267	3.188	.001
Habitual Strength⇒ Perceived Behavioral Control	.090	.050	-.008	.188	1.795	.073
Prototype Similarity⇒ Intention	.082	.056	-.027	.191	1.480	.139
Prototype Favorability⇒ Intention	.214	.056	.103	.324	3.796	< .001
Willingness⇒ Intention	.353	.054	.247	.459	6.538	< .001
Attitude⇒ Intention	.098	.043	.014	.182	2.295	.022
Perceived Behavioral Control⇒ Intention	.137	.042	.054	.220	3.237	.001
Subjective Norms⇒ Intention	.107	.037	.035	.180	2.896	.004
Habitual Strength⇒ Intention	.056	.034	-.012	.123	1.623	.105
Habitual Strength⇒ Subjective Norms	.131	.046	.040	.221	2.826	.005
Indirect Paths						
Habitual Strength ⇒ Willingness ⇒ SMDD	.019	.007	.004	.033	2.532	.011
Habitual Strength ⇒ Intention ⇒ SMDD	.034	.021	-.007	.075	1.617	.106
Habitual Strength ⇒ Willingness ⇒ Intention ⇒ SMDD	.026	.010	.007	.044	2.700	.007

Table 7. (continued)

Habitual Strength ⇒ Prototype Similarity ⇒ Willingness ⇒ SMDD	.003	.002	-.001	.007	1.677	.093
Habitual Strength ⇒ Prototype Similarity ⇒ Willingness ⇒ Intention ⇒ SMDD	.004	.003	-.001	.009	1.714	.087
Habitual Strength ⇒ Prototype Similarity ⇒ Intention ⇒ SMDD	.010	.007	-.004	.023	1.411	.158
Habitual Strength ⇒ Prototype Favorability ⇒ Willingness ⇒ SMDD	.001	.001	-.001	.002	0.914	.361
Habitual Strength ⇒ Prototype Favorability ⇒ Willingness ⇒ Intention ⇒ SMDD	.001	.001	-.001	.002	0.926	.354
Habitual Strength ⇒ Prototype Favorability ⇒ Intention ⇒ SMDD	.007	.006	-.005	.019	1.128	.259
Habitual Strength ⇒ Attitude ⇒ Willingness ⇒ SMDD	.009	.004	.001	.016	2.202	.028
Habitual Strength ⇒ Attitude ⇒ Willingness ⇒ Intention ⇒ SMDD	.012	.005	.002	.021	2.355	.019
Habitual Strength ⇒ Attitude ⇒ Intention ⇒ SMDD	.010	.006	-.001	.021	1.755	.079
Habitual Strength ⇒ Perceived Behavioral Control ⇒ SMDD	.008	.005	-.002	.019	1.526	.127
Habitual Strength ⇒ Perceived Behavioral Control ⇒ Willingness ⇒ SMDD	.003	.002	-.001	.008	1.518	.129
Habitual Strength ⇒ Perceived Behavioral Control ⇒ Willingness ⇒ Intention ⇒ SMDD	.005	.003	-.001	.010	1.594	.111
Habitual Strength ⇒ Perceived Behavioral Control ⇒ Intention ⇒ SMDD	.007	.005	-.002	.017	1.532	.126
Habitual Strength ⇒ Subjective Norms ⇒ Willingness ⇒ SMDD	.003	.002	-.000	.006	1.727	.084
Habitual Strength ⇒ Subjective Norms ⇒ Willingness ⇒ Intention ⇒ SMDD	.004	.002	-.000	.007	1.899	.058
Habitual Strength ⇒ Subjective Norms ⇒ Intention ⇒ SMDD	.009	.004	.000	.017	2.007	.045
Willingness ⇒ Intention ⇒ SMDD	.215	.037	.142	.287	5.814	< .001

Table 7. (continued)

Perceived Behavioral Control ⇒ Willingness ⇒ SMDD	.037	.013	.011	.063	2.787	.005
Perceived Behavioral Control ⇒ Willingness ⇒ Intention ⇒ SMDD	.050	.014	.023	.078	3.569	< .001
Perceived Behavioral Control ⇒ Intention ⇒ SMDD	.083	.027	.031	.136	3.104	.002
Prototype Similarity ⇒ Willingness ⇒ SMDD	.017	.009	-.001	.035	1.831	.067
Prototype Similarity ⇒ Willingness ⇒ Intention ⇒ SMDD	.023	.012	-.001	.047	1.876	.061
Prototype Similarity ⇒ Intention ⇒ SMDD	.050	.034	-.016	.116	1.481	.139
Prototype Favorability ⇒ Willingness ⇒ SMDD	.011	.009	-.006	.028	1.291	.197
Prototype Favorability ⇒ Willingness ⇒ Intention ⇒ SMDD	.015	.011	-.007	.037	1.350	.177
Prototype Favorability ⇒ Intention ⇒ SMDD	.130	.037	.057	.203	3.502	< .001
Attitude ⇒ Willingness ⇒ SMDD	.052	.017	.019	.085	3.101	.002
Attitude ⇒ Willingness ⇒ Intention ⇒ SMDD	.071	.017	.036	.105	4.040	< .001
Attitude ⇒ Intention ⇒ SMDD	.060	.026	.008	.111	2.272	.023
Subjective Norms ⇒ Willingness ⇒ SMDD	.020	.009	.002	.038	2.202	.028
Subjective Norms ⇒ Willingness ⇒ Intention ⇒ SMDD	.028	.011	.007	.049	2.567	.010
Subjective Norms ⇒ Intention ⇒ SMDD	.065	.023	.020	.111	2.801	.005

**E. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE
FOR STUDY**

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ APPLIED ETHICS RESEARCH CENTER DÜMLÜPINAR BULVARI 06800 ÇANKAYA/ANKARA/TÜRKİYE T: +90 312 210 22 91 F: +90 312 410 79 59 uea@metu.edu.tr www.uea.metu.edu.tr	 ORTA DOĞU TEKNİK ÜNİVERSİTESİ MIDDLE EAST TECHNICAL UNIVERSITY
13 MART 2024	
Konu: Değerlendirme Sonucu	
Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)	
İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu	
Sayın Bahar Öz Danışmanlığınızı yürüttüğünüz Bureu Arslan Arisoy'un "<i>Sosyal Medya Kullanım Alışkanlığının Araç Süreken Sosyal Medya Kullanımı Davranışı ile İlişkisi</i>" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek 0138-ODTÜİAEK-2024 protokol numarası ile onaylanmıştır. Bilgilerinize saygılarımla sunarım.	
[Redacted Signature] Prof. Dr. İ. Semih AKÇOMAK Üye	Prof. Dr. Ş. Halil TURAN Başkan [Redacted Signature] Doç. Dr. Ali Emre Turgut Üye
[Redacted Signature] Doç. Dr. Şerife SEVİNÇ Üye	[Redacted Signature] Doç. Dr. Murat Perit ÇAKIR Üye
[Redacted Signature] Dr. Öğretim Üyesi Süreyya ÖZCAN KABASAKAL Üye	[Redacted Signature] Dr. Öğretim Üyesi Müge GÜNDÜZ Üye

F. SURVEY FORM

ARAŞTIRMAYA GÖNÜLLÜ KATILIM FORMU

Bu çalışma, ODTÜ Psikoloji Bölümünden Doç. Dr. Bahar Öz, ve Uzm. Psk. Burcu Arslan Arısoy, tarafından yürütülen bir araştırmadır.

Çalışmanın Amacı Nedir?

Bu çalışmanın amacı, sürücülerin genel sosyal media kullanma alışkanlıkları ile araç sürerken sosyal medya kullanma davranışları arasındaki ilişkiyi incelemektedir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Gönüllü katılımcılardan kendilerine sunulan çevrimiçi anketi cevaplamaları istenmektedir. Anketin cevaplanması ortalama olarak 15-20 dakika sürmektedir. İsim ve kimlik bilgileriniz sizden istenmeyecektir. **Ankette sağlanan bilgiler yalnızca araştırma amaçlı olarak kullanılacak ve araştırma yürütücüleri dışında hiç kimse ile paylaşılmayacaktır.**

Sizden Topladığımız Bilgileri Nasıl Kullanacağız?

Çalışmaya katılım tamamıyla gönüllülük temelinde olmalıdır. Cevaplarınız tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Sizden elde edilecek bilgiler diğer katılımcıların bilgileriyle beraber toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır. Sizinle ilgili bilgiler eşleştirildikten sonra kesinlikle kimlik bilgileriniz tutulmayacak, **elde edilen tüm veriler anonim olarak saklanacaktır.**

Katılımınızla İlgili Bilmeniz Gerekenler:

Anket, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz.

Arařtırmayla İlgili Daha Fazla Bilgi Almak İsterseniz:

Bu alıřmaya katıldığınız için řimdiden teřekkür ederiz. alıřma hakkında daha fazla bilgi almak için Uzm. Psk. Burcu Arslan Arısoy ile iletişim kurabilirsiniz. alıřmanın sonunda sizi biraz daha bilgilendirmek amacıyla “katılım sonrası bilgilendirme formu” sunulmaktadır.

Yukarıdaki bilgileri okudum ve bu alıřmaya tamamen gönüllü olarak katılıyorum.

☐ **Evet**

☐ **Hayır**



Demografik Bilgi Formu

Yaşınız:

Cinsiyetiniz: ☐ Erkek ☐ Kadın

Bölümünüz:

Aşağıdakilerden hangisi sosyo- ekonomik statünüzü tanımlar? ☐ Alt ☐

Ortanın altı ☐ Orta ☐ Ortanın Üstü ☐ Üst

Ehliyetiniz var mı? ☐ Hayır ☐ Evet

Kaç yıldır ehliyet sahibisiniz? _____ yıl

Geçen yıldan bu yana yaklaşık olarak toplam kaç kilometre araç kullandınız? _____ km

Bütün hayatınız boyunca yaklaşık olarak toplam kaç kilometre araç kullandınız? _____ km

Genel olarak, ne sıklıkla araç kullanırsınız?

☐ Hemen hemen her gün ☐ Haftada 3-4 gün ☐ Haftada 1-2 gün

☐ Ayda birkaç kez ☐ Çok nadir

Son üç yılda kaç kez araç kullanırken **aktif olarak** (sizin bir araca, bir yayaya veya herhangi bir nesneye çarptığınız durumlar) kaza yaptınız? (hafif kazalar dâhil) _____ kez

Son üç yılda kaç kez araç kullanırken **pasif olarak** (bir aracın ya da bir yayanın size çarptığı durumlar) kaza geçirdiniz? (hafif kazalar dâhil) _____ kez

Son üç yılda aşağıdaki trafik cezalarını kaç kere aldığınızı belirtiniz.

Yanlış park etme: _____ Hatalı sollama: _____ Hız ihlali: _____ Diğer: _____

Günde ortalama kaç saat telefonunuzu kullanırsınız? ☐ 1 saatten az ☐ 1-3 saat ☐ 3 - 5 saat ☐ 5 saatten fazla

Günde ortalama ne kadar süre sosyal medya uygulamalarında (Facebook, Instagram, X, TikTok, haber uygulamaları vb.) vakit geçirirsiniz? ☐ 1 saatten az ☐ 1-3 saat ☐ 3 - 5 saat ☐ 5 saatten fazla

Lütfen aşağıdaki maddeleri, en sık kullandığınız sosyal medya uygulamasını düşünerek yanıtlayınız.

Gün içerisinde, **en sık kullandığınız sosyal medya uygulamasına** (WhatsApp, Facebook, Instagram, X, TikTok, haber uygulamaları vb.) **girip gezindiğiniz, vakit geçirdiğiniz zamanları** düşünün. Bu zamanlarda, aşağıdaki ifadelere ne kadar katılıp katılmadığınızı, 1 (kesinlikle katılmıyorum) ile 7 (kesinlikle katılıyorum) arasında bir puan vererek belirtiniz.

	1	2	3	4	5	6	7
Telefonu elime alıp sosyal medya uygulamalarında vakit geçirmek otomatik olarak yaptığım bir şeydir							
Telefonu elime alıp sosyal medya uygulamalarında gezinmek hiç düşünmeden yaptığım bir şeydir.							
Sosyal medya uygulamalarında gezinmek ne ara telefonu elime alıp uygulamalara girdiğimi hatırlamadan yaptığım bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarında gezinmek, niyetim olmasa da yaptığım bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarında gezinmeye başlamak, hiç farkında olmadan yaptığım bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarına <u>girmemek</u> zorlandığım bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarında <u>gezinmekten uzak durmak</u> , özellikle çaba göstermem gereken bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarında vakit geçirmek, özellikle düşünmeye ihtiyaç duymadan yaptığım bir şeydir.							
Telefonu elime alıp sosyal medyada gezinmek günlük rutininin bir parçasıdır.							
Telefonu elime alıp sosyal medya uygulamalarında gezinmek benim tipik bir davranışımdır.							

Gün içerisinde, telefonunuza **en sık kullandığınız sosyal medya uygulamasından** (WhatsApp, Facebook, Instagram, X, TikTok, haber uygulamaları vb.) **bir bildirim geldiğini düşünün**. Bu durumda aşağıdaki ifadelere ne kadar katılıp katılmadığınızı, 1 (kesinlikle katılmıyorum) ile 7 (kesinlikle katılıyorum) arasında bir puan vererek belirtiniz.

	1	2	3	4	5	6	7
Telefonu elime alıp gelen bildirimleri kontrol etmek otomatik olarak yaptığım bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol etmek hiç düşünmeden yaptığım bir şeydir.							
Gelen bildirimleri kontrol etmek, ne ara telefonu elime aldığımı hatırlamadan yaptığım bir şeydir.							
Telefonu elime alıp sosyal medya uygulamalarında gezinmek, niyetim olmasa da yaptığım bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol etmeye başlamak, hiç farkında olmadan yaptığım bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol <u>etmemek</u> zorlandığım bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol <u>etmemek</u> , özellikle çaba göstermem gereken bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol etmek, özellikle düşünmeye ihtiyaç duymadan yaptığım bir şeydir.							
Telefonu elime alıp gelen bildirimleri kontrol etmek günlük rutininin bir parçasıdır .							
Telefonu elime alıp gelen bildirimleri kontrol etmek benim tipik bir davranışımıdır .							

Lütfen araba sürerken aşağıdaki davranışları ne sıklıkla yaptığınızı belirtiniz.					
	Hiçbir zaman	Nadiren	Ara sıra	Sık Sık	Her zaman
<u>Araba sürerken ne sıklıkla telefonunuzu elinize alıp sosyal medya uygulamalarınızda vakit geçirirsiniz?</u>					
<u>Araba sürerken ne sıklıkla telefonunuzu elinize alıp sosyal medya uygulamalarından gelen bildirimleri okursunuz/kontrol edersiniz?</u>					



Aşağıdaki ifadelere ne kadar katılıp katılmadığınızı 1 (kesinlikle katılmıyorum) ve 7 (kesinlikle katılıyorum) arasında bir puan vererek belirtiniz.

	1	2	3	4	5
Önümüzdeki bir ay içerisinde, <u>araba sürerken</u> sosyal medya uygulamalarından <u>bir bildirim geldiğini gördüğümde</u> , telefonu elime alıp gelen bildirimleri okumayı/kontrol etmeyi planlarım/büyük ihtimalle yaparım.					
Önümüzdeki bir ay içerisinde, <u>araba sürerken sosyal medya uygulamalarında gezinmeyi</u> planlarım/büyük ihtimalle yaparım.					

Aşağıdaki ifadelere ne kadar katılıp katılmadığınızı 1 (kesinlikle katılmıyorum) ve 7 (kesinlikle katılıyorum) arasında bir puan vererek belirtiniz.

	1	2	3	4	5	6	7
Benim için önemli insanların çoğu araba sürerken <u>sosyal medyada gezinir.</u>							
Benim için önemli insanların çoğu araba sürerken sosyal medya uygulamalarından <u>bir bildirim geldiğini gördüğünde,</u> telefonu ellerine alıp gelen bildirimi kontrol ederler.							
Benim için önemli insanların çoğu araba sürerken sosyal medyada <u>gezinmeyi onaylar/ kabul eder</u>							
Benim için önemli insanların çoğu araba sürerken sosyal medya uygulamalarından <u>gelen bildirimlere bakmamı onaylar/ kabul eder</u>							
Araba sürerken sosyal medyada <u>gezinmek benim için kolaydır</u>							
Araba sürerken sosyal medyadan <u>gelen bildirimleri kontrol etmek benim için kolaydır</u>							
Araba sürerken sosyal medyada <u>gezinip gezinmemek bana kalmıştır.</u>							
Araba sürerken sosyal medyadan <u>gelen bildirimleri kontrol edip etmemek bana kalmıştır.</u>							
Önümüzdeki bir ay içerisinde, sakın bir yolda ilerlerken, sosyal medya hesaplarımın birinden çok ilgimi çeken/ önemli olduğunu düşündüğüm bir bildirim geldiğini görürsem, o uygulamaya girip gelen bildirimi kontrol etmeyi isterim.							
Araba sürerken, yavaş ilerleyen bir trafikte çok canım sıkılırsa <u>sosyal medya hesaplarıma girip gezinmeyi isterim.</u>							
Aşağıdaki bölümde size, “araba sürerken sosyal medya hesaplarında gezinen insanlar” denildiğinde sizde oluşan imgelere hakkında sorular bulunmaktadır. <u>Sosyal medyada uygulamalarında (Facebook, Instagram, TikTok, haber uygulamaları vb.) gezinerek araç süren tipik bir sürücüyü düşünün ve aşağıdaki ifadelere ne kadar</u>							

katılıp katılmadığınızı 1 (kesinlikle katılmıyorum) ve 7 (kesinlikle katılıyorum) arasında bir puan vererek belirtiniz.							
	1	2	3	4	5	6	7
Bu sürücülerin, genel özellikleri benim özelliklerime çok benzer							
Bu tarz kişilerden hoşlanırım							

Aşağıdaki bölümde size, “<i>araba sürerken sosyal medya hesaplarından bir bildirim geldiğinde telefonunu eline alıp bildirimi kontrol eden insanlar</i>” denildiğinde sizde oluşan imgelere hakkında sorular bulunmaktadır. Araba sürerken sosyal medyadan <u>gelen bildirimleri kontrol eden</u> <i>tipik</i> bir sürücüyü düşünün.							
Bu sürücülerin, genel özellikleri benim özelliklerime çok benzer							
Bu tarz kişilerden hoşlanırım							

Aşağıdaki cümleyi tamamlamak için altında verilen sıfatlardan hangisini sizin düşüncenizi daha çok yansıttığını, imleci kaydırarak belirtiniz.

Araba sürerken sosyal medyada gezinmek...

1. Zararlı.....**O**.....5.

Yararlı

1. Çok dikkat Dağıtıcı.....**O**.....5. Hiç Dikkat Dağıtıcı Değil

1. Sıkıcı.....**O**.....5. Heyecan Verici

1. Stresli.....**O**.....5. Rahatlatıcı

1. Sinir Bozucu.....**O**.....5. Eğlenceli

Araba sürerken sosyal medyadan bir bildirim geldiğini gördüğünde eline alıp bildirimi kontrol etmek

1. Zararlı.....**O**.....5.

Yararlı

1. Çok dikkat Dağıtıcı.....**O**.....5. Hiç Dikkat Dağıtıcı Değil

1. Sıkıcı.....**O**.....5. Heyecan Verici

1. Stresli.....**O**.....5. Rahatlatıcı

1. Sinir Bozucu.....**O**.....5. Eğlenceli

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Ph.D., Traffic and Transportation Psychology

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PUBLICATIONS

Peer-Reviewed Articles:

Arslan, B., & Özkan, T. (2024). Role of culture, income level and governance quality on driver behaviours. *Journal of Road Safety*, 35(3). <https://doi.org/10.33492/JRS-D-24-3-2319349>

Yılmaz, Ş., **Arslan, B.**, Öztürk, İ., Özkan, Ö., Özkan, T., & Lajunen, T. (2022). Driver social desirability scale: A Turkish adaptation and examination in the driving context. *Transportation Research Part F: Traffic Psychology and Behaviour*, 84, 53-64. <https://doi.org/10.1016/j.trf.2021.11.009>

Arslan, B. (2021). The Relationship between Dispositional Affect and Traffic Locus of Control in Driving. *Trafik ve Ulaşım Araştırmaları Dergisi*, 4(2), 84-95. <https://doi.org/10.38002/tuad.992975>

Technical Reports:

Özkan, T., Üzümcüoğlu Y., Kaçan-Bibican, B., **Arslan B.**, Tekeş, B., Öz, C., Azık, D.,..., Erkuş, U. (2016). Türkiye analizi: Takip çalışması sürücü ve ön koltuk yolcularının emniyet kemeri kullanımı [Analysis of Turkey: Longitudinal study on drivers' and front-seat passengers' seat belt use]. İç İşleri Bakanlığı, Emniyet Genel Müdürlüğü, Trafik Hizmetleri Başkanlığı. URL: https://www.researchgate.net/publication/366465605_Turkiye_Kemer_2014_2015_2016#fullTextFileContent

Proceedings:

Arslan, B. & Öz, B. (2019). Role of Dispositional Affect on Coping Strategies of Turkish Drivers. In: Bagnara, S., Tartaglia, R., Albolino, S., Alexander, T., Fujita, Y. (eds) Proceedings of the 20th Congress of the International Ergonomics Association (IEA 2018). IEA 2018. *Advances in Intelligent Systems and Computing*, vol 819. Springer, Cham. https://doi.org/10.1007/978-3-319-96089-0_73

Oguzhan Ahan, A., Arisoy, D.O., Muderrisoglu, K., **Arslan, B.**, Guclu, R. (2019). Use of a H ∞ Controller on a Half Semi-trailer Truck Model to Reduce Vibrations and Its Implications on Human Factor. In: Bagnara, S., Tartaglia, R., Albolino, S., Alexander, T., Fujita, Y. (eds) Proceedings of the 20th Congress of the International Ergonomics Association (IEA 2018). IEA 2018. *Advances in Intelligent Systems and Computing*, vol 823. Springer, Cham. https://doi.org/10.1007/978-3-319-96074-6_45

Congress Presentations:

Oral Presentations

Atalan, G., **Arslan B.** & Öz B. (October, 2024): Think before move: The effect of impulsivity on pedestrian behaviors. *IRF World Congress*, Istanbul, Türkiye

Arslan, B & Öz, B. (July, 2024): Mindfulness and Driver Behaviors: Considering the

Mediation Role of Self-Regulation. *33rd International Congress of Psychology*, Prague, Czech Republic.

Yılmaz, Ş. & Arslan, B. (October, 2021). Analyzing the values of Ankara Electricity, Gas and Bus Operations Organization in terms of Schwartz's Value Theory. *International Road Safety Congress by Turkish National Police Academy Directorate of Traffic Institute*. Online Presentation.

Arslan, B. & Öz, B. (August, 2018). Role of Positive and Negative Affect on Coping Strategies of Turkish Drivers. *20th Congress of International Ergonomics Association (IEA)*. Florence, Italy

Ahan, A. O., Arisoy, D. O., Muderrisoglu, K., Arslan, B., & Guclu, R. (August, 2018). Use of a H_{∞} Controller on a Half Semi-trailer Truck Model to Reduce Vibrations and Its Implications on Human Factor. *20th Congress of International Ergonomics Association (IEA)*. Florence, Italy

Arslan, B. & Öz, B. (November, 2016). Trafik Ortamlarında Portre Kültür Değerleri ve Yaya Davranışlarının İlişkisi [Relationship between Portrait Culture Values and Pedestrian Behaviors]. 19th National Psychology Congress. İzmir, Türkiye.

Poster Presentations

Yılmaz, Ş., & Arslan, B. (2022, August). Analyzing of Ankara public transportation services. 7th International Conference on Traffic and Transport Psychology (ICTTP), Gothenburg, Sweden.

Arslan, B., Özer Ö. & Öz B. (2018, November). Denizcilik Tarihinin En Beklenmedik Kazası: Batmaz Sanılan RMS TITANIC Gemisinin Kaza Analizi [Light on Mystery: Accident Analysis of Shipwreck of "Unskinable" Ship, RMS TITANIC]. 20th National Psychology Congress, Ankara, Türkiye.

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H. TURKISH SUMMARY / TRKE ZET

Giriř

Srř, olduka karmařık ve dikkat gerektiren bir grevdir; bu nedenle dikkat dađınıklığı, kk bir anlık dalgınlıkla bile ciddi sonular dođurabilir. Bu yzden, dikkat dađınıklığı trafik kazalarının nemli sebeplerinden biri olarak grlmektedir (WHO, 2023; Dingus vd., 2016). NHTSA (2022) verilerine gre, ABD’de yaklaşık 3308 kiři dikkat dađınıklığına bađlı kazalar nedeniyle hayatını kaybetmiřtir. Avrupa’da ise kazaların %5 ila %25’inin bu sebepten kaynaklandığı tahmin edilmektedir ve rneđin Avusturya’da bu durum, lml kazaların bařlıca nedeni olarak bildirilmiřtir (ITF, 2024). Ancak bazı dikkat dađıtıcı davranıřların (rneđin ara kullanırken eller serbest telefon grřmeleri) tespit edilmesi zor olduđundan, gerek sayılar muhtemelen daha yksektir (WHO & NHTSA, 2011).

Regan vd. (2011), src dikkat dađınıklığını "srcnn dikkatinin bařka bir yne kayması" olarak tanımlamıř ve bunu, gvenli srř iin kritik olan grevlerden dikkat sapması řeklinde aıklamıřtır. Bu tanımda dikkat dađınıklığı, tepki sresindeki gecikmeden ziyade, srcnn gvenli srř iin gerekli grevlerden zihinsel olarak uzaklařmasıyla iliřkilidir. Literatrde src dikkat dađınıklığı genellikle drt temel bařlık altında sınıflandırılmaktadır (WHO, 2011). Grsel dikkat dađınıklığı, srcnn gzn yoldan ayırmasına; biliřsel dikkat dađınıklık, zihinsel olarak farklı bir konuya odaklanmasına; fiziksel dikkat dađınıklık, ellerin direksiyondan ekilmesine; iřitsel dikkat dađınıklık ise dıřarıdan gelen sesli uyarıcılara dikkat verilmesine iřaret eder. Bu sınıflamaya ek olarak Regan ve Hallett (2011), dikkat dađınıklığını tat duyusuna (gustatory) ve dokunsal hislere (tactile) ynelik iki yeni trle geniřletmiřtir. rneđin ara kullanırken kahve imek; kahve bardađını tutmakla fiziksel, bardađa bakmakla grsel, kahvenin tadına odaklanmakla ise gustatory dikkat dađınıklığına neden olabilir. Bu tr davranıřlar, birden fazla dikkat dađınıklığı kategorisini aynı anda ierebilir.

Regan ve Hallett (2011), dikkatle rekabet eden altı temel dikkat dağıtıcı kaynak belirlemiştir: nesneler (örneğin cep telefonu), olaylar (örneğin bir kaza sahnesi), yolcular, diğer yol kullanıcıları (örneğin motosikletliler), hayvanlar ve içsel uyarıcılar (örneğin can sıkıntısı). Bu kaynakların her biri kaza riski oluşturabilir; ancak cep telefonu kullanımı, yalnızca yaygınlığı nedeniyle değil, aynı zamanda birden fazla dikkat dağınıklığı türünü aynı anda tetikleyebilmesi nedeniyle özel bir tehdit oluşturmaktadır (Dingus vd., 2016; NHTSA, 2022). Örneğin, sürüş sırasında telefonla konuşmak, telefonu eline almakla fiziksel, karşı tarafı dinlemekle işitsel ve konuşmanın içeriğini anlamakla bilişsel dikkat dağınıklığı yaratır. Cep telefonunun işlevi karmaşıklaştıkça dikkat dağınıklığı seviyesi de artmaktadır. Bu nedenle, cep telefonu kullanımının farklı biçimlerinin yol güvenliği üzerindeki etkilerini anlamak ve bu konuda daha fazla araştırma yürütmek büyük önem taşımaktadır. irçok çalışma, cep telefonuna bağlı dikkat dağınıklığı ile trafik kazalarına karışma arasında anlamlı bir ilişki olduğunu göstermektedir (NHTSA, 2022; Yannis vd., 2014). Birleşik Krallık'ta, yeni düzenlemelere ve artırılan cezalara rağmen, sürüş sırasında cep telefonu kullandığını kabul eden sürücülerin oranı 2022'de %10 iken 2023'te %12'ye yükselmiştir (RAC, 2024). Avrupa Birliği'nde ise cep telefonu kaynaklı dikkat dağınıklığına bağlı kazalarda her yıl artış gözlenmektedir. Bu durum, AB sürücülerinin büyük çoğunluğunun ister elde tutularak ister eller serbest şekilde olsun, cep telefonu kullanımının kazalara katkıda bulunduğunu kabul etmelerine rağmen devam etmektedir (European Commission, 2022).

Gelişen teknolojiyle birlikte araç içi sistemler ve mobil iletişim araçları, gündelik yaşamı kolaylaştırmakla birlikte sürüş sırasında dikkat dağınıklığını da artırmaktadır. Özellikle cep telefonu kullanımı, sürücü dikkatinin dağılmasındaki en yaygın ve ciddi risk kaynaklarından biri olarak öne çıkmaktadır (WHO, 2011; NHTSA, 2022; EGM, 2017). Cep telefonları yalnızca iletişim aracı olmaktan çıkarak sosyal medya, iş, sağlık takibi, navigasyon ve fotoğraf gibi çok sayıda işleve sahip hale gelmiştir. Bu durum, sürüş sırasında cep telefonundan uzak durmayı zorlaştırmakta ve dikkat dağınıklığının temel kaynaklarından biri haline getirmektedir. İlk zamanlarda yalnızca arama ya da mesajlaşma gibi temel iletişim işlevleriyle sınırlı olan cep telefonu kullanımı, günümüzde sosyal medya uygulamaları gibi daha karmaşık ve dikkat gerektiren formlara evrilmiştir (RAC, 2024; Xydianou vd., 2019).

Cep telefonu kullanımının sürücü performansı üzerindeki olumsuz etkileri çok sayıda araştırmada ortaya konmuştur. Bu tür dikkat dağınıklığı, kaza riskini artırmakta (Ige vd., 2016; Dingus vd., 2016), tepki süresini uzatmakta (Caird vd., 2008; Lyngsie vd., 2013), sürücülerin görsel tarama becerisini ve araç kontrolünü bozmakta (Caird vd., 2008; Rudin-Brown vd., 2013; Yannis vd., 2016) ve sürücünün bilişsel yükünü artırmaktadır (Caird vd., 2008). Chee vd. (2021) ise cep telefonunun kapalı olsa bile yalnızca varlığının bile sürüş performansını anlamlı şekilde etkilediğini göstermiştir. Özellikle telefonuna yüksek derecede bağlı olan sürücülerde bu etki daha da belirgin hale gelmiştir. Özetle, cep telefonuna bağlı dikkat dağınıklığı, yalnızca kullanım anıyla sınırlı kalmamakta, telefonun varlığı dahi sürüş performansını olumsuz etkileyebilmektedir.

Cep telefonu ile ilgili dikkat dağınıklığı türleri arasında, son yıllarda sosyal medya kaynaklı dikkat dağınıklığı yol güvenliği uzmanlarının dikkatini çekmeye başlamıştır. Sosyal medya, dünya genelinde bireylerin günlük yaşamının ayrılmaz bir parçası haline geldikçe, bu mecraların sürüş gibi diğer yaşam alanları üzerindeki etkisi de önemli bir araştırma konusu haline gelmiştir. RAC'nin 2024 yılına ait Sürüş Raporu'na göre, Birleşik Krallık'taki sürücülerin %25'i sosyal medya uygulamaları aracılığıyla mesajlaştığını, gönderi paylaştığını ya da bildirimleri kontrol ettiğini kabul etmiştir. Bu oran, sürüş sırasında telefonla arama yapmaktan sonra en yaygın ikinci cep telefonu kullanım türü olarak belirlenmiştir. Bu bulgu, araç kullanırken sosyal medya kullanım davranışlarının daha ayrıntılı biçimde incelenmesi gerektiğini açıkça ortaya koymaktadır.

Bu çalışmada, “Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı” (SMKSDD) kavramı ortaya konmuştur. SMKSD, sürücünün araç kullanırken sosyal medya uygulamalarındaki içeriklerle veya gelen bildirimlerle etkileşime geçmesi olarak tanımlanır. Bu etkileşim, hem sosyal medya uygulamaları üzerinden bağlantı kurmayı hem de gelen bildirimlere yanıt vermeyi kapsar. SMKSD, çeşitliliği ve kolay dikkat dağıtıcı yapısı nedeniyle diğer cep telefonu kullanım türlerine kıyasla daha büyük bir risk oluşturabilir. Genellikle, içeriği okuma, anlama ve yanıtlamaya yönelik zihinsel dikkat (bilişsel dikkat dağınıklığı), içeriği görmek için sürekli görsel dikkat gereksinimi (görsel dikkat dağınıklığı), uygulamalar arasında gezinirken

telefonu fiziksel olarak kullanma (fiziksel dikkat dağınıklığı) ve içeriklere ait sesli uyarıları dinleme (işitsel dikkat dağınıklığı) gibi farklı dikkat dağınıklığı türlerini aynı anda barındırır (Regan & Hallett, 2011). Ayrıca, mesajlaşma ya da arama gibi etkileşim türlerinden farklı olarak, sosyal medya kullanımı genellikle karşı taraftan yanıt gerektirmediği için kullanıcı tarafından zamanlaması ve süresi belirlenen bir dikkat dağınıklığı biçimidir. Bu da sürücülerin diledikleri zaman ve şekilde sosyal medya ile ilgilenmesine olanak tanır.

SMKSDD üzerine yapılan çalışmalar oldukça sınırlıdır. Xydianou vd. (2019), Yunanistan'da genç sürücülerle yaptıkları çalışmada, katılımcıların yarısından fazlasının sürüş sırasında çevrim içi kaldığını ve birçok sosyal medya uygulamasından bildirim aldığını bildirmiştir. Katılımcıların %15,1'i bu bildirimleri okuyup yanıtladığını, %36,3'ü ise araç kullanırken telefonlarına yoğun bağımlılık hissettiklerini ifade etmiştir. SMKSDD'nin bu kadar yaygın olması, sürücü performansı üzerindeki etkilerini daha da önemli bir araştırma konusu haline getirmiştir. McNabb ve Gray (2016), sosyal medya kullanımının sürücülerin takip mesafesi değişkenliği, bakış davranışları ve zihinsel yükleri üzerinde olumsuz etkiler yarattığını ortaya koymuştur. Hashhash vd. (2019) ise, sosyal medya kullanımının sürücülerin dikkatini dağıtma açısından mesaj yazmak kadar tehlikeli olduğunu, ancak katılımcıların sosyal medya kullanımının bu kadar zararlı olduğuna inanmadıklarını belirtmişlerdir. D'Amico vd. (2020) da SMKSDD'nin kaza sayısını artırdığını, tepki süresini uzattığını ve genel sürücü performansını önemli ölçüde düşürdüğünü göstermiştir. Bu bulgular, SMKSDD'yi mobil telefon kullanımına bağlı olarak ortaya çıkan ciddi bir dikkat dağınıklığı biçimi olarak öne çıkarmaktadır.

Her ne kadar son yıllarda yapılan araştırmalar SMKSDD'nin yaygınlığını ve olumsuz etkilerini ortaya koymuş olsa da bu davranışın arkasında yatan nedenler literatürde henüz yeterince ele alınmamıştır. Öte yandan, genel olarak araç kullanırken cep telefonu kullanımı ya da mesajlaşma gibi özel türleri üzerine yapılan çok sayıda araştırma, bu davranışların demografik özellikler, kişilik özellikleri ve sosyo-bilişsel faktörler gibi çeşitli öncüllerle ilişkili olduğunu göstermiştir. Sosyal medya kullanımı da cep telefonu kullanımının bir alt türü olduğundan, sonraki

bölümlerde ele alınacak bu faktörlerin SMKSDD ile de benzer ilişkiler gösterebileceği varsayılabilir.

Sürüş sırasında cep telefonu kullanımının öncül faktörleri yıllar içinde kapsamlı şekilde araştırılmıştır. Bu davranışla ilişkili faktörler iki ana başlık altında sınıflandırılabilir: bireysel farklılıklarla ilişkili faktörler (örneğin demografik özellikler ve kişilik özellikleri) ile sosyo-bilişsel faktörler (örneğin risk algısı, tutumlar, inançlar ve bu davranışa ilişkin normlar). Bireysel faktörler, kimlerin sürüş sırasında cep telefonu kullanma olasılığının daha yüksek olduğunu açıklamaya yönelikken; sosyo-bilişsel faktörler, bu davranışın arkasındaki psikolojik nedenleri anlamaya yardımcı olmaktadır.

Brusque ve Alauzet'e (2008) göre, sürüş sırasında cep telefonu kullanımında en çok ilişkilendirilen bireysel değişken yaştır. Genç sürücüler, bu davranış ile kazalar arasındaki ilişkide orantısız şekilde temsil edilmektedir (Lipovac vd., 2017; Bener vd., 2006) ve daha yaşlı sürücülere kıyasla mesajlaşma gibi cep telefonu kullanımına daha yatkındırlar (Li vd., 2018; Slepicka, 2018). Ancak diğer yandan, cep telefonu kaynaklı dikkat dağınıklığı yaşlı sürücülerin performansını daha fazla olumsuz etkilemektedir (Liang & Yang, 2022). Sürüş deneyimi ve maruziyet açısından bakıldığında, Oviedo-Trespalcios vd. (2017), her ek sürüş saati ve son üç yılda alınan her trafik cezasının, araç kullanırken mesajlaşma olasılığını sırasıyla 1,23 ve 1,66 kat artırdığını bildirmiştir. Üniversite öğrencileri arasında, ehliyet yılı ile mesajlaşma sıklığı arasında da pozitif bir ilişki bulunmuştur. Bu durum, sürüşün zamanla daha rutin bir aktiviteye dönüşmesiyle açıklanabilir. Rutinleşme, sürüşün daha az dikkat gerektirdiği algısını artırabilir ve bu da sürücünün ikincil görevleri daha az riskli ve daha keyifli görmesine neden olabilir (Slepicka, 2018).

Cinsiyet farklılıklarına bakıldığında, araştırmalar genel olarak kadın ve erkek sürücüler arasında sürüş sırasında mesajlaşma sıklığı bakımından anlamlı bir fark olmadığını göstermektedir (Nemme & White, 2010; Struckman-Johnson vd., 2015; Hallett vd., 2012; Cook vd., 2018; Slepicka, 2018). Ancak, Struckman-Johnson vd. (2015), cinsiyetler arasında bu davranışa yönelik motivasyonların farklılık gösterdiğini belirtmiştir. Erkek sürücülerde, mesajlaşma davranışındaki en büyük

varyans (%20), dikkat dağınıklığı hissinin düşük olmasıyla açıklanırken; kadın sürücülerde bu davranış daha çok cep telefonu bağımlılığı (%10,4) ve riskli davranış eğilimleri (%9,9) ile ilişkilendirilmiştir.

Kişilik özelliklerine ilişkin çalışmalar ise görece az sayıda olmakla birlikte, genellikle Beş Büyük Kişilik Modeli (John & Srivastava, 1999) ve dürtüsellik üzerine odaklanmıştır. Deneyime açıklık, dışadönüklük, nevroitiklik ve sorumluluk gibi kişilik boyutları, özellikle genç sürücülerde, sürüş sırasında arama yapma ve mesajlaşma davranışlarıyla pozitif ilişkilendirilmiştir (Bianchi & Philips, 2005; Parr vd., 2016; Schroeder & Sims, 2015; Ehrenberg vd., 2008). Buna karşılık, uyumluluk değişkeni bu davranışla negatif ilişki göstermiştir (Parr vd., 2016; Ehrenberg vd., 2008). Dürtüsellik de dikkat dağınıklığı ile ilişkili önemli bir kişilik özelliği olarak öne çıkmaktadır. Dürtüsellik, davranışın olası risklerini küçümseme eğilimi ile tanımlanmakta (Dawe vd., 2004) ve diğer riskli sürüş davranışlarında da rol oynamaktadır (Bıçaksız & Özkan, 2016). Birçok çalışma dürtüsellüğün, araç kullanırken mesajlaşmayı artırdığı yönünde bulgular sunmuştur (örneğin Brown vd., 2021; Struckman-Johnson vd., 2015).

Sosyo-bilişsel faktörler açısından, sürücülerin büyük çoğunluğu cep telefonu kullanımının riskli olduğunu kabul etse de bu risk algısı çoğu zaman davranışı engellememektedir (Prat vd., 2015). Bazı çalışmalar yüksek risk algısının bu davranışı azaltabileceğini gösterirken (Beck vd., 2016), diğer çalışmalar risk algısıyla davranış arasında anlamlı ya da beklenenin tersine pozitif ilişkiler bulmuştur (Prat vd., 2015; Dillow vd., 2015). Bu çelişkili bulgular, bu davranışın altında yatan psikolojik süreçlerin karmaşık olduğunu göstermektedir.

Bu karmaşıklığı anlamak için araştırmacılar planlı davranış teorisi (PDT; Ajzen, 1991) ve prototip isteklilik modeli (PİM; Gibbons vd., 1998) gibi teorik modeller çerçevesinde tutumlar, normatif inançlar, kontrol inançları ve prototip algıları gibi birçok sosyo-bilişsel faktörü incelemiştir. PDT kapsamında yapılan çalışmalar, olumlu tutumlar ve akran onayının cep telefonu kullanım niyetinin en güçlü belirleyicileri olduğunu göstermektedir. Ancak algılanan davranış kontrolü değişkenine ilişkin bulgular çelişkilidir. Nemme ve White (2010), sürücülerin bu

davranışı gerçekleştirme yeterliliğine inansalar da bu inancın gerçek davranışı öngörmediğini belirtmiştir. Bu durum, cep telefonu kullanımının daha çok tepkisel ya da otomatik süreçlerle gerçekleştiğine işaret ediyor olabilir.

PİM çerçevesindeki çalışmalar ise tutum ve normatif inançlara ek olarak, prototip algılarının da bu davranışı açıklamada önemli olduğunu ortaya koymuştur. Kişinin kendisine benzer ve olumlu olarak değerlendirdiği prototip algıları, sürüş sırasında cep telefonu kullanma istekliliğiyle anlamlı şekilde ilişkilidir. Bu bulgu, PDT'deki kontrol inancı ile gerçek davranış arasındaki çelişkili ilişkiyi de açıklayabilir. PİM'e göre, sürüş sırasında cep telefonu kullanımı, daha çok tepkisel bir süreçtir (Preece vd., 2018); bu nedenle öz-yeterlilik gibi akılcı değerlendirmeler, gerçek davranışı doğrudan öngörmeyebilir.

Bu modellerin yanı sıra, alışkanlık da sürüş sırasında cep telefonu kullanımını açıklayan önemli bir değişken olarak ele alınmıştır. Erken dönem çalışmalarda alışkanlık, geçmiş davranış sıklığıyla ölçülmüştür. Bu çalışmalar, cep telefonu kullanımının sık tekrarlanmasının dikkat dağınıklığına neden olan davranışlarla ilişkili olduğunu göstermiştir (Shevlin & Goodwin, 2019; Bazargan-Hejazi vd., 2017). Daha güncel çalışmalar ise alışkanlığı otomatik davranış olarak kavramsallaştırmakta ve bu alışkanlığın sürüş sırasında cep telefonu kullanımını da öngördüğünü ortaya koymaktadır (Demir vd., 2023; Hansma vd., 2020). Bu da sürüş sırasında cep telefonu kullanımının zamanla otomatikleşebileceğini göstermektedir.

Genel olarak önceki çalışmalar, sürüş sırasında cep telefonu kullanımının arkasındaki dikkat dağınıklığının çok boyutlu bir yapıda olduğunu ortaya koymaktadır. Bu nedenle, davranışın altında yatan farklı psikolojik süreçlerin, çeşitli kuramsal çerçeveler ve modeller aracılığıyla daha ayrıntılı biçimde incelenmesi gerekmektedir. Bu tür bir yaklaşım, daha etkili müdahale stratejileri geliştirmek için önemli katkılar sunabilir.

Planlı Davranış Teorisi'ni (PDT; Ajzen, 1991) modeli çerçevesinde algılanan davranış kontrolü, tutumlar ve öznel normlar niyetin ve niyet ve algılanan davranış kontrolü de davranışın doğrudan bir yordayıcısı olarak işlev görür. Sağlıkla ilişkili

davranışları açıklamak amacıyla yaygın olarak kullanılan modellerden biri olan Planlı Davranış Teorisi'nin (PDT) hem özgün hem de genişletilmiş versiyonları, sürüş sırasında cep telefonu kullanımına bağlı dikkat dağınıklığını incelemek için birçok çalışmada kullanılmıştır. Tutumlar ve öznel normların, sürücülerin niyetlerini (Okati-Aliabad vd., 2024; Nemme & White, 2010; Tian & Robinson, 2017; Wang, 2016) ve dikkat dağınıklığına yol açan cep telefonu kullanımını (Okati-Aliabad vd., 2024; Demir vd., 2023; Hansma, 2020) yordadığı gösterilmiştir. Özellikle, çevredeki kişilerin bu davranışları onaylaması ve kabul etmesi, sürücülerin bu tür davranışlara yönelme olasılığını anlamlı şekilde artırmaktadır. Benzer şekilde, algılanan davranış kontrolü de sürüş sırasında cep telefonu kullanımı ve mesajlaşma niyetiyle ilişkilendirilmiştir (Demir vd., 2023; Okati-Aliabad vd., 2024; Prat vd., 2015; Przepiorka vd., 2018). Ancak, Nemme ve White (2010), algılanan davranış kontrolünün sürüş sırasında mesajlaşma davranışını öngördüğünü kabul etmekle birlikte, bir hafta sonra yapılan ölçümde bu değişkenin gerçek davranışla ilişkili olmadığını belirtmiştir. Çünkü mesajlaşma, gönüllü bir davranıştır; yani birey, davranış üzerindeki kontrolüne inanıyor olsa bile, bu davranıştan bilinçli olarak kaçınmayı tercih edebilir.

Gibbons vd. (1998), özellikle riskli durumları değerlendirmede yetersiz kalan ergenler arasında, tüm riskli davranışların bilinçli ve mantıklı karar verme süreçlerinin sonucu olmadığını açıklamak amacıyla Prototip İsteklilik Modeli'ni (PİM) ortaya koymuşlardır. Bu modele göre bireyler, bazı durumlarda karşılına çıkan riskli davranış fırsatlarına ani ve tepkisel şekilde yanıt verebilirler. PİM, iki ayrı davranış yolunu içeren çift süreçli bir model olarak işler: planlı (akılcı) yol ve sosyal-tepkisel yol. Planlı yol, Planlı Davranış Teorisi (PDT) ile uyumlu şekilde, tutumlar ve öznel normların davranışın temel belirleyicisi olan niyetleri etkilediğini öne sürer. Öte yandan sosyal-tepkisel yol; tutumların yanı sıra, bireyin kendine benzer gördüğü prototiplere ilişkin algılar ve davranışa yönelik isteklilik gibi faktörleri temel alır. PİM'in sürüş sırasında cep telefonu kullanımını anlamada faydalı bir model olduğu kanıtlanmıştır. Preece vd. (2018), davranışa yönelik istekliliğin hem araç kullanırken hem de araç dururken mesajlaşma davranışını yordadığını göstermiştir. Ayrıca olumlu tutumlar ve olumlu prototip algılarının, genç sürücülerin bu davranışa yönelik istekliliğini artırdığını belirtmişlerdir. Benzer

şekilde, Bazargan-Hejazi vd. (2017) da genç sürücüler arasında sürüş sırasında mesajlaşmaya yönelik istekliliği incelemiş ve algılanan davranış kontrolü ile niyet arasındaki ilişkide, niyetin anlamlı bir aracı değişken olduğunu bulmuşlardır. Rozario vd. (2010) ise PDT modeline davranışsal istekliliği entegre ederek, öznel normların özellikle arkadaşlarla araç kullanırken cep telefonu kullanma istekliliğini yordadığını, ancak yalnızken bu ilişkinin daha zayıf olduğunu raporlamışlardır. Genel olarak bu çalışmalar, sürüş sırasında cep telefonu kullanımının planlı olmaktan çok tepkisel bir davranış olabileceğini göstermekte; bu da Walsh ve White'ın (2006) cep telefonu kullanımının çoğunlukla plansız ve kendiliğinden gelişen bir davranış olduğu yönündeki görüşüyle örtüşmektedir.

Alışkanlık, bireylerin belirli bir davranışı tekrar etmeleri ve istikrarlı bir bağlamda bu davranıştan ödül almaları sonucunda oluşan ipucu-tepki ilişkileriyle tanımlanır (Gardner, 2015; Wood & Rünger, 2016). Bu ipucu-tepki ilişkisi başlangıçta niyetler ve hedefler aracılığıyla gelişebilir. Ancak zamanla, bu istikrarlı bağlam, niyet ya da bilinçli bir hedef olmaksızın davranışı tetikleyebilir hale gelir (Mazar & Wood, 2018). Alışkanlığı ölçmede en yaygın kullanılan yöntemler, alışkanlığın iki temel özelliğini bir araya getirir: davranışın sıklığı ve istikrarlı bir bağlamda gerçekleşmesi. Bu ölçümler, bir davranışın sabit bir bağlamda tekrar edilmesinin zamanla alışkanlığa dönüştüğü varsayımına dayanır. Ancak, alışkanlığı geçmiş davranışa dayanarak ölçmenin, aslında alışkanlığı yansıtmayan başka faktörleri de kapsadığı öne sürülmüştür (Ajzen, 2002). Bu tür ölçümler ayrıca alışkanlığın en temel özelliği olan otomatikliği yakalayamamaktadır. Bu eksikliği gidermek amacıyla Verplanken ve Orbell (2003), alışkanlık davranışındaki otomatikliği ve bireyin bu davranışla özdeşleşmesini yakalayabilmek için Öz-Bildirimli Alışkanlık Ölçeği'ni geliştirmiştir. Bu ölçek, geçmiş davranışa dayalı ölçümlerin içinde saklı kalabilecek diğer etkileri de dikkate almak üzere tasarlanmıştır. Ölçeğin ilk versiyonu, alışkanlıkların özelliklerine dayanılarak geliştirilmiştir: tekrar geçmişi, davranış kontrolündeki zorluk, farkındalık eksikliği, verimlilik ve davranışla özdeşleşme. Başlangıçta, alışkanlıkların niyetten bağımsızlığı özelliği ölçekte yer almamıştır. Ancak LaRose'un (2010) eleştirileri doğrultusunda, geçmiş davranış sıklığını ölçen maddeler çıkarılmış ve davranışın niyet olmadan gerçekleşmesini yansıtan bir madde eklenmiştir. Ölçeğin son hali, sigara ve alkol kullanımı (Orbell & Verplanken, 2010),

beslenme ve fiziksel aktivite (Gardner vd., 2012), riskli sürücü davranışları (Demir vd., 2023; Lheureux vd., 2016) gibi birçok alanda alışkanlıkların değerlendirilmesinde etkili bir araç olduğunu kanıtlamıştır.

Sürüş sırasında cep telefonu kullanımının bireyin niyetiyle ilişkili olduğuna dair güçlü kanıtlar bulunmakla birlikte (örneğin, Demir vd., 2023), bazı çalışmalar, cep telefonu kullanım alışkanlıklarının bu davranışa dönüşebileceğini ortaya koyarak, sürüş sırasında cep telefonu kullanımının otomatik olup olamayacağı sorusunu gündeme getirmiştir. Bu konuda yapılan ilk çalışmalardan birinde Bayer ve Campbell (2012), otomatik olarak mesajlaşan genç yetişkinlerin araç kullanırken daha sık mesajlaştığını bulmuştur. Bu bulgular, sürüş sırasında cep telefonuna bağlı dikkat dağınıklığının otomatik doğasına işaret etmektedir. Benzer şekilde Panek vd. (2015), otomatiklik ve farkındalık düzeylerinin hem araç kullanırken hem de yürürken mesajlaşma üzerindeki etkisini incelemiş; otomatik mesajlaşma davranışının bu davranışların sıklığıyla pozitif ilişkili olduğunu, farkındalığın bir boyutu olan “bilinçli farkındalıkla hareket etme”nin ise negatif ilişkili olduğunu göstermiştir. Bu durum, bu tür davranışların farkındalık dışında gerçekleştiğini ve alışkanlıkların özellikle “farkında olmama” özelliğiyle tehlikeli mesajlaşma davranışında etkili olduğunu göstermektedir (Bargh, 1992; Gardner vd., 2012). Ayrıca, Moore ve Brown (2019), alışkanlık düzeyindeki mesajlaşma davranışı, bireysel öz-düzenleme kapasitesi, kişisel farkındalık ve araç kullanırken mesajlaşma arasındaki ilişkileri incelemiştir. Alışkanlık düzeyindeki mesajlaşma davranışının, öz-düzenleme ile sürüş sırasında mesajlaşma arasındaki ilişkide aracı değişken olduğu bulunmuştur. Bu da öz-düzenleme kapasitesi düşük olan sürücülerin bu alışkanlığı geliştirmeye ve sürüş sırasında mesajlaşma davranışına daha yatkın olduklarını göstermektedir. Ayrıca, farkındalık düzeyinin bu ilişkiyi anlamlı şekilde zayıflattığı; yani düşük düzeyde farkındalığa sahip bireylerin sürüş sırasında alışkanlıkla mesajlaşmaya daha meyilli olduğu ortaya konmuştur. Son dönemde yapılan çalışmalar, genel cep telefonu kullanım alışkanlıklarına odaklanmaktadır. Hansma vd. (2020), alışkanlık gücünün sürüş sırasında cep telefonu kullanımına etkisini incelemiş ve bu ilişkinin PDT değişkenleri (tutum, öznel norm, algılanan davranış kontrolü ve öz-yeterlik) kontrol edildikten sonra bile anlamlı kaldığını ortaya koymuştur. Bu bulgu, sürüş sırasında cep telefonu kullanımının sadece akılcı

süreçlerle değil, otomatik süreçlerle de ilişkili olabileceğini göstermektedir. Bu otomatik süreçlerin, akılcı bilişsel süreçleri bastırabileceği veya onlarla etkileşim içinde olabileceği düşüncesinden yola çıkarak, Demir vd. (2023) otomatik sürece dair yolları modellemiştir. Daha önceki bulgularla uyumlu şekilde, alışkanlık gücü PDT değişkenlerinin ötesinde davranışı yordamakta; dolayısıyla bu davranışın tamamen bilinçli ve planlı olmayabileceğini, otomatik özellikler de taşıyabileceğini göstermektedir. Ayrıca, alışkanlık gücünün tutumları, öznel normları ve algılanan davranış kontrolünü pozitif yönde etkilediği bulunmuştur. Bu durum, davranış otomatik olmasa bile, alışkanlıkların akılcı süreçleri etkileyerek davranışa katkı sağlayabileceğini düşündürmektedir.

Tüm bu bulgular, sürüş sırasında cep telefonuna bağlı dikkat dağınıklığının karmaşık doğasını ve bu davranıştaki alışkanlık eğilimlerinin önemini vurgulamaktadır. Bu nedenle, Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı gibi bir davranışın nasıl gerçekleştiğini anlamak için, birden fazla davranış teorisini ve yaklaşımını birleştiren daha bütüncül ve çok boyutlu bir yaklaşım gereklidir.

Benzer hedeflere sahip olması nedeniyle birçok çalışmada Planlı Davranış Teorisi (PDT) ile Prototip İsteklilik Modeli (PİM) birleştirilerek bütüncül bir yaklaşım benimsenmiştir. Örneğin Ravis vd. (2006), bu bütünleşik modeli hem sağlık koruyucu davranışlarda (örneğin egzersiz, uyku, kahvaltı yapma) hem de sağlık açısından riskli davranışlarda (örneğin alkol tüketimi, yağlı yiyecek tüketimi, sigara kullanımı) test etmiş ve PİM değişkenlerinin (prototip algısı ve tanımlayıcı normlar) PDT'ye eklenmesinin açıklanan varyansı her bir davranışta ortalama %5 oranında artırdığını bulmuştur. Bu da PİM değişkenlerinin niyet üzerinde önemli birer yordayıcı olduğunu göstermektedir. Sonraki bir çalışmada, Ravis vd. (2011), PDT modeline davranışsal isteklilik değişkenini ekleyerek genç ve yaşlı sürücülerin alkollü araç kullanma davranışlarını açıklamaya çalışmış ve modelin sırasıyla genç sürücülerde %59, yaşlı sürücülerde %23 oranında varyansı açıkladığını raporlamıştır. Ayrıca algılanan davranış kontrolü ile öznel normların istekliliği yordadığını göstermişlerdir; bu iki değişken, orijinal PİM modelinde yer almamaktadır (Gibbons vd., 1998). Bu çalışmalar, iki farklı davranış modelinin birleştirilmesinin, davranışların psikolojik süreçlerini daha ayrıntılı şekilde anlamaya ve sosyo-bilişsel

faktörlerin karar verme süreçlerini nasıl şekillendirdiğini ortaya koymaya olanak sağladığını ve böylece daha uygun müdahalelerin geliştirilmesine katkı sunduğunu göstermektedir.

Benzer bir bütüncül yaklaşım, trafik güvenliği alanındaki çalışmalarda da gereklidir. Bazı araştırmalar riskli sürücü davranışlarını test etmek için bu modellerin yapılarını bütünleştirmiştir. Örneğin, Demir vd. (2019), yaya kural ihlallerini açıklamak için her iki modeli birlikte kullanmış ve bu birleşik modelin, standart PDT'ye kıyasla davranışın varyansını %23 oranında daha fazla açıkladığını bulmuştur. Ayrıca, niyet yerine istekliliğin yaya ihlallerini daha güçlü bir şekilde yordadığını ve bu tür ihlallerin daha çok kendiliğinden gerçekleşen davranışlar olduğunu belirtmişlerdir. Wang ve Xu (2021) ise genç sürücülerin şerit değiştirme davranışına devam etme konusundaki niyetlerini ve istekliliklerini incelemiş, algılanan davranış kontrolünün isteklilik üzerinde anlamlı bir yordayıcı olduğunu göstermiştir. PDT çerçevesinde öz-yeterlik, niyet ve davranışın temel belirleyicisi olarak tanımlansa da (Ajzen vd., 2011), bu bulgu algılanan davranış kontrolünün tepkisel karar alma süreçlerini de tetikleyebileceğini göstermektedir. Bu çalışmalar, bir davranışın arkasındaki mekanizmaları derinlemesine anlamak için kapsamlı bir yaklaşımın önemini vurgulamaktadır.

Daha önce de belirtildiği üzere, bir davranış sadece akılcı ya da tepkisel değil, aynı zamanda otomatik de olabilir. Bu nedenle, davranış modellerine alışkanlık boyutunun dahil edilmesi, araştırmacılara belirli bir davranışın daha bütüncül yönünü yakalama fırsatı verir. Geleneksel alışkanlık yaklaşımına göre, alışkanlıklar karşıt niyetleri bastırarak davranışları sürekli olarak harekete geçirebilir (Hall & Fong, 2007). Ancak sağlık davranışlarına yönelik alışkanlık çalışmaları bazı çelişkili bulgular sunmuştur (de Bruijn vd., 2009; Gardner, 2015). Örneğin, Quinn vd.'nın (2010) günlük tüketim üzerine yaptığı bir çalışmada, katılımcılar sabit bağlamlarda gerçekleştirdikleri istenmeyen davranışları tetikleyen ipuçlarını dikkatle izleyerek bu davranışları engelleyebildiklerini belirtmişlerdir. Bu bulgu, alışkanlıkların yeterli irade gücü veya öz-düzenleme becerisiyle bastırılabilceğini göstermektedir (Neal vd., 2012).

Gardner (2015), alışkanlıkla ilgili davranışları anlamak için daha geniş yelpazede paradigma, tasarım ve yöntemlerin kullanılması gerektiğini öne sürmüş ve alışkanlığın, bir bağlamın ipucu öğrenilmiş davranışa yönelim oluşturduğu bir süreç olarak değerlendirilmesi gerektiğini savunmuştur. Bu süreç, başka kaynaklardan gelen dürtüler ya da engellemelerle yarışabilir veya onlarla birleşebilir. Dolayısıyla, çok güçlü alışkanlıklar bile bazı koşullarda başka kuvvetlerin etkisiyle akılcı kontrol altına alınabilir. Alışkanlığın Planlı Davranış Teorisi (PDT) ve Prototip İsteklilik Modeli (PİM) gibi akılcı modellere entegrasyonu, otomatik süreçlerden akılcı sürece geçişi açıklamak açısından değerli kanıtlar sunabilir.

Alışkanlık gücünün sürüş sırasında cep telefonu kullanımını açıklamadaki rolünü inceleyen iki çalışma (Hansma vd., 2020; Demir vd., 2023), alışkanlık gücünün akılcı süreçlerle etkileşerek bu davranışı yordayabildiğini ve diğer yapıların yordayıcılığını ortadan kaldırabildiğini göstermektedir. Ancak bu çalışmaların bazı sınırlılıkları vardır. Hansma vd. (2020), PDT'nin yapıları kontrol edilerek alışkanlık gücünün etkisini incelemiş, ancak niyet değişkenini modele dahil etmemiştir. Ayrıca alışkanlığın diğer yapıların üzerindeki etkisine dair herhangi bir bulguya yer verilmemiştir. Bu durum, alışkanlığın niyetten bağımsız etkisini sorgulamaya açık bırakmaktadır. Demir vd. (2023), alışkanlığın tutum, öznel norm ve algılanan davranış kontrolü gibi PDT değişkenleri üzerindeki etkisini göstererek bu sınırlılığın bir kısmını ele almış, ancak onlar da niyet değişkenini dahil etmemiştir. Dolayısıyla, alışkanlıkların gerçekten niyetten bağımsız bir etkisi olup olmadığı sorusu hâlâ tam olarak yanıtlanmamıştır. Sürüş sırasında cep telefonu kullanımının her zaman niyetli bir davranış olmadığını iddia edebilmek için, alışkanlıkların niyet üzerindeki etkisinin de bütüncül bir PDT modeli çerçevesinde değerlendirilmesi gerekmektedir.

Her ne kadar alışkanlık ve isteklilik farklı kavramlar olsa da ikisi de tepkisel süreçleri yansıtır. Alışkanlıklar otomatik, ipucu-tetikli dürtülere dayanırken (Gardner, 2015), isteklilik belirli koşullara verilen anlık tepkileri ifade eder (Strack vd., 2004). Alışkanlıkların erteleme becerisini ve dürtü kontrolünü olumsuz etkilediği (Wilmer & Chein, 2016) ve dürtüsellik ile pozitif ilişkili olduğu (Yeomans vd., 2023) bilinmektedir. Bu da alışkanlıkların özellikle alışkanlığın geliştiği koşullara benzer durumlarda bireylerin tepkisel davranışlarını etkileyebileceğini düşündürmektedir.

Ohtomo (2013), sađlıksız yeme alışkanlıklarının bireylerin niyetlerini deđil, istekliliklerini ve davranışlarını doğrudan etkilediđini göstererek, alışkanlık gücünün davranış kontrol sürecini deđiřtirdiđini öne sürmüřtür. Güçlü alışkanlık eğilimleri, niyet temelli kontrolü bastırabilir ve bireylerin belirli koşullarda otomatik ya da tepkisel olarak davranmasına neden olabilir. Ancak sađlık alanındaki bazı bulgular bu konuda tutarsızlık göstermektedir. Ohtomo ve Kimura (2022), COVID-19'a karřı alınan önleyici davranışlara iliřkin alışkanlıkların, bireylerin bu davranışlara yönelik isteklilikleriyle deđil, niyetleriyle iliřkili olduđunu ortaya koymuřtur. Bu çalıřma, karřıt davranıřa yönelik istekliliđi ve önleyici davranıřa yönelik alışkanlık gücü ile niyeti ölçtüđü için, alışkanlık gücünün isteklilikle iliřkili olmadıđını deđil, karřıt davranıřın engellenmesini öngörmediđini ileri sürmektedir.

Trafik güvenliđi alanında, alışkanlık gücü ve isteklilik kavramlarını birlikte ele alan bir çalıřma yapılmamıřtır. Bu çalıřmanın kapsamında, sosyal medya kullanımına iliřkin alışkanlık gücünün, sürüş sırasında bu davranıřı gerçekleřtirmeye yönelik isteklilikle iliřkili olabileceđi varsayılmaktadır. Sosyal medya kullanımının yüksek düzeyde alışkanlık içeren bir davranıř olması (Meier vd., 2023; Turel & Serenko, 2017), bireylerin belirli koşullar altında bu davranıřı sergileme eğilimini etkileyebilir. Örneđin, gelen bir bildirim sesi ya da can sıkıntısı hissi, sürüş sırasında bireyin en sık kullandıđı ya da ödöl aldıđı sosyal medya uygulamasına yönelme dürtüsünü tetikleyebilir. Bu dürtüsel davranıřlar, özellikle trafik ačíısından daha az riskli durumlarda daha olası hale gelebilir.

Bu çalıřma, Sosyal Medya Kaynaklı Sürücü Dikkat Dađınıklığı davranıřının ne derece akılcı, tepkisel ve alışkanlık temelli olduđunu ortaya koymayı; her bir süreci hem ayrı ayrı hem de bütünleřik bir çerçevede inceleyerek anlamayı amaçlamaktadır. Bu amacı gerçekleřtirmek üzere, çalıřma Sosyal Medya Kaynaklı Sürücü Dikkat Dađınıklığı (SMKSDD) davranıřını açıklamak için üç kuramsal çerçeveyi bir arada kullanmaktadır: akılcı süreci incelemek için Planlı Davranıř Teorisi (PDT), tepkisel süreci yakalamak için Prototip İsteklilik Modeli (PİM), otomatik ve düşünölmeden gerçekleřen katılımı ölçmek için alışkanlık gücü.

Yöntem

Çalışmayı toplamda 673 kişi tamamlamış, eksik yanıtlar veya hatalı veri girişleri nedeniyle 257 katılımcı analiz dışı bırakılmıştır. Nihai analiz 416 katılımcı ile yürütülmüştür. Katılımcıların yaş ortalaması 31.9'dur (SS = 10.9) ve cinsiyet dağılımı dengelidir (%49 kadın, %51 erkek). Katılımcıların %47,8'i neredeyse her gün araç kullandığını belirtmiştir. Çoğunluk, aktif (%63) ve pasif (%72,6) kazalara karışmadığını bildirmiştir. Katılımcıların %39'u günlük 3–5 saat, %24,5'i ise 3–5 saat arasında sosyal medya kullandığını ifade etmiştir. Etik onay Orta Doğu Teknik Üniversitesi Etik Kurulu'ndan alınmıştır. Katılımcılar çevrim içi anket, sosyal medya ve ODTÜ Psikoloji Bölümü öğrencilerine yönelik SONA sistemi aracılığıyla gönüllü olarak araştırmaya dahil edilmiştir.

Katılımcılardan çalışmaya başlamadan önce bilgilendirilmiş onam alınmış, ardından demografik bilgiler, sosyal medya kullanım alışkanlığı, sürüş sırasında sosyal medya kullanım sıklığı ve Planlı Davranış Teorisi (PDT) ile Prototip İsteklilik Modeli (PİM) çerçevesinde belirlenen değişkenleri içeren anket formunu doldurmaları istenmiştir.

PDT kapsamında tutumlar, öznel normlar, algılanan davranış kontrolü ve niyet ölçülmüştür. PİM kapsamında ise prototip benzerliği, prototipe yönelik olumlu algılar ve isteklilik değerlendirilmiştir. Her biri güvenilirlik düzeyleri yüksek ölçeklerle ölçülmüştür (Cronbach's alfa değerleri .71 ile .89 arasında değişmektedir). Tutumlar, sürüş sırasında sosyal medya kullanımına yönelik algıları yansıtan beş çift sıfatlı madde ile değerlendirilmiştir. Öznel normlar, kişinin çevresindeki önemli kişilerin bu davranışı sergileyip sergilemediği ve onaylayıp onaylamadığına ilişkin dört maddeyle ölçülmüştür. Algılanan davranış kontrolü, bu davranışın kolaylığı ve kontrol edilebilirliğine dair dört maddeden oluşmuştur. Niyet, sürüş sırasında sosyal medya kullanmayı planlama düzeyini ölçen iki maddeyle değerlendirilmiştir. PİM çerçevesindeki prototip benzerliği ve olumlu prototip algısı, kişinin sürüş sırasında sosyal medya kullanan tipik bireyle kendisini ne kadar özdeşleştirdiğini ve bu bireyleri ne derece olumlu değerlendirdiğini ölçen dört maddeyle belirlenmiştir. İsteklilik, sürücünün belirli durumlarla karşılaştığında bu davranışı gerçekleştirme isteğini ölçen iki maddeyle değerlendirilmiştir.

Sosyal medya kullanım alışkanlığı, Öz-Bildirimli Alışkanlık Ölçeği aracılığıyla ölçülmüştür. Bu ölçek, sosyal medya içeriklerine göz atma ve gelen bildirimleri kontrol etme gibi davranışları ne derece otomatik gerçekleştirdiğini ölçen 10 maddeden oluşur ve 7'li Likert tipi yanıtlar içermektedir. Ölçek Türkçeye araştırmacı ve tez danışmanı tarafından çevrilmiş, ardından farklı eğitim düzeylerinden üç kişi tarafından anlaşılabilirlik açısından değerlendirilmiştir. Son hali yüksek düzeyde güvenilirlik göstermiştir (Cronbach's alfa = .95).

Sürüş sırasında sosyal medya kullanım sıklığı, iki maddeyle (içerik gezme ve bildirim kontrolü) ölçülmüş; her birine 5'li Likert ölçeği üzerinden yanıt verilmiştir. Güvenilirlik düzeyi kabul edilebilir düzeydedir (Cronbach's alfa = .76).

Demografik bilgi formunda ise katılımcıların yaş, cinsiyet, sürüş sıklığı, ehliyet yılı, son bir yılda gidilen kilometre, aktif ve pasif kaza sayısı, trafik cezası alma durumu, günlük mobil telefon ve sosyal medya kullanım süreleri yer almıştır. Sürüş sıklığı ve günlük kullanım süreleri 5'li derecelendirme ölçekleriyle toplanmıştır.

Sonuçlar

Veri analizine başlamadan önce veri seti düzenlenmiş ve temizlenmiştir. Yaş, yıllık kilometre, yaşam boyu kilometre, kaza ve ceza sayıları gibi metin formatındaki değişkenler sayısal forma dönüştürülmüştür. Temizleme işlemi tamamlandıktan sonra faktör skorları hesaplanmıştır. SPSS 23 sürümünde faktör analizi, ikili korelasyon analizi ve hiyerarşik regresyon analizleri gerçekleştirilmiş; yol analizleri ise JAMOVİ 2.3 sürümünde yürütülmüştür. Ölçekler arası farklılıkları kontrol edebilmek adına tüm değişkenler z-skorlarına dönüştürülerek analiz edilmiştir.

Sosyal medya kullanım alışkanlığını ölçmek için kullanılan Öz-Bildirimli Alışkanlık Ölçeğinin Türkçe çevirisinin faktör yapısı incelenmiş ve özgün yapı ile uyumlu olup olmadığı değerlendirilmiştir. İlk olarak, KMO örneklem yeterliliği .934 olarak bulunmuş ve mükemmel düzeyde uygunluk göstermiştir. Bartlett testi de anlamlı çıkmıştır ($\chi^2(190) = 7677.63$, $p < .001$), bu da korelasyon matrisinin faktör analizi için uygun olduğunu göstermektedir. Dört faktörün özdeğeri birin üzerinde olsa da

özdeğerlerdeki keskin düşüş ve çizgi grafiği tek faktörlü yapıyı desteklemiştir. Bu nedenle analizler alışkanlık gücünü temsil eden tek faktör üzerine sabitlenmiştir. Bu faktör varyansın %55,2'sini açıklamıştır. Faktör yükleri .63 ile .84 arasında değişmiştir. En yüksek yüklenen madde “Bildirimleri kontrol etmek için telefonu elime almam farkında olmadan yaptığım bir şeydir” olmuştur. En düşük yüklenen madde ise “Telefonumu elime alıp sosyal medyada zaman geçirmek günlük rutinimin bir parçasıdır” ifadesidir. Faktörün güvenilirliği oldukça yüksektir ($\alpha = .96$).

Genel olarak, bu sonuçlar ölçeğin güçlü bir tek boyutlu yapıya sahip olduğunu ve orijinal formuyla tutarlı olduğunu göstermektedir. Açıklanan varyans oranı, Verplanken ve Orbell'in (2003) çalışmasında bildirilen %47,32 ile %65,56 aralığı içindedir. İç tutarlılığı ve faktör yükleri oldukça yüksek olan bu ölçek, Türkiye örnekleminde sosyal medya kullanımına ilişkin otomatik ve alışkanlık temelli davranışları değerlendirmede güvenilir bir araç olarak öne çıkmaktadır.

Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı (SMKSDD), sosyal medya kullanım alışkanlığı gücü, PDT ve PİM yapılarına ek olarak yaş, cinsiyet, ehliyet yılı, son bir yılda gidilen kilometre ve günlük sosyal medya kullanım süresi gibi demografik değişkenler arasında ikili korelasyon analizleri gerçekleştirilmiştir. Sonuçlara göre, SMKSD; tüm PDT ve PİM yapılarıyla ve alışkanlık gücüyle anlamlı ve pozitif yönde ilişkilidir (alışkanlık gücü $r = .19$; tutum $r = .40$; öznel normlar $r = .33$; algılanan davranış kontrolü $r = .49$; prototip benzerliği $r = .43$; prototip olumlama $r = .45$; niyet $r = .76$; isteklilik $r = .59$). Demografik değişkenlerden son bir yılda gidilen kilometre ile SMKSD arasında negatif bir ilişki bulunmuştur ($r = -.16$), buna karşın günlük sosyal medya kullanımı ile SMKSD arasında pozitif yönde bir ilişki gözlenmiştir ($r = .13$).

Benzer şekilde, SMKSD'ye yönelik niyet değişkeni de PDT, PİM yapıları ve alışkanlık gücüyle pozitif ilişkili bulunmuştur (alışkanlık gücü $r = .21$; tutum $r = .44$; öznel normlar $r = .42$; algılanan davranış kontrolü $r = .52$; prototip benzerliği $r = .51$; prototip olumlama $r = .52$; isteklilik $r = .64$). Ayrıca, son bir yılda yapılan kilometre ile niyet arasında da pozitif ve anlamlı bir ilişki saptanmıştır ($r = .12$).

Öte yandan, SMKSDĐ'ye yönelik isteklilik değışkeni yaşla negatif yönde anlamlı bir ilişki göstermiştir ($r = -.12$), bu da sürücüler yaşlandıkça bu davranışı gerçekleştirmeye yönelik istekliliklerinin azaldığını göstermektedir. İsteeklilik değışkeni ayrıca alışkanlık gücü ($r = .24$), tutum ($r = .52$), öznel normlar ($r = .35$), algılanan davranış kontrolü ($r = .50$), prototip benzerliği ($r = .42$) ve prototip olumlaması ($r = .37$) ile de anlamlı ve pozitif ilişkili bulunmuştur.

Sosyal Medya Kaynaklı Sürücü Dikkat Dağınlıklığının (SMKSDĐ) ne ölçüde alışkanlık temelli (otomatik) olduğunu incelemek amacıyla hiyerarşik regresyon analizi gerçekleştirilmiştir. Modelin ilk adımında yaş, cinsiyet, ehliyet yılı, son bir yılda gidilen kilometre ve günlük sosyal medya kullanımı gibi demografik değışkenler kontrol edilmiştir. İkinci adımda ise sosyal medya kullanımına ilişkin alışkanlık gücü eklenmiştir.

Modelin ilk adımı, SMKSDĐ varyansının %7,7'sini açıklamıştır ($F(5, 410) = 6.87$, $p < .001$). Bu adımda yaş ($\beta = -.46$), ehliyet yılı ($\beta = .43$), son bir yıldaki kilometre ($\beta = .19$) ve günlük sosyal medya kullanımı ($\beta = .16$) SMKSDĐ ile anlamlı ilişkili bulunmuştur. İkinci adımda modele eklenen alışkanlık gücü, varyansın %11,4'ünü açıklamış ($F(6, 409) = 7.33$, $p < .001$) ve SMKSDĐ'yi anlamlı düzeyde artırıcı etkisi olduğu görülmüştür ($\beta = .21$, $p < .001$). Bu bulgu, sürücülerin SMKSDĐ davranışını belirli ölçüde otomatik olarak gerçekleştirebildiğine işaret etmektedir.

Yapısal eşitlik modellemesi (SEM) kullanılarak üç ayrı yol analizi gerçekleştirilmiştir. İlk modelde, Planlı Davranış Teorisi'nin (PDT) Sosyal Medya Kaynaklı Sürücü Dikkat Dağınlıklığı'nı (SMKSDĐ) açıklamadaki rolü test edilmiştir. İkinci modelde, Prototip İsteeklilik Modeli'nin (PİM) SMKSDĐ üzerindeki etkisi incelenmiştir. Son modelde ise PDT ve PİM birleşik olarak kullanılmış, alışkanlık gücü dışsal bir değışken olarak dâhil edilmiştir.

Birinci modelde, PDT çerçevesinde oluşturulan modelin veriye iyi uyum sağladığı görülmüştür ($\chi^2/df = 3.35/2$, $RMSEA = .040$, $CFI = .998$, $TLI = .990$, $GFI = .997$). Modelde niyet değışkeni varyansın %39,6'sını, SMKSDĐ davranışı ise %58,8'ini açıklamıştır. Bulgulara göre SMKSDĐ, hem niyet ($\beta = .694$, $p < .001$) hem de

algılanan davranış kontrolü ($\beta = .126, p < .001$) tarafından anlamlı şekilde yordanmıştır. Niyet değişkeni ise tutum ($\beta = .244, p < .001$), öznel normlar ($\beta = .262, p < .001$) ve algılanan davranış kontrolü ($\beta = .345, p < .001$) tarafından yordanmıştır. PDT yapılarına ait dolaylı etkiler de kuramsal beklentilerle uyumlu şekilde SMKSDD üzerine etkili bulunmuştur. Niyet aracılığıyla SMKSDD'ye en yüksek dolaylı etki, algılanan davranış kontrolü üzerinden gerçekleşmiştir ($\beta = .239, p < .001$).

İkinci modelde, Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı nı (SMKSDD) açıklamak için Prototip İsteklilik Modeli (PİM) kullanılmıştır. Modelin ilk hali veriye iyi uyum göstermemiştir ($\chi^2/df = 77.7/7$, RMSEA = .156, CFI = .94, TLI = .82, GFI = .95). Kuramsal olarak anlamlı görülen yollar (örneğin prototip algılarından niyete doğru) modele eklendikten sonra modelin uyumu anlamlı düzeyde iyileşmiştir ($\chi^2/df = 4.20/4$, RMSEA = .011, CFI = 1.00, TLI = .999, GFI = .997). Bu düzenlemeler sonucunda model, niyetteki varyansın %53,5'ini, isteklilikteki varyansın %38,2'sini ve SMKSDD davranışındaki varyansın %59,7'sini açıklamıştır.

Modelde teorik olarak öngörülen yollar anlamlı bulunmuştur. SMKSDD, hem isteklilik ($\beta = .18, p < .001$) hem de niyet ($\beta = .64, p < .001$) tarafından yordanmıştır. Niyet, tutum ($\beta = .12, p = .006$), öznel normlar ($\beta = .11, p = .003$) ve isteklilik ($\beta = .39, p < .001$) tarafından anlamlı şekilde etkilenmiştir. İsteklilik ise tutum ($\beta = .40, p < .001$), prototip benzerliği ($\beta = .18, p < .001$) ve sınıra yakın bir düzeyde prototip olumlaması ($\beta = .10, p = .051$) ile anlamlı ilişkilidir. Yapılan model modifikasyonları sonucunda, öznel normların istekliliği ($\beta = .15, p < .001$), prototip olumlamasının niyeti ($\beta = .23, p < .001$) ve prototip benzerliğini ($\beta = .11, p < .001$) yordadığı bulunmuştur. Dolaylı etkilere bakıldığında, en yüksek etki isteklilikten niyete ve oradan SMKSDD'ye giden yol üzerinden gerçekleşmiştir ($\beta = .313, p < .001$).

Son modelde, birinci ve ikinci modellerde test edilen tüm yollar ile alışkanlık gücü dışsal bir değişken olarak entegre edilmiştir. Modelin ilk hali veriye yeterli uyum göstermemiştir ($\chi^2/df = 28.5/5$, RMSEA = .106, CFI = .984, TLI = .883, GFI = .984). Modelin uyumunu artırmak amacıyla önerilen modifikasyonlar değerlendirilmiş ve

algılanan davranış kontrolünden istekliliğe bir yol eklenmiştir. Bu düzenlemeden sonra modelin veriye uyumu belirgin biçimde iyileşmiştir ($\chi^2/df = 2.19/4$, RMSEA = .000, CFI = 1.00, TLI = 1.01, GFI = .999). Model, niyetin %54,8'ini, istekliliğin %43,1'ini ve SMKSDD davranışının %60,3'ünü açıklamıştır.

Alışkanlık gücü, tutum ($\beta = .165$, $p < .001$), öznel normlar ($\beta = .130$, $p = .005$), prototip benzerliği ($\beta = .191$, $p < .001$) ve isteklilik ($\beta = .119$, $p = .002$) üzerinde anlamlı ve pozitif etkiler göstermiştir. Diğer değişkenler arasındaki ilişkiler önceki modellerle benzerlik göstermiştir. Niyet; tutum ($\beta = .097$, $p = .022$), öznel normlar ($\beta = .107$, $p = .004$), algılanan davranış kontrolü ($\beta = .137$, $p < .001$), prototip olumlaması ($\beta = .213$, $p < .001$) ve isteklilik ($\beta = .352$, $p < .001$) tarafından anlamlı şekilde yordanmıştır. İsteklilik ise tutum ($\beta = .329$, $p < .001$), öznel normlar ($\beta = .128$, $p = .004$), algılanan davranış kontrolü ($\beta = .234$, $p < .001$) ve prototip benzerliği ($\beta = .106$, $p = .039$) tarafından anlamlı şekilde etkilenmiştir.

Dolaylı etkilere bakıldığında, alışkanlık gücünün SMKSDD üzerindeki en yüksek dolaylı etkisinin önce isteklilik ardından niyet aracılığıyla gerçekleştiği görülmüştür ($\beta = .026$, $p = .007$). Diğer anlamlı bir dolaylı yol ise yalnızca isteklilik aracılığıyla SMKSDD'ye etkidir ($\beta = .019$, $p = .011$). Bu bulgular, alışkanlık gücünün yalnızca doğrudan değil, dolaylı yollarla da Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı davranışını etkileyebileceğini göstermektedir.

Tartışma

Sosyal medya kullanımının sürüş sırasında giderek daha yaygın hale gelmesi, sürücü güvenliği açısından önemli bir sorun olarak ortaya çıkmıştır. Bu çalışmada, bu davranış “Sosyal Medya Kaynaklı Sürücü Dikkat Dağınıklığı” (SMKSDD) olarak adlandırılmıştır. SMKSDD'nin sürücü performansını olumsuz etkilediği bilinmektedir; ancak bu davranışın neden ve nasıl gerçekleştiği üzerine yeterli açıklama bulunmamaktadır. Bu boşluğu doldurmak amacıyla yapılan çalışmada, SMKSDD'nin planlı, tepkisel ve alışkanlık temelli süreçlerle ne ölçüde ilişkili olduğu ve bu süreçlerin nasıl etkileştiği araştırılmıştır.

SMKSDD'nin planlı yönü Planlı Davranış Teorisi (PDT), tepkisel yönü Prototip İsteklilik Modeli (PİM) ile açıklanmış; alışkanlık yönü ise sosyal medya kullanımındaki alışkanlık gücü üzerinden değerlendirilmiştir. Bu üç süreci kapsayan bütünlük bir model kurulmuştur.

Öz-Bildirimli Alışkanlık Ölçeği ile yapılan faktör analizinde sosyal medya kullanımına dair alışkanlığın tek boyutlu bir yapı olduğu doğrulanmıştır. Ölçek, yüksek iç tutarlılık ve açıklanan varyans oranı göstermiştir. En yüksek faktör yükleri, davranışın otomatikliğini vurgulamıştır.

İkili korelasyon analizlerinde, sosyal medya kullanım sıklığının SMKSDS ile pozitif ilişkili olduğu, son bir yıldaki sürüş mesafesinin de benzer şekilde etkili olduğu görülmüştür. SMKSDS ile tutum, öznel normlar, algılanan davranış kontrolü, prototip algısı, niyet ve isteklilik gibi yapılar arasında anlamlı ilişkiler bulunmuştur. SMKSDS'ye en güçlü etkiyi niyet göstermiştir. İsteklilik ikinci sıradadır; alışkanlık gücü ise en düşük ancak anlamlı bir ilişki göstermiştir. Genç sürücüler SMKSDS'ye daha eğilimlidir ve alışkanlık gücü özellikle kadınlarda ve sosyal medyayı daha uzun süre kullananlarda daha yüksektir.

SMKSDS'nin alışkanlıkla ilişkisini test eden analizde, sosyal medya kullanımında yüksek alışkanlık düzeyine sahip bireylerin SMKSDS davranışı sergileme olasılığının daha yüksek olduğu görülmüştür. Bu, SMKSDS'nin belirli koşullarda otomatik olarak ortaya çıkabileceğini göstermektedir.

PDT modeliyle yapılan yol analizinde niyet en güçlü yordayıcı olarak öne çıkmıştır. Tutum, öznel normlar ve algılanan kontrol, niyeti anlamlı şekilde etkilemiştir. Niyetin davranışı öngörme gücü, SMKSDS'nin çoğunlukla bilinçli ve planlı bir davranış olduğunu düşündürmektedir. Algılanan kontrolün etkisi, sürücülerin çoklu görev yapabilme becerilerine duydukları aşırı güvenle ilişkili olabilir.

PİM ile yapılan modelde yine en güçlü belirleyici niyet olmuştur. Ancak isteklilik de SMKSDS'ye dolaylı yoldan etki etmiş, bu da davranışın belirli durumlara tepki olarak ortaya çıkabileceğini göstermiştir. PİM modeli kapsamında tutum, öznel

normlar, prototip benzerliđi ve olumlamaşı, niyet ve isteklilik üzerinde anlamlı etkiler göstermiştir. SMKSDĐ'nin, bireylerin benzer gördükleri veya olumladıkları kişilerle özdeşleşme yoluyla da ortaya çıkabileceđi bulunmuştur.

Bütünleşik modelde PDT, PİM ve alışkanlık gücü birlikte test edilmiştir. Alışkanlık gücünün doğrudan etkisi anlamlı olmamakla birlikte, dolaylı etkiler göstermiştir. Alışkanlık gücü, tutum, öznel norm, prototip benzerliđi, isteklilik ve niyeti dolaylı olarak etkilemiş, bu da alışkanlıkların davranışı doğrudan deđil, bilişsel değerlendirmeleri şekillendirerek etkilediđini göstermiştir.

Çalışmanın sınırlılıkları arasında öz-bildirim ölçümlerinin kullanılması, gerçek sürüş davranışlarının gözlenememesi ve kesitsel yapısı yer almaktadır. Gelecekteki araştırmalar, deneysel veya uzunlamasına tasarımlar ve doğal gözlemlerle desteklenmelidir. Ayrıca duygusal durumların ve bağlamsal faktörlerin de SMKSDĐ üzerindeki etkileri incelenmelidir.

Uygulama açısından, niyetin SMKSDĐ'yi en güçlü şekilde öngördüğü göz önünde bulundurularak, farkındalık kampanyaları, sosyal normları hedefleyen müdahaleler ve teknolojik çözümler önerilmiştir. Telefon erişimini sınırlayan uygulamalar veya sürücüler sosyal medya kullanımından caydıran teknolojiler, etkili müdahale yöntemleri olabilir. Politika düzeyinde ise, daha sıkı yaptırımlar ve teknolojik müdahaleler önerilmiştir. SMKSDĐ'nin azaltılması için davranış bilimi, teknoloji ve mevzuatın bütünleşik biçimde çalışması gerektiđi sonucuna varılmıştır.

Sonuç olarak, bu çalışma Sosyal Medya Kaynaklı Sürücü Dikkat Dağınlıklığı davranışını (SMKSDĐ) planlı, tepkisel ve alışkanlık temelli süreçleri bir arada inceleyerek özgün ve bütüncül bir bakış açısı sunmaktadır. Sürücülerin sosyal medya kullanma kararlarının yalnızca planlı süreçlerle deđil, aynı zamanda durumsal tetikleyiciler ve kökleşmiş alışkanlıklarla da şekillendiđi gösterilmiştir. Bu kapsamlı yaklaşım, sürücü dikkat dağınlıklığı gibi karmaşık davranışların tek bir modelle deđil, birden fazla bilişsel modelin entegrasyonuyla daha iyi açıklanabileceđini ortaya koymuştur. SMKSDĐ'ye götüren yolların belirlenmesi, bu davranışın altında yatan mekanizmaları anlamada kritik bilgiler sunmuştur.

Sonuçlar, SMKSDĐ'de niyetin önemli bir belirleyici olduğunu vurgulamaktadır. Sürücülerin bu davranışa yönelik niyetlerini değiştirmek, güvenli sürüşe yönlendirmede etkili olabilir. Ancak niyet tek başına yeterli değildir. Bazen sürücüler daha önce böyle bir niyetleri olmasa da, anlık koşullar, içsel (örneğin sıkılmak) ya da dışsal (örneğin çok hafif trafik), sebebiyle sosyal medyaya yönelebilmektedir. Bu durum, çevresel koşullara dair anlık algıların SMKSDĐ'ye neden olabileceğini göstermektedir.

Bu araştırmanın önemli bir bulgusu da SMKSDĐ'nin tamamen otomatik bir tepki şeklinde gelişmediğidir. Sosyal medyaya bakma isteği gibi alışkanlık temelli eğilimler, sürücülerin öncelikle durumu değerlendirmesine neden olur. Ancak bu değerlendirmeden sonra davranış gerçekleştirilir. Bu nedenle, sürücülere durumsal riskleri fark etme ve bu risklere tepki verme becerisi kazandırmayı hedefleyen programlar, alışkanlık kaynaklı dürtülerle başa çıkmak açısından etkili olacaktır.

Genel olarak bu çalışma, mobil telefon kaynaklı dikkat dağınıklığına dair anlayışı ilerletmiştir. SMKSDĐ, mobil telefon kullanımının özgün bir alt biçimi olarak, çoklu model yaklaşımıyla daha etkili bir şekilde açıklanabilmektedir. Bütünleşmiş model, bu karmaşık ve riskli davranışın önlenmesine yönelik net müdahale yolları sunmaktadır.

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