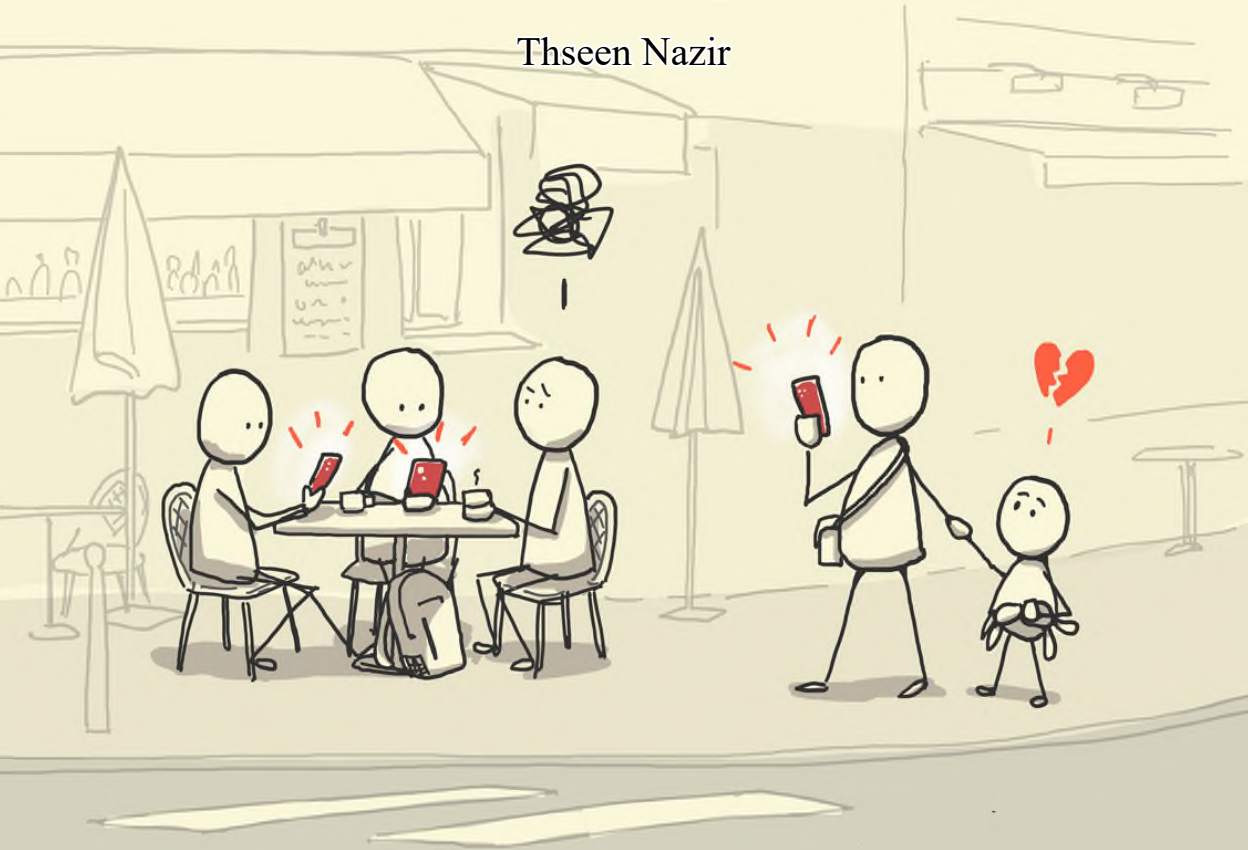


# The Psychology of Phubbing

## *Social Disconnection in a Hyperconnected World*

Thseen Nazir



# **The Psychology of Phubbing**

## **Social Disconnection in a Hyperconnected World**

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Published by **Istanbul University Press**  
İstanbul Üniversitesi Merkez Kampüsü  
34452 Beyazıt, Fatih / İstanbul - Türkiye  
<https://iupress.istanbul.edu.tr>

## **The Psychology of Phubbing: Social Disconnection in a Hyperconnected World**

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E-ISBN 978-605-07-1867-6

DOI 10.26650/B/SSc18SSc20AH7.2026.002

Istanbul University  
Publication No 5399

Published Online January, 2026



It is recommended that a reference to the DOI is included when citing this work.

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*To my wife whose patience has demonstrated higher reliability than most psychological scales, and whose support serves as the strongest predictor of my academic productivity.*

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## Abbreviations

ADHD	: Attention Deficit Hyperactivity Disorder
ASD	: Autism Spectrum Disorder
AR	: Augmented Reality
ASD	: Autism Spectrum Disorder
AI	: Artificial Intelligence
DDT	: Digital Displacement Theory
EVT	: Expectancy Violation Theory
FTA	: Face-Threatening Act
FOMO	: Fear of Missing Out
GDPR	: General Data Protection Regulation
GSPB	: Generic Scale of Being Phubbed
GSP	: Generic Scale of Phubbing
IA	: Internet Addiction
IoT	: Internet of Things
OCD	: Obsessive Compulsive Disorder
SAD	: Social Anxiety Disorder
SLT	: Social Learning Theory
SNT	: Social Norms Theory
TIB	: Theory of Interpersonal Behaviour
TPB	: Theory of Planned Behaviour
UGT	: Uses and Gratifications Theory
UI	: User Interface
UX	: User Experience
VTA	: Ventral Tegmental Area
VR	: Virtual Reality

## Acknowledgements

This book is the result of many minds, many conversations, and countless moments of support that carried me through its creation. I owe my deepest gratitude to my beloved wife, *Ayşe*, whose steady encouragement formed the emotional backbone of this work. Her quiet strength, unwavering faith, and gentle reminders to keep going transformed long nights of writing into meaningful progress.

My heartfelt thanks go to my dear mother; my sisters, *Pragash* and *Falak*; and my joyful nephews, *Ayaan* and *Farhaan*. Their warmth, affection, and lively presence have continually uplifted my spirits and provided enduring comfort and strength.

I remain indebted to Prof. Metin Pişkin, who first introduced me to the concept of phubbing. Our reflective dialogues often shared beside his office window during his smoke breaks were the spark that ignited my curiosity about this topic. Those conversations laid the earliest stones of intellectual inquiry that eventually led to this book.

I also wish to thank Prof. Irfan Ahmad, whose guidance and thoughtful conversations continually challenged me to think more deeply and pushed my academic spirit toward growth.

My sincere appreciation goes to Mehvish (*Anjali Didi*) for engaging with the earliest draft of this manuscript. Her careful reading and insightful suggestions offered clarity at a moment when clarity was most needed.

Finally, I extend my sincere gratitude to Prof. Nadire Gülçin Yıldız for proposing the book's title, which so beautifully captures its essence, and to Jono Hey of Sketchplanations for generously providing the meaningful illustration featured on the book's cover.

To all those mentioned here, and to those who supported me in ways too quiet to name, I extend my heartfelt thanks.

## Summary

The *Psychology of Phubbing: Social Disconnection in a Hyperconnected World* is an in-depth analysis of phubbing, a behaviour that has become pervasive in modern life as individuals increasingly prioritize smartphone use over physical engagement with those around them. This book investigates the origins, psychological roots, and far-reaching consequences of phubbing, emphasizing how technological intrusion has fundamentally reshaped interpersonal communication. The exploration begins by tracing phubbing's development, a term coined in Australia in 2012 by the "Stop Phubbing" campaign, which was aimed at addressing the growing trend of neglecting others in favor of mobile devices. Through a blend of linguistic innovation and social awareness, this campaign shed light on the behaviour now known as phubbing, where "phone" and "snubbing" combine to capture the act of ignoring someone in favor of a smartphone. This behaviour has since rapidly permeated diverse social contexts, becoming increasingly common across age groups and cultures, and raising concerns about its impact on communication quality.

The book offers a rigorous definition of phubbing that considers both conscious and unconscious forms, recognizing the full psychological implications of the phenomenon. It demonstrates that phubbing's disruption of traditional face-to-face communication stems largely from interference with nonverbal cues and immediacy two fundamental components of effective social exchange. When phubbing occurs, the person being ignored (referred to as the "phubbee") not only experiences direct exclusion but also suffers from indirect social consequences as the interaction is disrupted. The book references the temporal need-threat model to elucidate the emotional consequences of phubbing on both the phubber and phubbee, as well as on those who witness this behaviour. Through this lens, it explores how phubbing triggers a series of reflexive, reflective, and resignatory emotional responses, ultimately contributing to feelings of social exclusion, which can lead to a negative feedback loop in social well-being and psychological health.

By examining the distinct manifestations of phubbing within relationships such as those with parents, partners, friends, employers, and academic peers, the book provides a detailed view of its varied effects. Parental phubbing, for instance, has severe implications for a child's emotional security, impacting attachment, trust, and even self-esteem. Children who experience phubbing from caregivers may perceive themselves as less valued, potentially affecting their developmental trajectory and shaping their future relationships. Similarly, partner phubbing undermines romantic relationships by diminishing emotional intimacy and eroding trust, leading to feelings of jealousy, resentment, and in some cases, relationship dissatisfaction. The book also discusses the psychological toll of phubbing on friendships, workplaces, and educational environments, showing how it compromises trust, weakens bonds, and detracts from interpersonal satisfaction. Such a nuanced approach reveals phubbing's far-reaching implications across various relational contexts, underscoring its role in fostering disengagement and emotional disconnection.

The work also situates phubbing within the framework of addictive behaviour, investigating its association with psychological traits such as narcissism, boredom, smartphone dependency, and Fear of Missing Out (FOMO). Through this analysis, phubbing is positioned as more than a simple social inconvenience; rather, it is presented as an intricate, compulsive behaviour with complex underlying determinants that often mirror addiction. The book references both behavioural addiction models and personality theory to contextualize how factors like impulsivity, habitual smartphone use, and social validation contribute to the persistence of phubbing behaviours. These analyses highlight that phubbing is not merely an individual's failure to disconnect but rather a modern compulsion exacerbated by psychological, neurological, and age-related predispositions.

Further, the book explores the societal and ethical dimensions of phubbing within the context of the "attention economy." Social media and digital platforms, designed to capture and sustain user engagement, exert a powerful influence over user behaviour. The book illuminates how features like user interface design, algorithm-driven content, and A/B testing manipulate attention, thereby fostering addictive engagement patterns. These design choices capitalize on human psychology to create a feedback loop that keeps users on digital platforms. Within this cycle, phubbing emerges as a byproduct of society's broader reliance on technology. By commodifying user attention, the digital economy not only changes our social behaviours but also reshapes the nature of human interactions, leading to a fragmented sense of social connectedness. The ethical implications of this attention economy are significant, raising questions about regulation, autonomy, and the role of technology in modern life.

In addressing phubbing's underlying motivations and social triggers, the book draws on various psychological theories, including the Theory of Interpersonal Behaviour, Social Norms Theory, and Expectancy Violation Theory. It also introduces Digital Displacement Theory (DDT), which provides new insights into how digital habits displace real-world engagement, offering a fresh lens through which to view phubbing's role in contemporary society. By integrating these theoretical perspectives, the book enables a comprehensive understanding of phubbing as a multi-faceted social phenomenon deeply rooted in psychological, behavioural, and societal constructs. This approach allows readers to grasp both the immediate and extended effects of phubbing, as well as the intricate ways it affects human interaction.

The book goes beyond analysis to offer practical strategies to counteract phubbing's impact, underscoring the importance of creating a balance between digital engagement and face-to-face communication. It proposes that individuals and families adopt "phone etiquette," enforce boundaries for smartphone use, and integrate practices that encourage attentiveness in social settings. Recognizing that phubbing's impacts vary across age groups and relationship types, the book suggests tailored interventions, such as setting digital boundaries in romantic relationships and promoting public awareness. Furthermore, it emphasizes the need for psychological support to help individuals recognize and reduce compulsive smartphone use, highlighting that phubbing is a behaviour that requires both awareness and intentional effort to address effectively.

## *Summary*

Finally, the book encourages future research on emerging areas such as self-phubbing, the effects of advancing technology, and cultural perspectives on phubbing. It stresses the necessity of examining the long-term implications of phubbing on social norms, particularly with respect to artificial intelligence and digital interaction. By advocating for a multidisciplinary approach, the book calls on researchers to explore phubbing within the evolving technological landscape and to investigate how digital innovations might shape phubbing behaviours and redefine social connection. This scholarly approach reinforces the book's commitment to fostering awareness and cultivating a deeper understanding of the ways in which digital habits shape our lives.

*Phubbing: The Modern Social Disconnection* stands as an insightful exploration of phubbing, a phenomenon that reflects broader issues within society's relationship with technology. Through a structured and evidence-based approach, the book positions phubbing as a significant and pressing issue that warrants increased attention, both in academic research and daily practice. Its call for awareness, practical solutions, and continued inquiry underscores the importance of addressing phubbing not only as an emerging behaviour but as a challenge that will define the quality of human connection in the digital age.

# CHAPTER I.

## Phubbing

**Abstract:** Phubbing, the act of ignoring someone in favor of smartphone use during social interactions, is a growing phenomenon with wide-ranging emotional and relational consequences. This analysis draws on real-life examples from contexts such as healthcare, education, and parent-child relationships to illustrate its pervasive impact. While smartphones offer unparalleled convenience, they have also contributed to an "attention economy" that prioritizes digital engagement over human connection. The chapter revisits the origins of the term "phubbing," coined in Australia in 2012, and critiques existing definitions for their narrow focus, proposing a more inclusive definition that captures both conscious and unconscious behaviours driving social disconnection. It examines the roles of both the "phubber" and "phubbee," shedding light on the dynamic interplay within social interactions and the erosion of interpersonal bonds. By exploring the psychological and behavioural dimensions of phubbing, the chapter underscores the importance of understanding this phenomenon to mitigate its negative effects. Addressing gaps in existing literature, it aims to challenge misconceptions and provide readers with a nuanced understanding of phubbing and its implications for modern social interactions.

**Keywords:** *Attention economy, Phubbing, Phubber, Smartphone, Social interactions*

### 1.1. Introduction

In the summer of 2018, I accompanied my mother to New Delhi to consult one of the renowned gastroenterologists for her persistent stomach issues. However, during the visit, my mother appeared to be quite frustrated. After the doctor examined her and gathered her medical history, we left the clinic. My mother wasted no time expressing her doubts about the doctor's abilities. She pointed out that I had recommended him as a good doctor but she firmly believed otherwise. When I inquired about her concerns, she recounted the incident that had bothered her. While explaining her medical history and undergoing the examination, she noticed that the doctor was constantly glancing at his phone. This made her feel neglected and unimportant as if he was not fully paying

attention to her health concerns. How could he have genuinely understood her issues and made an accurate diagnosis while distracted by his phone? Her disappointment was justified as she questioned how a doctor could expect his patients to be satisfied if he barely paid attention during their appointments. It was disheartening for her to witness such behaviour from a reputed doctor, and it left her sceptical about the quality of care she had received.

This incident highlights the pervasive nature of technology's intrusion into even the most sensitive areas of life, such as healthcare, where undivided attention and empathy are paramount. The doctor's behaviour, influenced by his phone usage, not only eroded my mother's trust in his professional competence but also underscored a broader issue of how technology can undermine human connection and care.

I would like to share another incident that I realized during one of my research works on phubbing in which I approached university professors for qualitative interviews. I inquired about their experiences during lectures, explicitly asking if they noticed students using smartphones. The question was simple: "How do you feel or react when you observe a student using their smartphone while delivering a lecture?" Younger professors expressed that they felt disheartened by seeing students using their phones during class. Some interpreted it as a sign that the students did not like their lectures or found them boring. It led to some young professors doubt their teaching abilities and seeing it as a failure to engage their students effectively. Meanwhile, senior professors typically had a different perspective on students' phubbing. They saw it as a generational trend and believed that their students, unlike themselves, were adept at multitasking. As a result, they did not take phubbing personally and did not affect their confidence in their teaching. Although they regarded phubbing as disrespectful, they generally chose to overlook it rather than letting it impact their interactions with students. The findings highlighted the negative emotional impact of smartphone usage in the classroom on professors.

This dichotomy between younger and older educators illustrates how phubbing can be interpreted differently depending on one's generational perspective and professional experience. It also sheds light on the broader implications of phubbing in educational settings, where it can undermine the effectiveness of teaching and create a sense of disengagement.

I would like to recount an experience that I observed during my video calls with my sister. During our conversations, I noticed her second son, who is one and a half years old, displaying tantrum-like behaviours in an attempt to gain her attention. His efforts to capture his mother's attention included trying to take her phone, throwing his toys, and ultimately resorting to crying when nothing else worked. However, his mother consistently employed distractions to keep him occupied, enabling her to continue using her phone or engage in social media without interruptions. My sister often remarked that whenever the child saw her with a smartphone, he began to behave in this manner. This observation led me to reflect on the potential implications of such behaviour, suggesting that the child may have developed an expectation of receiving his mother's attention specifically when she is using her smartphone. Instead of addressing his expectation, my

sister usually distracted him by offering toys or playing a video, which kept him engaged while she continued her smartphone usage. This pattern of behaviour raises important questions about the potential impact of smartphone use on parent-child interactions and the ways in which children may come to associate attention with their parents' phone usage.

This situation exemplifies how phubbing can infiltrate even the most foundational relationships, such as that between a parent and child. A child's attempts to gain parental attention reveal the emotional and developmental consequences of competing with a device for a parent's focus. This scenario is particularly concerning as it suggests that phubbing can shape children's expectations and behaviour, potentially leading to long-term implications for their social development.

The three incidents discussed above in different settings are not infrequent or specific to the situation; in contrast, many of us encounter such situations daily. It may not be surprising if we consider the position of smartphones in our lives. Before going into details, it is important to consider how the smartphone has come to occupy the space that it does in the lives of billions of people in a short time span. Over the past decade, the increase of smartphone technology has been nothing short of a wildfire, surpassing computers and laptops by combining pre-existing personal computer features with a haptic-centred, handheld device. Further advancements led to the smartphone offering a convenient solution for many aspects of daily life especially with higher speeds of internet, such as shopping, banking, travelling, reading and socializing more accessible. This transformation seamlessly integrated functions like wristwatches, calculators, maps, measuring tools, health monitoring system, and even letter writing into a single handheld device, which made detachment from the device difficult if not impossible. The ever-increasing capabilities of smartphones have rendered them indispensable in people's daily lives (Hitcham et al., 2023). As of 2023, statistics show that approximately 86.11% of the world's population, accounting for 6.92 billion people, owns a smartphone (Statista, 2023).

This device seamlessly integrated into our daily routines, with corporate interests subtly guiding our behaviours and ensuring we stay constantly connected. What began as a promise to turn the world into a "global village," bringing people closer and simplifying life, has increasingly been revealed as an illusion. Instead of enhancing genuine human connections, these devices have evolved into tools of corporate exploitation, where users are commodities. In this "attention economy," the aim appears to be not just to sell products but to capture and monetize our attention. Social media platforms, for instance, gather vast amounts of user data and sell it to advertisers, thus turning individuals into products themselves. This commodification of attention underscores how consumers are now seen as valuable resources for data extraction and engagement, rather than just purchasers of goods. The shift shows that companies are prioritizing profits over the well-being and genuine engagement of their users.

Through notifications and constant digital engagement, companies induce users with tempting offers and promotions, encouraging not only unnecessary purchases but also

habitual behaviours like staying connected and updated with a stream on unrelated information on social media. Many individuals have developed the habit of checking their phones incessantly, even during face-to-face conversations, whether for shopping or keeping up with virtual friends' lives via social media platforms. The narrative of "staying connected" convinces users that they need to be constantly in touch with their social circle through apps, alerts, and updates, making it difficult to disconnect and engage fully in real-life social interactions.

Furthermore, corporations leverage behavioural data through algorithms to better understand and influence user behaviour. By doing so, they continue to refine their methods, ensuring people remain glued to their smartphones. A key example of this is the creation of smartwatches, which allow users to stay connected without even having to pull out their phones. This constant connection, reinforced by notifications and updates about friends' activities, creates an unbreakable cycle where users often find it hard not to stay engaged. This relentless engagement, whether for purchasing or staying connected with friends in virtual world, poses a significant challenge to maintaining genuine human interactions. As a result, people struggle to overcome the lure of their smartphones during social encounters, leading to a greater sense of social disconnection despite being digitally linked. This dynamic ultimately reshapes how we socialize and communicate, often at the expense of deeper, face-to-face interactions. As the ubiquity of smartphones grows, so does the potential for them to intrude upon and disrupt the quality of our social interactions. The examples provided earlier serve as a testament to how deeply integrated smartphones have become in our daily routines, sometimes at the expense of meaningful human connections. While providing a great deal of convenience in our lives, the indispensability and prevalence of smartphones also breed undesirable social phenomena, with phubbing being an emerging and typical example (Büttner et al., 2022).

The incidents I mentioned earlier catalysed my curiosity towards this phenomenon, Phubbing, has a relatively brief history, spanning just over a decade, closely intertwined with the technological revolution surrounding smartphones. It refers to the act of ignoring someone physically present by diverting attention to one's smartphone instead of engaging with them directly. Observably, these behaviours have become ubiquitous in many parts of the world during family gatherings, communication within families, friends, workplace environments, educational institutions, hospital visits, babysitting or even attending a funeral. Perhaps many individuals have become accustomed to such occurrences or are quietly enduring them. On the other hand, this behaviour has caught the attention of psychologists and researchers worldwide, sparking discussions and investigations into its implications on our social lives. The prevalence of Phubbing has become a topic of concern, and researchers are studying its effects on interpersonal relationships and overall well-being (Nuñez & Radtke, 2024). The ever-increasing dependency on smartphones and the potential consequences of excessive usage are issues that demand attention and thoughtful consideration as we navigate the evolving landscape of technology and human interactions.

## 1.2. The Word Phubbing

The phenomenon of Phubbing is global but was recognized first in Australia. In May 2012, McCann Melbourne, an Australian advertising agency initiated a campaign, to find a word to describe the behaviour of ignoring others by using the phone. Lexicologists, phoneticians, cruciverbalists (the profession of making crossword puzzles), authors, and poets were invited. The term has appeared in media and its repercussions were observed around the world, having its consequences on our everyday lives.

It was popularized by the 'Stop Phubbing' campaign created by McCann (Ugur & Koc, 2015). The "Stop Phubbing" campaign, introduced the term to describe the act of ignoring others in favor of a phone, aiming to spark a global conversation on smartphone etiquette. Through a short film, website, and extensive media coverage, the campaign reached over 300 million people, raising awareness of the social disconnection caused by mobile devices. By coining 'phubbing,' the campaign not only provided a term to address smartphone overuse but also encouraged people to recognize and influence this behaviour. This effort led to widespread discussions about how technology affects human interactions while also promoting the Macquarie Dictionary's Sixth Edition, significantly boosting its visibility and relevance.

*Phubbing (Verb) is snubbing someone in a social setting by looking at your phone instead of paying attention to the person around in a social setting.*

The term 'Phubbing' itself is a combination of the suffix of the words "phone" and "snubbing," cleverly blending the two to describe this behaviour (Nazir & Piskin, 2016; Vanden Abeele et al., 2016). Around the world, the drive against Phubbing has taken a considerable force, and many researchers have tried to define a term that fits such behaviour.

## 1.3. Defining Phubbing

The rapid evolution of technology and the continuous nature of human interactions have consistently driven researchers to revisit and redefine the concept of phubbing. Despite these efforts, there remains a notable lack of consensus and clarity regarding the phenomenon, largely due to its complex association with addiction. Various interpretations and definitions of phubbing have been proposed by scholars over time, reflecting significant shifts in understanding as the concept continues to evolve. The following definitions illustrate how scholarly perspectives on phubbing have evolved over the past decade:

- Phubbing can be described as an individual looking at his or her phone during a conversation with other individuals, dealing with the mobile phone, and escaping from interpersonal communication (Karadağ et al., 2016a).
- Phubbing is the action of ignoring someone or multiple people's events and using smartphones to check or use Facebook, WhatsApp, or other social media applications (Nazir & Piskin, 2016).

### 1.3. Defining Phubbing

- Phubbing is a kind of social exclusion and interpersonal neglect and is used to indicate the interruptions in social relationships by mobile phone usage (Roberts & David, 2017).
- “Phubbing is the act of snubbing someone in a social setting by looking at your smartphone instead of paying attention” (Chotpitayasunondh & Douglas, 2018b).
- “Phubbing is the act of checking your smartphone in the middle of a real-life conversation with someone else and escaping from interpersonal communication” (Balta et al., 2020a).
- Phubbing is when one suddenly turns their gaze downwards and ‘disappears’ into their smartphone in the middle of social interaction (Aagaard, 2020).
- “Phubbing means ignoring communication partners in co-present interactions by focusing on one’s mobile phone” (Schneider & Hitzfeld, 2021).
- Phubbing is the fleeting engagement with the smartphone during a face-to-face conversation with someone (Al-Saggaf, 2022).

These definitions of phubbing presented by different scholars reflect a range of perspectives on the phenomenon, yet they also reveal certain limitations and criticisms. A common thread across these definitions is the focus on the use of smartphones during face-to-face interactions, leading to social exclusion or neglect of interpersonal communication. However, these definitions can be critiqued for their somewhat narrow scope, as they predominantly emphasize the observable behaviour of smartphone use, without fully addressing the underlying psychological or social factors that contribute to phubbing. For example, while Karadağ et al. (2016a) and Chotpitayasunondh & Douglas (2018a) highlight the act of escaping from interpersonal communication, they do not explore the motivations or compulsions behind this behaviour. Similarly, the definitions by Nazir & Piskin (2016) and Roberts & David (2017) focus on the interruption of social relationships but may oversimplify the complex dynamics involved in phubbing, such as the role of digital addiction or societal norms around smartphone use. Furthermore, Aagaard’s (2020) and Schneider & Hitzfeld’s (2021) definitions, while offering more nuanced descriptions, could be critiqued for their lack of emphasis on the broader implications of phubbing on mental health and social well-being. Overall, while these definitions provide valuable insights into the manifestation of phubbing, they may benefit from a more comprehensive approach that incorporates both behavioural and psychological dimensions of the phenomenon.

This book proposes a new definition of phubbing that offers a broader perspective on the phenomenon.

*“Phubbing refers to both conscious and unconscious behaviours exhibited by individuals who ignore others in social settings by persistently using or looking at their smartphones, resulting in a sense of social disconnection.”*

This definition introduces a crucial dimension by acknowledging both conscious and unconscious behaviours, which significantly broadens the understanding of phubbing.

By recognizing that phubbing can be both a deliberate action and an automatic, habitual response, this definition extends beyond the mere description of the act. It incorporates the psychological aspects of whether the behaviour is intentional or not, adding depth and aligning it more closely with a comprehensive understanding of phubbing. This approach not only addresses the visible behaviour but also considers the underlying cognitive processes, offering a more nuanced and complete view of the phenomenon. Additionally, the definition highlights that phubbing is not simply the use of a smartphone during a social conversation; it is characterized by consistent or repeated behaviour that leads to the phubbed individual feeling socially disconnected. For it to be classified as phubbing, the act must be habitual enough to disrupt the social bond between those involved, rather than an isolated instance of phone use.

## 1.4. Elements of Phubbing

The definitions provided above clearly delineate the essential components of the phubbing phenomenon.

- First, there is the "phubber," referring to the individual who uses a smartphone repetitively, either consciously or unconsciously, during a social setting. The phubber may intentionally use the smartphone to signal disinterest in the conversation, attempt to multitask by engaging in both social interaction and smartphone use, or may be entirely unaware of their phubbing behaviour.
- Second, the "phubbee" is the individual or individuals affected by the phubber's behaviour in a social setting. The phubbee may expect active engagement in conversation and rely on non-verbal cues to feel heard and understood, enabling the continuation of the interaction.
- The third crucial element is the "social setting," which involves two or more individuals in a shared context. A social setting can include any situation where people come together with the expectation of sharing social moments, such as conversations, meals, or playtime with children. It is important to note that for an instance to be classified as phubbing, it must occur in the presence of others within at least a dyadic social setting. If a phubber uses a smartphone in solitude, it will not be considered phubbing. Thus, phubbing inherently requires a social context involving at least two or more individuals.

Phubbing can occur in various social situations, such as conversing while walking with someone, on public transportation, in classrooms, meeting halls, family dinners, airports, and more. Understanding these components and contexts is crucial for comprehending the impact of phubbing on interpersonal relationships and for developing strategies to mitigate this pervasive behaviour. Before moving further, let us narrow down the specifics of phubbing in various situations.

## 1.5. Identifying Phubbing Roles

Phubbing can manifest through various signs that indicate its presence in an individual's behaviour. Various scales and instruments, such as The Phubbing scale (Karadağ et al., 2016a), the Generic Scale of Phubbing (GSP), The Generic Scale of Being Phubbed (GSBP) (Chotpitayasunondh & Douglas, 2018a), and the Perceived Phubbing scale (David & Roberts, 2020) have been developed to analyze this behaviour and classify individuals as either phubbers or phubbees. However, a straightforward approach can help determine whether one falls into either category. To identify whether someone is a phubber, it is essential to examine their behaviour in social settings. Key indicators include frequent smartphone use, whether consciously or unconsciously, and how this behaviour influences others. One sign is the constant presence of a smartphone, due to the feelings of discomfort or a fear of missing out (FOMO) if the device is not within reach. Another sign is the inability to focus on a single conversation, instead engaging in two lines of communication one in person and one on the smartphone. Even during quality time with loved ones, a phubber might unconsciously resort to using their smartphone. Additionally, at social events, a phubber may often place their smartphone beside their plate during meals to avoid missing anything important.

However, it is important to differentiate between passive and active participation in a social setting. If an individual is not actively participating in conversations or discussions and chooses to use their smartphone despite being physically present, they cannot be considered a phubber. Phubbing occurs specifically when an individual is actively engaged in a social setting and simultaneously chooses to engage with their smartphone. For instance, a student might believe that quietly using their smartphone during lectures isn't disruptive to their professor, but they may not realize that their phubbing behaviour is impacting the professor's experience as the interaction between the student and the professor is an active one.

Conversely, if an individual frequently finds themselves being ignored due to others' phubbing behaviour, they likely fall into the category of a phubbee. Phubbees are those who experience feelings of neglect or frustration as a result of being overlooked while someone else is engrossed in using their phone. A friend trying to engage in conversation while their companion scrolls through social media may feel unappreciated or undervalued, highlighting the emotional toll of being a phubbee.

To foster healthier social interactions, it is crucial to reflect on how our gadget-related behaviours affect those around us. Phubbers and phubbees reciprocally influence each other, often to the detriment of social interactions and relationships. Phubbers, by ignoring phubbees, compromise the quality of interpersonal relationships. Conversely, when phubbees silently endure this behaviour, it can adversely affect the overall quality of the dyadic relationship. Understanding these consequences can prompt individuals to take proactive steps to prevent negative effects. For example, in a couple, if one partner engages in phubbing while the other silently suffers as a phubbee, it can severely damage

bonding and emotional connection over time. Awareness of these dynamics is essential to addressing the issue and fostering healthier and more fulfilling relationships.

## 1.6. Purpose of the Book

Phubbing, although still an emerging area of research and only a decade-old phenomenon, has experienced exponential growth in research, as evidenced by a significant surge in publications on this subject over the past few years. However, currently there are only a few books that are dedicated to this focussed research area. There is a considerable gap, misunderstandings, and misconceptions about phubbing, and unawareness about it and its effects on interpersonal relationships, mental health, and social dynamics. This void in resources despite its widespread prevalence and impact on human relations has served as the motivation for writing this book, which aims to cover the various facets of phubbing comprehensively. The lack of a clear research agenda to guide the efforts and interests of phubbing researchers further encouraged the creation of this book. While scholars have extensively studied phubbing's impact on children, partners, and employees, there is a noticeable scarcity of research on types of phubbing, determinants, prevalence, awareness, and tackling the issue.

The book addresses this research gap by shedding light on phubbing, its types, potential determinants, and its prevalence in society. It shows how addiction is different from phubbing. The book has a primary objective of providing a complete overview of existing literature on phubbing, which will help readers comprehend this phenomenon better. The ultimate goal is to raise awareness about the severe consequences of phubbing behaviour. Given these factors, it is evident that this book will be of immense value to its readers. It addresses a critical gap in the current literature and provides essential insights into the implications of phubbing in various interpersonal contexts.

## 1.7. Methodology Insight: Navigating a Decade of Phubbing Research

The research for this book entailed a rigorous literature review of the phubbing phenomenon, spanning roughly a decade from 2014 to 2024. The primary sources for this review included prominent academic databases and repositories such as Web of Science, Scopus, and TR Dizin. Additionally, thesis databases were examined to identify unpublished academic work. Through this comprehensive search, approximately 383 research articles were sourced from Web of Science, 355 from Scopus, 35 from TR Dizin, and 30 thesis dissertations specifically focused on phubbing.

To refine the pool of literature, only articles and theses with direct relevance to phubbing and its subtypes were retained. These subtypes included parent phubbing, partner phubbing, boss phubbing, friendship phubbing, and academic phubbing, with an emphasis on the effects of phubbing on communication and interpersonal relationships. Broader topics that contextualize phubbing, such as technology's impact on communication, the role of AI, and other intersecting themes, were also explored. Publications in languages other than English, from low-quality journals, or with unclear writing were excluded to ensure academic rigor. The analysis followed a structured approach: each

article and thesis was reviewed for main themes and specific subthemes, such as "Effects on Family Relationships" or "Technology-Induced Communication Barriers." Key details were documented for each publication, including the country of study, research design, participant demographics, and relevant keywords. Geographic diversity was a priority, covering both prolific sources, such as China (135 articles), the United States (67), England (29), and Turkey (21), as well as less represented regions, including South Korea, Ireland, and Austria, each with only one article. Finally, the selected resources were analyzed in depth. Key findings were summarized and synthesized to create a cohesive foundation for the discussions and insights presented in this book. This systematic process facilitated a comprehensive understanding of phubbing as a complex social phenomenon.

## 1.8. Organization of the Book

This book is structured to guide readers through the landscape of Phubbing. It begins with an introduction that sets the stage, providing essential background information and context. The chapters that follow are organized thematically, each delving into a specific aspect of the topic, building on the knowledge gained in previous sections. The book concludes with a summary of the main points and a reflection on the broader implications of the topic. A comprehensive index and bibliography assist readers in further exploration and research. Below, the themes of each of the chapters are explored in some details.

**Chapter 2** examines how phubbing disrupts traditional face-to-face communication by breaking down the core components of interaction, such as nonverbal cues and immediacy. It highlights how phubbing fosters social exclusion and interrupts the flow of in-person exchanges, weakening the depth of connections. Using the temporal need-threat model, the chapter analyzes the psychological impact of witnessing social exclusion, including its lasting effects on social well-being. Ultimately, this chapter emphasizes phubbing as a substantial barrier to effective and meaningful communication.

**Chapter 3** explores the diverse manifestations of phubbing across various types of relationships, including those with parents, partners, friends, bosses, and within academic settings. Each section addresses the specific psychological and behavioural consequences of phubbing, such as feelings of exclusion, jealousy, and reduced intimacy. The chapter also discusses the impact of phubbing on trust, job satisfaction, and emotional bonds in professional and academic environments. By examining the nuances of phubbing within each relational context, this chapter offers a comprehensive understanding of the extent and potential harm of this pervasive behaviour.

**Chapter 4** delves into the addictive aspects of phubbing, examining the psychological and personality traits that drive this behaviour. It investigates key predictors like smartphone addiction, narcissism, boredom, and Fear of Missing Out (FOMO), highlighting how these factors fuel phubbing tendencies. The chapter also considers neurological and psychological dimensions, including age-related influences that may increase susceptibility to phubbing. By framing phubbing as a contemporary addictive behaviour with

intricate, layered determinants, this chapter provides a nuanced perspective on its underlying causes.

**Chapter 5** shifts focus to the science of attention and the ways digital technologies leverage human psychology to capture and retain it. It explains how features like user interface design, A/B testing, and algorithm-driven content are strategically employed to boost engagement on social media platforms. The chapter explores the societal impact of the attention economy, with particular emphasis on its effects on mental health, social fragmentation, and personal well-being. It also addresses ethical concerns and regulatory challenges, offering a critical perspective on the broader consequences of our digital consumption habits.

**Chapter 6** introduces a range of psychological and behavioural theories that shed light on phubbing, including the Theory of Interpersonal Behaviour, Social Norms Theory, and Expectancy Violation Theory. It examines phubbing as an addictive behaviour through frameworks on addiction and self-control. Additionally, the newly proposed Digital Displacement Theory (DDT) provides novel insights into how digital habits can displace real-world interactions. By grounding phubbing in these theoretical perspectives, the chapter seeks to enhance readers' understanding of its psychological foundations and social catalysts.

**Chapter 7** provides practical strategies to combat phubbing, highlighting the importance of recognizing this behaviour and balancing digital interaction with real-life engagement. It recommends establishing "phone etiquette" in both social and home environments, implementing interventions to address phubbing in romantic relationships, and educating individuals across different age groups about its effects. By fostering awareness and advocating for psychological support when needed, this chapter offers a comprehensive guide to mitigating the harmful impact of phubbing on relationships and mental well-being.

**Chapter 8**, as the concluding chapter, explores future directions for phubbing research, suggesting new areas of inquiry like self-phubbing, technological advancements, and cross-cultural perspectives. It underscores the importance of studying the long-term social implications and ethical considerations of phubbing, particularly in relation to AI and digital interactions. Advocating for a multidisciplinary approach, this chapter encourages researchers to investigate how emerging technologies may shape phubbing behaviours and impact social norms in the future.

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## CHAPTER II.

### Phubbing and In-Person Communication

**Abstract:** Phubbing disrupts face-to-face communication by impairing both verbal and nonverbal interactions, with significant consequences for relational closeness and trust. This analysis traces the evolutionary roots of human communication, emphasizing the critical role of nonverbal cues such as eye contact and body language in fostering effective interactions. Phubbing diverts attention to smartphones, undermining these cues and diminishing immediacy, a key factor in building strong interpersonal connections. It is further conceptualized as a form of social exclusion, drawing insights from the Temporal Need-Threat Model, which explains the emotional distress (reflexive stage), coping responses (reflective stage), and long-term psychological consequences (resignation stage) experienced by those affected by phubbing. Observing phubbing also triggers stress and empathetic responses in bystanders, akin to the distress caused by direct exclusion. Beyond individual effects, phubbing erodes the quality of relationships and social dynamics by signaling disengagement and reducing interaction quality. Recognizing these impacts is essential for developing strategies to minimize phubbing's influence and promote healthier communication practices. By addressing the psychological underpinnings of phubbing, such as social exclusion and reduced immediacy, this study contributes to understanding and mitigating the broader challenges posed by this pervasive phenomenon.

**Keywords:** *Communication, Temporal Need-Threat Model, Verbal Communication, Nonverbal Communication.*

#### 2.1. Introduction

According to evolutionary theory, humans have undergone gradual changes spanning millions of years, leading to the development of distinct traits, such as advanced cognitive abilities, language, and complex problem-solving, alongside bipedalism. Among these traits, our highly advanced capacity for communication stands out as particularly transformative and unparalleled in the animal kingdom. This capability distinguishes humanity. Philip Lieberman, an evolutionary scholar, underscores this view

in his book *Eve Spoke* (1988), noting that *homo sapiens*, unlike any other species, can articulate speech. While many other species communicate through vocalizations, body language, or chemical signals, the complexity and richness of human language allowing for abstract thought, detailed narratives, and the transmission of culture and knowledge across generations sets us apart. Human communication also involves the use of symbols and writing, enabling the preservation and expansion of information in ways unmatched by any other species. Given this backdrop, communication is a dynamic transaction between individuals, involving the exchange of meanings to achieve specific objectives. Evolutionary theory contextualizes the distinctiveness of human communication, but understanding how this communication unfolds in contemporary contexts brings to light several challenges. In today's fast-paced, technology-driven world, the way we communicate has shifted dramatically, with digital platforms occupying significance alongside face-to-face interactions. This shift has introduced new forms of communication, but also new challenges, such as the risk of misinterpretation, the loss of non-verbal cues, and phenomena like phubbing, where technology use disrupts the quality of interpersonal communication. While communication theories offer various perspectives on human interaction, each providing a unique approach to understanding communication, this discussion will not delve into those broader theoretical frameworks. Instead, the focus here is on unraveling the fundamental components of communication and examining the impact of newly emerging barriers, such as phubbing. We will begin by clarifying the essential elements of human communication and then explore the challenges these new barriers present in shaping contemporary communication. In this chapter, I explore communication verbal and nonverbal, immediacy, and social exclusion.

## 2.2. Communication and Its Elements

Communication is a dynamic process involving the exchange of ideas, thoughts, and information between two individuals. Successful communication depends on the transmission of information and mutual understanding. This process encompasses several fundamental components: a sender, a receiver, a medium, and a message. It begins with the sender, who initiates the communication by sharing their thoughts, ideas, or information. The receiver, often referred to as the interpreter, is the intended recipient of the conveyed information. Facilitating this exchange is the medium, the conduit through which the message or information travels from sender to receiver. At the heart of it all lies the message, which encompasses the content the sender aims to convey. These essential elements form the core of most communication processes. The process unfolds as the sender encodes the message, transmitting it through diverse channels or mediums, until it reaches the receiver. The receiver, in turn, decodes and interprets the message, attributing it meaningfully.

However, beneath the apparent simplicity, numerous factors contribute to the effectiveness and culmination of the communication process. This process is far from straightforward. Beyond the foundational elements, additional intricacies come into play, often imperceptible to the participants yet wielding significant influence. Among these intricacies, the verbal and non-verbal dimensions of communication play a crucial

role. While the basic components of communication such as the medium, message, and processes of encoding and decoding lay the foundation for effective exchanges, the true complexity of communication lies in the interplay between its verbal and nonverbal dimensions. Understanding this intricate dynamic is essential for grasping the full scope of human interaction.

Communication can be classified in many ways. For the purpose of this book, I take it to consist of two interwoven dimensions: verbal and nonverbal. The verbal aspect pertains to spoken language, while nonverbal communication encompasses unspoken cues such as gestures, tone of voice, facial expressions, and body movements. This intricate interplay between verbal and nonverbal communication adds layers of complexity and embodies a multifaceted interplay, far more intricate than its surface appearance suggests. Beyond the foundational components, these intangible yet potent elements orchestrate a symphony of interaction, exemplified notably by the pervasive influence of nonverbal communication, as explained below.

### 2.3. Verbal Communication

Verbal communication, the use of spoken language to convey thoughts, emotions, and information, is an essential element of human interaction. Through words, individuals share their perspectives, negotiate meanings, and build connections. Verbal communication relies on clarity, tone, and responsiveness to ensure that messages are understood accurately. However, phubbing prioritizing a mobile device over in-person conversation can disrupt this process. When an individual is engrossed in their smartphone, they are often less engaged in the ongoing verbal exchange, potentially leading to fragmented conversations, misunderstandings, or a feeling of neglect in the other person.

Studies suggest that phubbing negatively impacts verbal communication by creating interruptions that reduce the depth and quality of interaction (Hutabarat et al., 2024a). For instance, Roberts & David (2016) found that partner phubbing in relationships often leads to feelings of exclusion and decreased conversational satisfaction. In educational and professional settings, phubbing can similarly affect verbal exchanges, as attention diverted to digital devices detracts from active listening and engagement.

While verbal communication is critical for conveying explicit information, it is only one component of effective interaction. A significant portion of face-to-face communication, estimated to be around two-thirds to three-quarters, is conveyed through non-verbal cues such as body language, facial expressions, and gestures (Mehrabian, 1971). These non-verbal elements add depth, context, and emotion to the spoken word, allowing for a richer and more nuanced understanding. Phubbing, however, disrupts these non-verbal signals, weakening the connection between participants. In the following section, we will explore how non-verbal communication is impacted by phubbing and the broader implications this holds for interpersonal relationships.

## 2.4. Nonverbal Communication

Building on this understanding, nonverbal communication encompasses the realm of unspoken expressions, where meaning is conveyed through gestures, facial expressions, body language, eye contact, tone of voice, and other forms of nonverbal behaviour (Burgoon et al., 2021). These forms of expression are often referred to as silent or sign language. In essence, nonverbal communication encompasses all communicative actions except for explicit words. Most people instinctively employ, discern, and interpret different types of nonverbal cues even when not consciously aware, enhancing our interactions with others.

When integrated with verbal communication patterns, nonverbal cues enhance and reinforce the message being conveyed, adding depth and nuance to the overall communication experience. The synergy between verbal and nonverbal communication serves to amplify the significance and coherence of the conveyed messages. Nonverbal communication imbues the verbal message with added depth, lending robust support and further enriching its meaning. In the broader context of communication, when considering the entirety of communication both verbal and nonverbal dimensions it becomes evident that a substantial portion, ranging from two-thirds to three-quarters, comprises the nonverbal component. This underscores the profound impact of nonverbal communication and its contribution to the communicative experience.

In nonverbal communication, facial expressions and bodily movements play a crucial role in complementing and enhancing verbal communication. Facial expressions, such as smiles, frowns or raised eyebrows, can convey emotions and attitudes that align with or even contradict the spoken words. Similarly, bodily movements, including gestures, posture, and the way one physically positions themselves, add context and depth to verbal messages, helping to clarify intent and meaning (Fridlund, 2014). According to Ekman (1976) categorization, these expressions and movements can be classified into five distinct types:

1. **Symbolic Movement:** These include facial expressions that substitute verbal language. These substitutes, which vary across cultures, fulfil a role akin to spoken words.
2. **Illustrative Movement:** Nonverbal facial expressions are employed with verbal communication to enhance message clarity. These gestures contribute a visual context to spoken words.
3. **Emotion-Revealing Movement:** In this category, nonverbal facial expressions and movements align with an individual's emotional state and mood. They serve as windows into the person's feelings.
4. **Modulation Movement:** These nonverbal expressions aid in facilitating face-to-face interactions. For instance, movements like nodding or maintaining eye contact while speaking fall within this classification.

5. Adaptable Movement: This classification pertains to nonverbal movements that convey specific messages, such as using a handshake to convey a greeting.

Consequently, as discussed earlier, a myriad of expressions and movements work in tandem with verbal communication to achieve greater clarity and precision in conveying messages. These nonverbal cues, such as facial expressions, gestures, and body language, enhance the spoken word by providing additional context, emphasizing key points, and helping to ensure that the intended meaning is accurately understood. Fusing these expressive forms with spoken content engenders a sense of gratification for both the sender and receiver, enhancing the lucidity of communication. Notably, the amalgamation of nonverbal components, alongside verbal discourse, serves as a conduit for individuals to articulate their ideas and emotions. The success of the communication process hinges upon the symbiotic interplay between verbal and nonverbal dimensions. The absence of clear communication or comprehension of verbal or nonverbal elements may usher in misunderstandings or incomplete exchanges. Both facets necessitate unequivocal channeling; any omission in this regard could potentially disrupt not just the communication process but also the dynamics of relationships and the outcomes of interpersonal exchanges.

Today, when digital technology has permeated communication channels, a seismic shift in our social interactions has ensued. While instantaneous communication is irrefutable in its convenience, it remains a point of contention whether these messages relayed through diverse digital modes resonate with genuine emotions and foster a sense of connection. The prevailing landscape of face-to-face interaction is replete with new obstacles, each manifesting in distinct forms. A prime example of this is phubbing, which profoundly impacts our social relationships and can lead to significant consequences for them.

## 2.5. Phubbing as an Obstacle to Communication

To fully understand the impact of phubbing on interpersonal communication, it is essential to examine how this behaviour serves as a significant barrier to effective communication, disrupting both verbal and nonverbal exchanges in social settings. As Crowley et al. (2018) suggest, the use of a smartphone during face-to-face interactions functions as a nonverbal communicative cue, making it critical to understand the ways in which smartphone usage can obstruct communication.

Building on this understanding, when exploring phubbing as a communication barrier, it is important to consider the perspectives of both the "phubber" (the individual engaged with the smartphone) and the "phubbee" (the individual being ignored), as well as the broader social environment. The phubber may neglect the phubbee, whether intentionally, accidentally, or without awareness of his behaviour. Conversely, the phubbee typically expects the attention of the phubber during communication. However, the phubber's attention may be diverted to their smartphone, or at least perceived as such by the phubbee, leading to varying degrees of communication disruption. This diversion of attention through phubbing can be detrimental to both the relationship and the

communication process, as it often conveys negative messages, such as disinterest in the conversation (Aagaard, 2020). When a phubber repeatedly shifts their gaze between the person they are speaking or listening to and their smartphone during face-to-face communication, they are likely missing important nonverbal cues. This behaviour not only causes the phubber to miss key information that could enhance understanding but also signals a lack of interest in the conversation. Phubbers communicate these signals of disinterest or disengagement by frequently avoiding eye contact and focusing on their smartphones instead (Sun, 2024). This lack of engagement can hinder effective communication and negatively affect the relationship between the individuals involved.

Understanding the role of phubbing as a communication barrier requires a deeper comprehension of the subtle, often invisible, components of nonverbal communication. These intricate elements, which can be conveyed consciously or unconsciously, play a critical role in shaping the dynamics of interpersonal interactions. Nonverbal cues, such as eye contact, body language, and facial expressions, often carry more weight than spoken words and must be carefully considered when analyzing the effects of phubbing.

To fully grasp the complexities of phubbing and its impact on interpersonal communication, it is essential to examine key factors such as the importance of immediacy in communication, the dynamics of social exclusion that are frequently linked to phubbing, and the broader psychological and social implications of witnessing such exclusion. By delving into these elements, we can gain a more comprehensive understanding of how phubbing influences both individual behaviour and collective social interactions, revealing the profound ways in which this seemingly minor behaviour can disrupt communication and relationships.

### 2.5.1. Immediacy

In psychology, immediacy is explained as behaviour that signals openness and attentiveness, elicits positive emotions, and facilitates the development of positive relationships (Mehrabian, 1967). Similarly, in communication literature, immediacy encompasses actions that "indicate availability, heighten sensory stimulation, and reduce both physical and psychological proximity" between people (McDaniel & Andersen, 1998). According to Andersen & Andersen (2014), immediacy is not a simple concept but rather a complex component that significantly affects the dynamics of communication. For Andersen et al. (2006), the most significant aspect of nonverbal communication is immediacy, which is crucial in fostering interpersonal relationships. Immediacy behaviours, such as eye contact, smiling, gesturing, forward leaning, nodding, and mirroring (synchronizing), along with vocal diversity are powerful examples of how this concept operates in communication (Comadena et al., 2007; Richmond et al., 2001). These gestures convey warmth, proximity, involvement, and engagement during communication (Andersen, 1999; Hildenbrand, 2023; Prager, 2000).

Within the phubbing context, immediacy becomes a crucial factor with wide-ranging consequences. A phubber's constant attention shift between their smartphone and the phubbee communicates a lack of interest in the conversation and is a clear sign of distract-

tion. For instance, eye contact is a vital indicator of credibility, empathy, and immediacy (Dowell & Berman, 2013; Grondin et al., 2021; Mast, 2007). The phubber is alternating his attention between the phubbee and his smartphone, giving out a strong, unfavourable nonverbal cue. By controlling the visual attention between interaction partners, eye gaze is recognized as a significant observable cue that influences the formation of affiliation and immediacy in social interactions (Burgoon & Hale, 1988; Mehrabian, 1968). Looking away from the conversation partner conveys disengagement and indifference, while direct eye contact indicates attraction and likeability (Chartrand & Bargh, 1999). This is because the lack of eye contact interferes with highly automatic processes that result in empathy and connection (Marci & Orr, 2006).

Furthermore, people rely on gaze perceptions when forming opinions about the mental state of the person they are engaging with (Shepherd, 2010). Because of this highly automated cognitive process known as "mental state attribution," turning one's head away from a smartphone can give the impression that one is uninterested or disengaged. An involuntary alignment of attention known as a reflexive shift occurs when one of the interaction partners looks at something, drawing the other person's awareness to that object. Consequently, the phubbee may interpret the phubber's persistent phone-checking behaviour that is, the fluctuating eye contact between the phone and the person as inattentiveness, which can increase both physical and emotional distance between them. This highlights the complex relationship between immediacy and the quality of interpersonal relationships.

Perceptions of immediacy have been linked to several positive outcomes, including improved learning outcomes (Wilson & Locker Jr, 2007), reduced student anxiety (Chesebro & McCroskey, 2001), increased satisfaction with organizational leaders (Richmond & McCroskey, 2000), and a positive correlation with parental rejection in children (Xie & Xie, 2020). Moreover, perceptions of immediacy have been found to partially mediate the positive correlation between relationship satisfaction and partner phone usage. Low-immediacy behaviour, such as phubbing, which signals disinterest and low attention, can lead to increased conflicts and decreased relationship satisfaction, ultimately suggesting relational disengagement (Beukeboom & Pollmann, 2021a; Bröning & Wartberg, 2024; Sun & Samp, 2022)

It is important to note that perceptions of immediacy are consistently correlated with conversation and relationship satisfaction. Individuals who perceive their conversations with partners as more immediate report higher levels of conversation satisfaction (Guntzviller et al., 2017). However, these perceptions of immediacy rely on individuals being fully present and attentive during discussions. Smartphone usage can detract from this engagement, potentially diminishing the sense of immediacy. Therefore, immediacy may act as a mediator between conversation satisfaction and the presence of smartphones; the presence of a phone can lower conversation satisfaction by reducing perceptions of immediacy.

### 2.5.2. Social Exclusion and Phubbing

Phubbing, a smartphone-induced form of social exclusion, has been recognized in recent studies as a behaviour that makes the phubbee feel excluded by the phubber (Abeele, 2020; Chotpitayasunondh & Douglas, 2018a; Gonzales & Wu, 2016; Hales et al., 2018). Research shows that when a person is phubbed, they feel socially excluded by the person who is more focused on their smartphone than on the ongoing face-to-face interaction (Hutabarat et al., 2024b). This form of exclusion is crucial in understanding how smartphone use during social interactions can lead to feelings of being ignored, which may overlap with ostracism. Phubbing, therefore, not only disrupts the interaction but can also have serious consequences, such as damaging basic psychological needs, causing feelings of depression, and decreasing trust between individuals (Knausenberger et al., 2022).

Social exclusion typically occurs when someone is ignored or excluded from social interactions, even when they are physically present (Williams et al., 2013). This type of exclusion can lead to a variety of negative emotional responses, including increased aggression, heightened anxiety, and feelings of depression and loneliness (Nuñez et al., 2020). Moreover, social exclusion can disrupt essential human needs, such as the need to belong, maintain self-esteem, feel that life is meaningful, and have control over one's environment (Gonzales & Wu, 2016; Kiuru et al., 2024). When these needs are not met, individuals may experience immediate physical reactions like stress, as well as long-term effects such as withdrawal from social situations and loss of self-worth.

Phubbing is particularly damaging because it shares key characteristics with social exclusion, specifically the exclusion of individuals from meaningful social interactions. Like other forms of social exclusion, phubbing can occur either intentionally, when someone deliberately ignores another person to use their smartphone, or unintentionally, when someone becomes so absorbed in their phone that they unknowingly neglect those around them. Certain behaviours associated with phubbing, such as avoiding eye contact, can be seen as a form of 'silent treatment' or social rejection, similar to how people might feel when they are being deliberately ignored. When eye contact is withdrawn, it often feels like a passive form of rejection, which is why phubbing can lead to lower satisfaction of essential human needs. Therefore, phubbing displays many characteristics of social exclusion, and it is likely to have similar negative effects on a person's emotional well-being and ability to connect socially.

### 2.5.3. The Temporal Need-Threat Model of Social Exclusion

Williams (2009) introduced the temporal need-threat model of social exclusion, which explains its various stages and effects. According to this model, social exclusion unfolds in three stages: (a) the reflexive stage, where individuals experience immediate emotional reactions; (b) the reflective stage, where they try to cope with these feelings; and (c) the resignation stage, where long-term effects on mental and physical health may develop.

In the reflexive stage, individuals experience strong emotional reactions such as anxiety, stress, or anger, as their basic human needs like the need to belong and to feel valued are immediately threatened (Chotpitayasunondh & Douglas, 2018a). This stage is characterized by a universal response mechanism, which serves as an early warning system, alerting individuals that their social inclusion is at risk (Kerr & Levine, 2008; Spoor & Williams, 2007). Even small signs of social rejection, such as those experienced during phubbing, can trigger this system, leading to a quick onset of negative emotions. The reflexive response is immediate and automatic, acting before any coping strategies can be employed. Because of this, the initial emotional reaction is often negative, regardless of individual differences or the specific context. Minor signs of exclusion, like phubbing, are enough to set off this reflexive response, leading to feelings of rejection and emotional discomfort. However, as individuals process these feelings, they may move into the reflective stage, where they begin to actively cope with the experience. This coping phase can help to buffer the intensity of the initial reflexive response, but it does not change the immediate negative impact.

In the reflective stage, individuals use different coping strategies to manage the negative feelings associated with social exclusion (Williams, 2007, 2009). These strategies might include seeking out new social connections, trying to fit in with a group, or, in some cases, reacting with aggression or hostility to regain a sense of control. For instance, those who feel excluded might judge others more harshly, viewing them as less pleasant or competent (Bourgeois & Leary, 2001; Buckley et al., 2004). For instance, they may evaluate others less favourably in terms of pleasantness, likability, and competence, as seen in the example at the beginning of the first chapter about my mother's encounter with a doctor, which led her to doubt the doctor's abilities.

While the Temporal Need-Threat Model has only been applied in a few studies on phubbing or smartphone-induced social exclusion, findings indicate that phubbing can result in sudden negative emotions and a detrimental mood, threatening essential human needs (Knausenberger et al., 2022). Studies have shown that the immediate emotional impact of phubbing is consistent across different people, regardless of how sensitive they are to rejection or how common they believe smartphone use to be in social settings (Gonzales & Wu, 2016; Hales et al., 2018; McDaniel & Wesselmann, 2021). This consistency supports the model's claim that the reflexive stage of social exclusion has universal effects. However, the reflective effects of phubbing, where individuals start to cope with their feelings of exclusion, have not been extensively studied. Nevertheless, research on phubbing suggests that people may use similar coping strategies as those described in the reflective stage of the Temporal Need-Threat Model. For example, when people are phubbed, they may increase their own online activity as a way to reconnect socially. Some studies have also observed that individuals might respond to being phubbed by phubbing in return, as a form of retaliation. A daily diary study by Thomas et al. (2022a) found that on days when participants perceived higher levels of partner phubbing, they reported increased feelings of resentment and were more likely to phub their partner in return. Additionally, there is evidence that people who are phubbed may react by judging their

interaction partners more negatively, seeing them as less trustworthy or polite (Abeele et al., 2016).

In a nutshell, recent research applying the temporal need-threat model to phubbing supports the idea that the reflexive effects, or immediate negative consequences, of phubbing mirror those seen in broader cases of social exclusion. Furthermore, other studies on phubbing suggest that individuals may use coping strategies like those described in the model's reflective stage. However, more research is needed to understand fully how phubbing influences the later stages of the model, particularly the effects of long-term resignation.

#### 2.5.4. The Impact of Witnessing Social Exclusion

Social exclusion affects not only those who are directly involved but also those who witness it. Neuroimaging studies have shown that the brain responds similarly to witnessing social exclusion as it does to experiencing it directly, with the dorsal anterior cingulate cortex, a region associated with physical pain—becoming active in both scenarios (Kawamoto et al., 2012). These findings are consistent with research showing that observing social exclusion can cause physical stress reactions, such as an elevated heart rate and increased electrodermal activity, which are indicators of heightened emotional arousal (Bass et al., 2014; Williamson et al., 2018).

Moreover, the emotional distress experienced by those who witness social exclusion can be just as intense as that felt by those who are directly excluded. Studies have found that observers of social exclusion can experience similar levels of discomfort, anxiety, and emotional pain as the individuals who are ostracized (Riva, 2016; Smart Richman & Leary, 2009). This underscores how deeply humans are affected by violations of social inclusion norms, even when they are not the direct targets of exclusion.

Additionally, witnessing social exclusion can trigger reflective coping strategies in observers, with varied outcomes. Some observers may react by condemning the source of the exclusion, viewing it as a violation of social norms. Others may respond with empathy and attempt to comfort the excluded individual. However, there is also the possibility that observers might devalue the excluded person, perhaps because they blame them for their own exclusion.

As mentioned earlier, research on the effects of phubbing on those who witness it is still limited. However, if phubbing is indeed a form of smartphone-induced social exclusion, it is likely that similar reflexive and reflective effects would occur in those who observe it, just as they do in other forms of social exclusion.

In conclusion, communication is a multifaceted process that relies on various verbal and nonverbal cues to convey meaning and maintain human connection. The increasing prevalence of smartphone-induced social exclusion, or phubbing, presents a significant challenge to effective communication and the health of interpersonal relationships. By exploring the psychological mechanisms involved in phubbing, we can develop better strategies to address this issue and reduce its negative impact. Phubbing not only affects

those directly involved but also has repercussions for those who witness these interactions. The temporal need-threat model of social exclusion provides a valuable framework for understanding the emotional and cognitive processes that occur during phubbing incidents. It emphasizes the reflexive, reflective, and resignation stages of social exclusion and highlights the potential consequences for all individuals involved. Recognizing the harmful effects of phubbing on communication and social well-being is crucial to finding solutions.

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## CHAPTER III.

### Diverse Manifestations of Phubbing

**Abstract:** This chapter examines the varied manifestations of phubbing and its impact across multiple relationship dynamics, including romantic, familial, academic, and professional contexts. It provides an in-depth analysis of key dyadic relationships explored in existing research, such as partner phubbing in romantic relationships, which undermines relational satisfaction, and parental phubbing, which weakens the parent-child bond. The discussion extends to friend phubbing, highlighting its detrimental effects on friendship quality and satisfaction. In academic settings, phubbing whether by teachers or students disrupts trust and diminishes the quality of educational interactions. Similarly, boss phubbing in the workplace negatively affects trust, employee engagement, and job satisfaction. The chapter also explores phubbing in less commonly studied contexts, such as religious gatherings and doctor-patient interactions, emphasizing its widespread influence. Special attention is given to individuals with mental health challenges, including those with ASD or ADHD, who may experience heightened isolation and rejection due to phubbing. This comprehensive analysis underscores the pervasive nature of phubbing and its far-reaching consequences across diverse social and relational settings.

**Keywords:** *Academic Phubbing, Boss Phubbing, Parental Phubbing, Patner Phubbing,*

#### 3.1. Introduction

Phubbing, a pervasive phenomenon in the digital age, manifests in various forms, each intricately linked to the specific dynamics of the relationships involved. Researchers have thoroughly investigated the multifaceted nature of phubbing, employing a nuanced approach to categorize it based on the distinct interactions between the phubber (the individual engaging in phubbing) and the phubbee (the individual being ignored). This chapter undertakes a comprehensive exploration of the criteria for classifying different types of phubbing, highlighting their intricate characteristics and their impact on interpersonal relationships.

The classification of phubbing hinges on the examination of diverse relationship dynamics, each giving rise to distinct manifestations of this digital-age affliction. Among the most well-documented forms are Partner Phubbing, Friend Phubbing, Parental Phubbing, and Boss Phubbing, each reflecting a different dimension of this widespread phenomenon. However, an area that remains less explored but equally important is academic phubbing. Most studies have focused on the effects of phubbing within specific dyadic relationships, such as Partner Phubbing in romantic relationships (Frackowiak et al., 2024; Roberts & David, 2016), Friend Phubbing in peer relationships (Kelly et al., 2019) and Parental Phubbing in the parent-child relationship (Bai et al., 2020; Wang et al., 2022). While these categories have received considerable attention in research, it is essential to acknowledge that phubbing extends beyond these well-explored relationship types and social contexts.

Phubbing is not limited to the examples previously mentioned; its occurrence can manifest differently depending on the specific type of relationship involved. For instance, phubbing can occur between a doctor and a patient, potentially compromising the quality of care and eroding the trust that is essential to the doctor-patient relationship. In another example, phubbing might take place between a speaker and their audience, reducing the effectiveness of the speaker's message and diminishing audience engagement; this can be termed "Audience Phubbing." Furthermore, phubbing can also happen among colleagues during a meeting, which can weaken teamwork and collaboration, a situation that can be labeled "Colleagues Phubbing." Each of these examples highlights how phubbing, though often subtle, can have significant impacts depending on the context and the relationships involved.

This chapter examines the most prominent and extensively researched forms of phubbing, exploring their varying intensities and significant effects on interpersonal relationships. As we proceed, we will uncover the complex patterns of phubbing, deepening our understanding of its impact on human connection in the digital age. The classification of phubbing, therefore, must consider the unique dynamics of any given social relationship, as the nature of the relationship between the individuals involved is the fundamental criterion for categorization. In this chapter, we will discuss some of the dyadic relationships that have been the focus of existing research, exploring them in detail.

## 3.2. Parental Phubbing

In 2023, while traveling on a bus, I witnessed an example of parental phubbing. A fellow passenger, a woman with a child, was deeply engrossed in her smartphone, likely watching Instagram reels, while her child struggled to gain her attention. Despite the child's persistent efforts, including throwing tantrums, the mother remained focused on her device. Annoyed by the child's interruptions, she finally looked at him, pointed her finger toward me, and said, "This uncle is so dangerous and takes away kids who throw tantrums." I was shocked by her response, which highlighted the extent to which she was willing to go to continue her phubbing behaviour. This situation exemplifies parental

phubbing, where a parent's attention is diverted away from their child in favor of a smartphone, leading to neglect of the child's emotional and psychological needs (Liu et al., 2024; Wang et al., 2022). This behaviour, often unnoticed by the parents themselves, involves snubbing or neglecting their children because of excessive focus on mobile phone devices (Ding, 2022; Xie & Xie, 2020). With the rise in smartphone usage, parental phubbing has become a widespread issue that many parents fail to recognize despite its long-term effects on their children.

In the digital era, activities such as browsing the internet, scrolling through social media, or watching short videos (reels) have become popular pastimes for many parents, even while spending time with their children. While these activities may seem harmless, they can quickly become distractions that interfere with important moments of connection between parents and their children. Some parents might even give their children a toy or a modern gadget (smartphone) to keep them occupied, thinking this solves the problem. However, what a child truly needs goes beyond just being fed, cleaned, and supervised. Children crave attention, affection, warmth, and love—things that cannot be provided by simply being physically present. Children thrive on active play and quality time with their parents. This means more than just sitting beside them while scrolling through a smartphone; it involves participating in activities together, engaging in meaningful conversations, and showing genuine interest in the child's thoughts and feelings. When parents are too engaged with their smartphones, they miss out on these opportunities for active engagement, which can negatively impact their children's emotional and psychological development.

Simply being present in the same room as your child while you're absorbed in your smartphone does not equate to quality time. Children can sense when their parents are not fully engaged with them, and this can lead to feelings of neglect or rejection. Over time, this lack of meaningful interaction can weaken the parent-child bond and hinder the child's ability to form secure and healthy relationships.

### 3.2.1. The Consequences of Parental Phubbing

The impact of parental phubbing is far-reaching, affecting the parent-child relationship in significant ways. When parents engage in phubbing, it damages the intimate interactions that are crucial for a strong relational bond. Research indicates that parental phubbing has a profound impact on the quality of the parent-child relationship (Hong et al., 2019; Nidhuna, 2024). This impairment goes beyond just the immediate interaction; it can have long-lasting effects on a child's overall development. (Bai et al., 2020; Liu et al., 2021; Xie & Xie, 2020b). The quality of the parent-child relationship is crucial for a child's emotional security and overall well-being. A strong, healthy relationship is built on trust, mutual respect, and consistent emotional support. When parents are frequently distracted by their smartphones, they may unintentionally neglect these fundamental aspects of the relationship. The child may begin to feel ignored, undervalued, or less important than the device occupying their parent's attention. Over time, this can erode

the emotional bond between parent and child, leading to feelings of rejection and insecurity.

Effective communication between parents and children is essential for the child's overall growth. According to attachment theory, when parents are sensitive and responsive to their child's needs, the child develops a sense of being loved and supported (Bretherton, 2008). Conversely, when parents are distracted by their smartphones, children may feel disconnected, leading to feelings of rejection and a lack of acceptance. Recent studies have also shown that parental phubbing is associated with fewer parent-child interactions (Wang et al., 2022), higher parental rejection (Xie & Xie, 2020), and overall harm to the parent-child relationship (Geng et al., 2021; Pancani et al., 2021).

#### 3.2.2. Emotional and Behavioural Effects

Parental phubbing has profound psychological and behavioural effects on children, with consequences that extend into various aspects of their lives. Children exposed to high levels of parental phubbing often struggle to form secure attachments and develop healthy social skills, which are foundational to their overall well-being. These challenges can negatively impact areas such as academic performance and peer relationships. Furthermore, studies have shown that children who experience parental phubbing demonstrate increased levels of anxiety and depression, highlighting the detrimental effects on their mental health (Xie & Xie, 2020).

The emotional toll of parental phubbing is significant, particularly in its impact on children's ability to regulate their emotions and control impulses. These skills are crucial for managing stress and navigating challenging situations effectively (Wang et al., 2022). When children feel that their parents are not emotionally present or available due to being distracted by their smartphones, they may struggle to develop these essential coping mechanisms. This difficulty in emotional regulation can manifest in various ways, such as increased anxiety, frustration, and difficulty handling peer interactions.

Furthermore, the lack of emotional support from parents, as a result of phubbing, exacerbates the problem. Children look to their parents for affirmation, validation, and a sense of security. When these needs are not met, children may begin to feel alienated, not just from their parents but from their peers as well. This alienation occurs because children often project the unstable relationship schemas they develop with their parents onto their interactions with others. For instance, if a child feels ignored or rejected by their parent, they may expect similar treatment from their peers, leading to a self-fulfilling cycle of rejection and isolation (Chapple et al., 2005; Haslam & Taylor, 2022). Moreover, the feelings of neglect that arise from parental phubbing contribute to a child's sense of low self-esteem. When children perceive that they are not worthy of their parents' attention, they may internalize this perception, leading to long-lasting effects on their mental health. This lack of self-worth can affect their confidence, social skills, and overall well-being, potentially resulting in issues like depression and anxiety that persist into adulthood (Geng et al., 2021).

### 3.2.3. The Role of Parents as Role Models

Parents serve as primary role models for their children, and their behaviour is often imitated, leading to the development of lifelong learning patterns. When children observe their parents' actions, they internalize these behaviours, forming patterns that can influence their development well into adulthood. This modeling is especially critical in today's digital age, where the use of technology is pervasive (Hong et al., 2021; Liu et al., 2021). When parents frequently use smartphones, particularly during interactions with their children, they inadvertently send a powerful message. The child observes that it's acceptable to prioritize a device over human connection, even during moments that should be devoted to nurturing relationships. For instance, a parent might be scrolling through social media while their child is trying to share something important about their day. The child, noticing the lack of attention, might start to believe that this behaviour is normal and acceptable.

Over time, this exposure can have profound consequences. Children may begin to imitate this behaviour, adopting the habit of turning to their smartphones during conversations, meals, and other social interactions. This not only affects their ability to engage in meaningful, face-to-face communication but can also lead to deeper issues such as smartphone addiction and dependency. They might start feeling anxious or uneasy without their devices, prioritizing screen time over real-life experiences and relationships. The implications are serious. A child who grows up seeing their parents constantly glued to their smartphones may struggle with the same tendencies, finding it difficult to disconnect from technology. For instance, they might become more prone to feelings of loneliness or depression as they substitute virtual interactions for real-world connections. This can affect their social skills, academic performance, and even their mental health.

It's important to delve deeper into the mechanisms behind how these behaviours are transmitted to children. According to social learning theory, children learn behaviours by observing and imitating others, with parents serving as the most influential role models in their lives (Bandura & Barab, 1971; Grusec, 2011). This means that when parents engage in behaviours like phubbing, their children are likely to adopt similar behaviours. This imitation reinforces the idea that smartphone use during social interactions is normal and acceptable.

Research supports this notion, showing that children's perceptions of their parents' technology usage are directly linked to their own behaviours (Jackson et al., 2012). For instance, if a child sees their parent constantly checking their phone, even during important moments of connection, they are more likely to develop similar habits. Additionally, studies by McDaniel & Radesky (2018) have found that parental problematic digital technology use, such as mobile phone addiction and technoference, is positively associated with both externalizing (e.g., aggression) and internalizing (e.g., anxiety, depression) behavioural problems in children and adolescents.

The rise in smartphone usage has made parental phubbing a widespread issue, yet many parents fail to recognize its long-term effects on their children. Research consistently demonstrates that parental phubbing can significantly impair the quality of the parent-child relationship. The negative outcomes of this behaviour are wide-ranging, including decreased emotional support for the child, heightened feelings of rejection, and impaired psychological development.

Moreover, while much of the research on parental phubbing treats it as a unified behaviour, recent studies have begun to examine father phubbing (Fphubbing) and mother phubbing (Mphubbing) separately. This distinction is crucial because both fathers and mothers play essential roles in providing emotional support for their children, particularly during adolescence. Understanding the specific impact of phubbing by either parent is an important area for further study, as it may reveal different dynamics and consequences depending on whether it is the father or the mother who is more frequently engaged in this behaviour (Geng et al., 2021).

#### 3.2.4. Father Phubbing vs. Mother Phubbing

While much of the research on parental phubbing treats it as a unified behaviour, some studies have begun to examine the differences between father phubbing (Fphubbing) and mother phubbing (Mphubbing) (Wang, Mao, et al., 2022). This distinction is important because both parents serve as essential sources of emotional support for their children, but their roles and the impact of their behaviour may differ (Geng et al., 2021). In the majority of families, mothers are often the primary caregivers, spending more time with their children and being more involved in their daily routines. This close involvement means that when a mother engages in phubbing, the impact on the child can be particularly pronounced. Children may feel a deeper sense of rejection or neglect because they rely heavily on their mothers for emotional support, guidance, and validation.

For instance, imagine a scenario where a child eagerly approaches their mother to share an achievement from school. Instead of celebrating the moment, the mother is engrossed in her smartphone, barely acknowledging the child's excitement. The child may feel dismissed and unimportant, which can lead to feelings of insecurity and low self-worth. Over time, repeated instances like this can weaken the mother-child bond, making the child less likely to seek emotional support from their mother in the future.

On the other hand, fathers, who may traditionally take on roles focused on providing and discipline, also have a significant impact on their children's emotional development. When fathers engage in phubbing, it can be particularly damaging during moments that require emotional connection or reinforcement. For example, consider a family dinner where the father is distracted by his smartphone. This time should ideally be devoted to bonding and sharing experiences, but the father's distraction sends a message to the child that even these shared moments are not valuable. This can lead to a sense of detachment and emotional distance between the father and child, potentially causing the child to feel unimportant and neglected.

The differing roles of mothers and fathers mean that phubbing by either parent can have unique and significant impacts on a child's emotional development. For instance, mothers play a particularly crucial role in adolescent development, with maternal sensitivity and interaction significantly influencing a child's emotional and behavioural health (Van der Cruijssen et al., 2019; Van der Giessen et al., 2015). When mothers engage in phubbing, it can decrease the quality of the mother-child relationship, acting as a significant stressor that may result in psychological health problems for the child, such as increased levels of depression and stress (Davey et al., 2020; David & Roberts, 2021).

Similarly, father phubbing, though less studied, also has serious implications. When fathers engage in phubbing, it can lead to feelings of social exclusion in the child, further straining the father-child relationship. Adolescents who experience father phubbing may feel lonely and unaccepted, which can negatively affect their emotional development (Abeele et al., 2016; Wang et al., 2020). Traditionally, studies have often combined fathers' and mothers' phubbing behaviours when exploring the impact of parental phubbing on adolescents (Wang et al., 2020; Xie & Xie, 2020). However, this combined approach may not fully capture the nuances of each parent's behaviour. Research has shown that the influence of phubbing on social disconnection is stronger for mother phubbing than for father phubbing (Pancani et al., 2021). Moreover, Allred (2020b) found that female participants were more likely than male participants to report being phubbed by their female primary caregiver, indicating that the impact of phubbing may also be influenced by the gender dynamics within the parent-child relationship.

In conclusion, parental phubbing is a form of neglect that can have serious implications for the parent-child relationship and children's overall development. Whether it is the mother or the father who engages in phubbing, the consequences can be profound and long-lasting. It is crucial for parents to be mindful of their smartphone usage during interactions with their children. Prioritizing meaningful face-to-face communication is essential for fostering healthy emotional and psychological growth in their children.

### 3.3. Partner Phubbing

Last year, I received an early morning call from my friend's wife, who urgently asked me to intervene in their relationship. She was so frustrated by her husband's constant smartphone use that she was seriously considering ending their relationship. Her repeated question, "What's so important on your smartphone that you always have to check it even during our conversations or while having meals together?" reflected the deep sense of neglect she felt. This behaviour had evidently pushed their long-term relationship to the breaking point, leaving her feeling that breaking up was her only option. This troubling scenario is a clear example of partner phubbing, where one partner's excessive smartphone use threatens the stability of their romantic relationship.

Partner phubbing, or Pphubbing, refers to the act of snubbing one's romantic or family partner in favor of smartphone use. This behaviour, which has become increasingly common in the digital age, can have detrimental effects on close relationships, eroding the emotional connection between partners and leading to feelings of neglect and

frustration (Yuzhanin, 2022). Although smartphones are integral to modern life playing a key role in maintaining and managing relationships their misuse introduces significant challenges.

Face-to-face interactions between romantic partners are vital for relationship health. Such interactions serve as the foundation for intimacy and ensure that both partners' emotional and psychological needs are met (Mills & Clark, 1982). These in-person exchanges not only foster a deeper emotional bond but also create opportunities for mutual understanding and support. When partners engage in meaningful conversations or share personal experiences, they offer each other acceptance and validation, which is crucial for self-esteem and the development of positive relationship dynamics (Vangelisti & Alexander, 2002). Furthermore, the quality and consistency of these interactions determine the long-term health of the relationship. Studies show that the more quality time couples spend together, uninterrupted by external distractions, the higher relationship satisfaction they register (Bradbury et al., 2000; Guldner & Swensen, 1995). However, with the ubiquitous presence of smartphones in daily life, partner phubbing has emerged as a common issue among couples. A study involving 143 women in romantic relationships revealed that 70% experienced varying degrees of smartphone interference during interactions with their partners (McDaniel & Coyne, 2014). This pervasive issue highlights the growing impact of technology on romantic relationships.

On one hand, smartphones have greatly enhanced the ability of partners to stay connected, particularly when they are physically apart. Constant connectivity allows for instant communication, which can strengthen relationships by fostering a sense of closeness, even across long distances (Beukeboom & Pollmann, 2021b; Murray & Campbell, 2015). For example, sending a quick message or making a video call during a busy day can help bridge the gap between partners, reinforcing feelings of connectedness. However, on the other hand, the presence of smartphones during face-to-face interactions introduces significant distractions. When one partner prioritizes their phone over fully engaging in conversation or attempts to multitask by splitting their attention between their device and their partner, it often results in feelings of annoyance, frustration, and neglect in the other partner. This issue is especially pronounced during important discussions or intimate moments, where full attention is crucial for maintaining emotional closeness (Dwyer et al., 2018a; Miller-Ott & Kelly, 2015; Przybylski & Weinstein, 2013).

Moreover, as smartphones provide easy access to online services like messaging, social media, and internet browsing (Plant, 2001; Shrivastava et al., 2016), they often disrupt the flow of interactions between partners. This constant diversion is harmful because it creates an imbalance in attention, leaving one partner feeling ignored or undervalued while the other is preoccupied with their device (Ang et al., 2019; Przybylski & Weinstein, 2013b; Turkle, 2017). As a result, the emotional connection that is essential for maintaining a healthy and fulfilling relationship is eroded, causing strain over time. The growing trend of partner phubbing underscores the urgent need to examine the impact of smartphone use on intimate relationships and to take steps to ensure that technology does not undermine the quality of personal connections.

### 3.3.1. Digital Allergy in Romantic Relationships

Partner phubbing is increasingly recognized as a pervasive social allergen (Al-Saggaf et al., 2019a). Similar to physical allergens like bee stings or food allergies, a social allergen is defined as an "emotion-arousing behaviour or situation created by another person that is seen as unpleasant but not as unbearably aversive by objective observers" (Cunningham et al., 2005). In the same way that repeated exposure to a physical allergen can provoke a heightened immune response, repeated exposure to partner phubbing – a form of social allergen- can lead to an escalating emotional response. Over time, the phubbed partner becomes increasingly sensitive to these behaviours, experiencing stronger negative emotional reactions with each occurrence.

The study by Cunningham et al. (2005) highlights that social allergens, such as partner phubbing, can elicit stronger negative reactions as time passes, especially in long-term relationships. The reason for this intensifying effect is that small irritations like being ignored for a phone accumulate over time, building long-term resentment. In the beginning, the behaviour may seem trivial or manageable, but as it recurs, it becomes more emotionally charged. Roberts & David (2022) expanded on this idea, indicating that the cumulative effect of partner phubbing can significantly erode relationship quality, making the ignored partner feel increasingly neglected.

Moreover, research by Leary et al. (1998) suggests that psychological hurt, such as being dismissed or ignored, can last longer than physical hurt. While physical wounds heal, emotional pain can linger, especially when the triggering behaviour, like phubbing, is repeated over time. In this way, partner phubbing creates a deep emotional void in romantic relationships. Each instance of neglect adds to the emotional distance between the partners, leading to a cycle of hurt that, if not addressed, can have long-term consequences on the health of a relationship.

Studies further indicate that couples rarely discuss social allergens like phubbing (Roberts & David, 2022). This is likely because the partner engaging in phubbing may not view their own behaviour as harmful. They might see it as normal or insignificant, given the pervasive nature of smartphone use in daily life. However, for the partner being ignored, this behaviour feels much more problematic. The lack of communication about these issues creates a further gap in understanding, which, over time, erodes trust and intimacy in the relationship. Cunningham et al. (2005) stress that the absence of discussion around these issues can lead to greater dissatisfaction in the relationship. Over time, unresolved feelings of neglect can escalate to the point where one partner considers ending the relationship. Phubbing, therefore, not only affects momentary interactions but also has the potential to undermine long-term relationship stability and satisfaction.

### 3.3.2. Digital Distraction and Relationship Satisfaction

Relationship satisfaction is often understood as "the degree to which spouses perceive that their partners meet their needs and desires" (Peleg, 2008). This satisfaction is not simply about the time partners spend together but the quality of that time, particularly

in terms of communication. Guldner & Swensen (1995) argue that the depth of communication is crucial to satisfaction in relationships. For example, a couple might spend two hours watching television together, but if there is no meaningful conversation or emotional exchange, this time does not contribute significantly to relationship satisfaction. Conversely, a 10-minute conversation where both partners are fully engaged, sharing their thoughts and feelings, could have a far more positive effect on the relationship.

Stable and healthy relationships are also linked to the overall well-being of individuals and families. Coyne et al. (2014) highlight that happy, well-adjusted families often arise from stable partnerships. For instance, a couple that communicates effectively and resolves conflicts in a healthy manner may model these behaviours for their children, contributing to a more stable family environment. On the other hand, frequent digital distractions, such as checking phones during family time, can disrupt these positive interactions, potentially affecting both the relationship and the family dynamics.

Interpersonal interactions between partners are significant predictors of relationship satisfaction (Ahlstrom et al., 2012). Regular expressions of affection, active listening, and emotional support all contribute to a sense of satisfaction in a relationship. However, digital distractions, like smartphones, can disrupt these interactions. For instance, in a scenario where one partner is venting about a stressful day, but the other partner is distracted by notifications on their phone, it can easily result in friction in a relationship. This lack of attentiveness may cause the former partner to feel undervalued and ignored, which can lead to feelings of dissatisfaction in the relationship.

For a relationship to be mutually satisfying, each partner must be present for the other (Siegel et al., 2019). Presence in this context refers not only to physical proximity but also to emotional and mental engagement. Leggett & Rossouw (2014) describe this presence as being focused and open to the other person without internal (e.g., daydreaming) or external distractions (e.g., smartphones). Couples might sit down for dinner together, but if one partner spends the meal checking emails or scrolling through social media, the other partner may feel disconnected despite being physically together.

The presence of smartphones, in particular, has become a common source of distraction in modern relationships. This behaviour can have serious consequences for relationship satisfaction. When one partner feels that the other is more interested in their phone than in the relationship, it can create a sense of emotional distance. Turkle (2017) argues that media use often separates people by making them physically present but mentally absent. Couples may sit side by side on the couch, but if one partner is deeply engrossed in their smartphone, the other might feel as though they are alone. This emotional absence can lead to feelings of neglect, frustration, and ultimately, dissatisfaction within the relationship.

#### 3.3.3. Feelings of Exclusion

Feelings of exclusion are closely associated with phubbing. Social exclusion or ostracism is defined as the perception of "being invisible and being excluded from the

social interactions of those around you" (Williams, 2002). This experience can be deeply distressing, as humans have a fundamental need to feel connected and valued by those around them, especially by romantic partners. When a romantic partner experiences phubbing, they feel ignored and sidelined in a social interaction despite being physically present. For instance, imagine a couple sitting together at a restaurant, but one partner continuously checks their phone while the other tries to engage in conversation. Despite being physically present, the phubbed partner may feel as though they are invisible or unimportant.

Partner phubbing can make a person feel ignored even if the behaviour is not deliberate. In some cases, the partner engaging in phubbing may not realize the extent to which their behaviour is affecting the other. They might argue that they are simply checking a quick notification or responding to a message. However, from the perspective of the phubbed partner, each instance of divided attention reinforces a feeling of exclusion. Studies have demonstrated that partners who experience phubbing report feeling more ignored and excluded than those who engage in attentive conversations (Gonzales & Wu, 2016; McDaniel & Wesselmann, 2021). In one study, participants who recalled instances of their partners being distracted by a phone reported significantly lower levels of relationship satisfaction and heightened feelings of exclusion, particularly if they had experienced frequent phubbing (Beukeboom & Pollmann, 2021c). The feeling of being ignored and excluded has also been found to increase with the frequency of phubbing between partners (Knausenberger et al., 2022). As phubbing becomes more common, the phubbed partner may begin to expect this behaviour and, as a result, feel increasingly sidelined. For instance, in a scenario where a partner is regularly distracted by their phone during dinner conversations, the other partner may eventually stop attempting to initiate meaningful dialogue, believing it will not be reciprocated. Over time, this can create a distance between the partners, as feelings of exclusion deepen and communication erodes.

The profound impact that partner phubbing can have on relationship dynamics and individual well-being is clear. Phubbing not only affects the emotional connection between partners but also undermines key psychological needs. A person who frequently feels excluded or ignored by their partner may start to disengage from the relationship, leading to further emotional distance. In severe cases, persistent phubbing could even contribute to the breakdown of a relationship, as one partner feels increasingly undervalued and excluded.

In summary, the studies surrounding feelings of exclusion highlight how phubbing can erode the core elements that hold relationships together: mutual attention, respect, and emotional connection. Each instance of phubbing chips away at a partner's sense of belonging and value in the relationship, ultimately damaging individual well-being and the overall relationship quality.

### 3.3.4. Phubbing and Perceived Intimacy

The quality of a romantic relationship is deeply connected to individuals' perceptions of their interactions and emotional experiences with their partners (Morry et al., 2010). These perceptions are shaped by both positive and negative experiences within the relationship. When partners consistently engage in meaningful conversations, share emotions, and show care, they are likely to perceive their relationship as high-quality. However, if interactions are frequently disrupted by distractions, such as excessive smartphone use, the perception of relationship quality may diminish.

This perceived quality emerges from the emotional, cognitive, and behavioural benefits individuals derive from their romantic relationships (Fincham & Beach, 2010). Emotionally supportive partners provide a sense of security and belonging, which strengthens intimacy. However, behaviours like phubbing, where one partner neglects the other to focus on their phone, can interrupt emotional sharing and decrease feelings of closeness. Over time, this can lead to a decrease in intimacy and emotional satisfaction, as the phubbed partner may feel neglected or unimportant.

Factors such as the frequency of interactions, emotional sharing, and overall perceptions of the relationship shape individuals' views on romantic relationship quality (Farooqi, 2014). Partners who engage in regular emotional sharing, such as discussing their day or expressing their feelings, tend to perceive their relationship as stronger and more intimate. In contrast, frequent phubbing can cause an emotional disconnect.

Partners who perceive high relationship quality typically experience intimacy, interest, and emotional satisfaction. In contrast, those who perceive low relationship quality often face anger, insecurity, dissatisfaction, and conflict (Clark & Reis, 1988; Galliher & Bentley, 2010). A couple that spends quality time together without distractions is more likely to feel emotionally connected and satisfied. On the other hand, if one partner constantly prioritizes their phone over the relationship, the other partner may become frustrated, leading to conflict and decreased intimacy.

The perceived quality of a romantic relationship is crucial for psychological well-being (Kansky, 2018). Positive and negative outcomes within romantic relationships significantly affect individuals' overall well-being (Gómez-López et al., 2019; Hudson et al., 2020). High perceived relationship quality has been linked to numerous benefits, including better physical health (Holt-Lunstad et al., 2008) and psychological well-being (Chen, 2015; Dush & Amato, 2005; Hudson et al., 2020). Couples who report high relationship quality often experience greater life satisfaction and lower stress levels. Conversely, relationships with low perceived quality, particularly those marred by frequent phubbing, can lead to persistent conflicts and a decline in well-being.

Increased use of technology in romantic relationships has led to a decrease in time spent with partners and reduced emotional sharing and intimacy (Abeele, 2020). Research indicates that excessive technology use can diminish feelings of intimacy (Hawkins & Hertlein, 2013) and emotional sharing (Czechowsky, 2008). A couple may physically be together, but if one partner is engrossed in their smartphone, the other

partner may feel emotionally distant, even in shared spaces. This emotional distance can gradually erode feelings of closeness and intimacy.

### 3.3.5. Conflict about Phone Use

The increased daily use of smartphones has heightened instances of phubbing, which leads to conflicts between partners. While smartphones are a common part of life, their use can disrupt meaningful communication and create emotional disturbances that contribute to misunderstandings and relationship issues. Phubbing interrupts important interactions and diminishes the quality of communication between partners (Mahmud et al., 2024). When partners spend excessive time on their smartphones during conversations, they risk losing the depth and effectiveness of their interactions.

Consequently, conflicts may arise not from the smartphones themselves but from the reduced time available for meaningful communication. The real issue is often not the presence of the phone but what it represents a distraction from the relationship. For example, a partner might feel that their significant other prioritizes their phone over spending quality time together, leading to feelings of neglect. This can escalate into arguments about phone usage, where one partner accuses the other of being "addicted" to their device, while the other may defend their behaviour as harmless or necessary. Such conflicts can create a rift between partners, especially if the underlying emotional needs such as the need for attention, validation, and emotional intimacy remain unmet.

Studies have shown that phubbing negatively impacts communication quality, leading to misunderstandings and potential conflicts in relationships (Abeele, 2020). In a study conducted on couples, researchers found that participants who experienced frequent phubbing reported higher levels of conflict and dissatisfaction in their relationships (Thomas et al., 2022b). For example, couples who reported frequent smartphone distractions during conversations also reported more arguments about seemingly unrelated topics, such as house chores or social plans. This suggests that the disruption caused by phubbing can spill over into other areas of the relationship, leading to more generalized conflict. Misunderstandings are more likely to occur when one partner feels ignored or emotionally neglected, as they may begin to interpret their partner's behaviour as a sign of disinterest or lack of commitment.

Phubbing-related conflicts can also escalate when one partner feels insecure or jealous about their partner's phone use, particularly if they believe that their partner's attention is being directed toward someone else. For example, if a partner frequently uses their phone to chat with friends or engage in social media, the other partner might feel that this behaviour is detracting from their time together. This can lead to accusations of neglect or even infidelity, especially if the phubbed partner feels excluded from these digital interactions. These conflicts can significantly impact the overall quality of the relationship, as they often touch upon deeper emotional issues, such as trust and emotional availability.

### 3.3.6. Feelings of Jealousy

Jealousy, typically viewed as a blend of negative emotions such as sadness, fear, and worry, often arises when individuals feel excluded or threatened in their romantic relationships (Schmitt et al., 1994). This emotion serves as a protective mechanism, emerging when a partner perceives that their romantic connection is at risk. In particular, jealousy tends to surface when one partner's attention appears to be directed elsewhere, especially toward another person or activity (Bauminger, 2010; Tov-Ruach, 1980). If a partner spends significant time on their smartphone, particularly engaging in social media interactions or texting, the other partner may perceive this as a threat to the exclusivity of their relationship. This fear of losing their partner's attention can evoke feelings of jealousy, which can then lead to emotional distress and relational tension.

As social and romantic relationships are universally valued, jealousy acts as a defense mechanism to protect these bonds (Baumeister & Leary, 2017). This emotional response helps individuals safeguard their relationships from perceived threats, such as rival attractions or potential abandonment. By triggering protective behaviours, jealousy can prompt partners to reaffirm their commitment and strengthen their connection. In a relationship where one partner feels neglected perhaps due to excessive phone use this emotional response is a natural reaction to the perceived threat of losing intimacy or attention. For instance, when one partner frequently checks their phone during a romantic dinner or intimate moment, the other may interpret this behaviour as a sign of disinterest in their connection. If phone use involves social media interactions with others, it can further amplify feelings of insecurity and jealousy, leading the neglected partner to wonder whether the "virtual other" is competing for their partner's attention.

Partner phubbing can evoke a sense of threat and jealousy, particularly when the behaviour is perceived as an attempt to connect with a "virtual other" (Chotpitayasunondh & Douglas, 2018b; Franchina et al., 2018). For example, if a partner is consistently engrossed in messaging or engaging with others on social platforms while physically present with their significant other, the latter may feel that their partner's emotional energy is being directed elsewhere. This virtual attention, especially if directed toward individuals outside the relationship, can make the neglected partner feel insecure, leading to suspicions of emotional infidelity. The presence of a smartphone in such scenarios often amplifies these feelings, as it becomes a visible reminder of the partner's divided attention.

The perception of losing exclusive attention from one's romantic partner, who instead focuses on others through social media, is a primary driver of romantic jealousy (David & Roberts, 2021; Krasnova et al., 2016; Miller-Ott & Kelly, 2015). For instance, seeing a partner frequently liking, commenting, or engaging with the posts of someone else on social media can trigger feelings of jealousy and competition. This sense of rivalry with a "virtual other" can create deep insecurities, especially if the phubbed partner already has concerns about their partner's fidelity or emotional availability. The constant presence of

social media in everyday life has made these types of feelings more common, particularly in relationships where trust or communication may already be strained.

Research has demonstrated that a partner's social media activities can induce jealousy, especially in individuals with lower self-esteem (Muise et al., 2009). A partner who is already insecure about their self-worth is more likely to feel threatened when their significant other engages heavily with others online. For instance, if a person with low self-esteem sees their partner frequently interacting with attractive individuals on social media, it can intensify feelings of inadequacy and fear of being replaced. This can lead to increased surveillance behaviour, such as checking their partner's social media accounts, which only exacerbates feelings of jealousy and insecurity.

Jealousy is inversely associated with relational satisfaction (Elphinston & Noller, 2011), meaning that as jealousy increases, the overall quality of the relationship decreases. The more a partner feels jealous or threatened by their significant other's smartphone use, the more likely they are to experience dissatisfaction in the relationship. Over time, this dissatisfaction can lead to more frequent arguments, emotional distancing, and, ultimately, a breakdown in the relationship. A partner who constantly feels jealous due to phubbing may begin to withdraw emotionally, making it harder to communicate openly and resolve issues effectively. This cycle of jealousy and withdrawal often perpetuates relational dissatisfaction.

Jealousy partially accounts for the negative relationship effects of partner phubbing (Beukeboom & Pollmann, 2021c). When one partner feels neglected or insecure due to excessive smartphone use, it undermines the trust and emotional security that are critical for a healthy relationship. Frequent phubbing not only decreases the time spent on meaningful interactions but also fuels suspicions that the partner's attention is being diverted toward someone else. These combined factors neglect, insecurity, and suspicion can erode the foundation of a relationship, leading to greater emotional distance and conflict.

In conclusion, partner phubbing significantly impacts romantic relationships by causing feelings of exclusion, reducing partner responsiveness and intimacy, increasing conflicts about phone use, and evoking jealousy. Understanding these multifaceted effects is crucial for mitigating the adverse impacts of partner phubbing and fostering healthier romantic relationships. Partners may set boundaries around phone use during important conversations or intimate moments, ensuring that they prioritize each other over digital distractions. By addressing the underlying causes of jealousy and exclusion, couples can enhance their emotional connection and prevent the negative effects of phubbing from damaging their relationship.

### 3.4. Friend Phubbing

During my 2024 summer holidays, I visited my hometown, where spending time with my friends was always a highlight of my vacation. One day, while sitting by the Jehlum riverbank (One of the life lines of Kashmir valley) and reminiscing about old times, I

noticed my friend was constantly staring at his smartphone, whilst attempting to follow our conversation simultaneously. It quickly became apparent that his attention was divided between our conversation and his phone. Annoyed by this, I asked, "Can't you put your phone down and listen to me?" He smiled and replied, "It's not that important; you can continue." His response left me feeling dismissed and disinterested in continuing the conversation, ultimately leading me to decide to leave.

This scenario exemplifies the growing issue of "friend phubbing," a phenomenon that refers to the act of using smartphones during face-to-face interactions with friends (Sun & Samp, 2022). Friendships play an essential role in our lives, offering emotional support, shared experiences, and opportunities for personal growth. As we move through life, the relationships we establish with friends are fundamental to our happiness and well-being (Demir et al., 2015). A study by Demir & Weitekamp (2007) highlights the centrality of friendships in achieving life satisfaction, underscoring that the presence of close and meaningful friendships contributes significantly to one's emotional health. These relationships are built on trust, empathy, and mutual respect, with certain social expectations for active participation and undivided attention during interactions (Clark & Ayers, 1993).

Maintaining friendships requires more than just time it requires a commitment to being emotionally present and engaged. Conversations, whether they occur in person or over the phone, are a vital part of strengthening these bonds. Research has consistently shown that the quality of communication between friends plays a significant role in the overall health of friendships. Active listening, attentiveness, and genuine participation are markers of positive friendship experiences (Burgoon & Hale, 1988; White et al., 2018). However, with the increasing presence of smartphones, many people unintentionally undermine these expectations.

Research suggests that people are more likely to phubb their friends than other types of relationships (Al-Saggaf et al., 2019a). This may occur because friendships, especially long-term ones, are often viewed as more forgiving. People may assume that friends will tolerate divided attention, as these relationships are perceived as more stable and resilient compared to other relationships like romantic partnerships or professional connections. However, repeated instances of phubbing can slowly erode the quality of the friendship. When one person constantly checks their phone during a conversation, it can signal that they are not fully engaged or interested in what the other person is saying, leading to feelings of neglect or frustration.

Furthermore, the negative effects of friend phubbing are not just limited to feelings of being ignored or dismissed. Studies indicate that individuals who are phubbed by their friends may experience a range of emotional responses, including hurt, resentment, and a sense of exclusion (Sun & Samp, 2022). These emotional reactions can reduce the sense of closeness and intimacy that is essential for maintaining strong friendships. A friend who is frequently phubbed may feel that their value in the relationship is diminished, which can lead to a decline in trust and mutual respect over time. If left unaddressed,

these feelings can accumulate, resulting in distance or even the eventual breakdown of the friendship.

In addition to causing emotional harm, friend phubbing can also affect the overall dynamics of social interactions. Research has shown that when one person in a conversation uses their phone, the quality of the interaction for both parties decreases. A study by Przybylski & Weinstein (2013) found that even the mere presence of a smartphone on the table during a conversation can reduce the perceived quality of the interaction, even if the phone is not being actively used. This is because smartphones serve as a constant reminder of the potential for interruption, making it difficult for individuals to fully engage in meaningful exchanges. Consequently, friends may become less likely to share personal thoughts and feelings, knowing that their companion may be distracted at any moment.

Moreover, friend phubbing can disrupt the balance of reciprocity that is essential for maintaining healthy friendships. Friendships are typically built on the expectation of give-and-take, with both individuals contributing equally to the relationship. However, when one person is frequently distracted by their phone, it creates an imbalance where one party is forced to do most of the emotional labor in maintaining the conversation or social connection. Over time, this can lead to resentment and dissatisfaction, as the phubbed individual may feel that their efforts to maintain the friendship are not being reciprocated. Friend phubbing is a pervasive issue that undermines the quality of friendships by disrupting meaningful communication, causing emotional harm, and altering the dynamics of social interactions.

#### 3.4.1. Friend Phubbing and Loneliness

Friend phubbing and loneliness are interconnected phenomena that highlight how technology can both alleviate and exacerbate feelings of social isolation. Even when surrounded by friends, individuals may still experience loneliness if their social interactions lack depth or meaningful connection. This sense of loneliness can be particularly pronounced among individuals who struggle with certain personality traits, such as shyness, which often impedes their ability to engage fully in social settings. Studies have demonstrated that lonely individuals are less likely to participate in social interactions due to factors such as shyness, underdeveloped social skills, and a reluctance to engage in self-disclosure (Cheek & Busch, 1981; Solano et al., 1982; Spitzberg & Canary, 1985). These individuals may feel socially inadequate in face-to-face settings, often withdrawing from in-person interactions even when they are physically surrounded by friends.

For these individuals, online environments provide a relatively stress-free alternative, allowing them to communicate without the pressures of immediate social performance. This aligns with the "social compensation hypothesis," which suggests that individuals who feel uncomfortable in face-to-face interactions are more likely to turn to online social networks to meet their social needs (Valkenburg & Peter, 2007). Virtual interactions offer the anonymity and reduced social pressure that shy or lonely individuals crave. Research by Morahan-Martin & Schumacher (2003) supports this notion, indicating that online

spaces allow for greater flexibility in self-expression and participation. However, this increased reliance on online communication can result in a positive relationship between loneliness and phubbing, as lonely individuals may be more inclined to engage with their smartphones instead of their physically present friends (Yaseen et al., 2021).

This behaviour can lead to "friend phubbing," where one prioritizes their smartphone or online interactions over the friends who are physically present. In many cases, individuals may turn to their phones during social interactions as a form of comfort or habit, but this can result in feelings of neglect or disconnection among their in-person companions. Over time, this behaviour can erode the quality of real-life friendships. Research suggests that while online friendships or virtual interactions may provide temporary fulfillment, they often lack the emotional depth and immediacy that face-to-face interactions offer. As a result, individuals who are physically present may feel undervalued or ignored, creating a sense of disconnection even in the company of friends.

For example, a study by Roberts & David (2016) found that when individuals feel phubbed by their friends, they are likely to report feelings of social exclusion and diminished connection. This effect is particularly damaging in long-term friendships where mutual attention and respect are core components of maintaining the relationship. As friends become more aware of the smartphone use during interactions, they may interpret it as a sign of disinterest, leading to the gradual erosion of trust and emotional closeness.

Moreover, the implications of friend phubbing extend beyond immediate feelings of exclusion. As individuals increasingly prioritize their online interactions, they risk losing the opportunity to engage in meaningful, face-to-face communication that is essential for maintaining deep, fulfilling friendships. This loss of engagement can be particularly harmful to lonely individuals who, despite seeking comfort in online interactions, may find themselves even more isolated from their real-world connections. The paradox here is that while technology offers a way to connect, it also creates barriers to authentic connection when it dominates social interactions.

#### 3.4.2. Relational Intimacy and Phubbing

Relational intimacy significantly impacts phubbing behaviour, particularly within close and familiar relationships. As research has shown that individuals are more likely to phub their friends than strangers or acquaintances (Al-Saggaf et al., 2019a), and this trend stems from the belief that closer relationships offer a level of implicit understanding, where phubbing is less likely to be perceived negatively. However, this assumption can be problematic, as the frequency of phubbing within intimate relationships can erode the very foundation of these connections.

In highly intimate relationships, people often feel more comfortable engaging in behaviours like phubbing because they assume that their friends or partners will not judge them harshly. This sense of security, stemming from emotional closeness, can result in individuals phubbing more frequently, mistakenly believing that the behaviour

won't harm the relationship. For example, a partner may pull out their phone during dinner, thinking that their significant other will understand it as a non-issue. However, the repeated use of a smartphone during important conversations or quality time can lead to a subtle, yet significant erosion of relational intimacy.

This dynamic is supported by the concept of "relational entitlement," where individuals feel they have the liberty to act in certain ways within close relationships without fear of negative consequences (Burnside & Baker, 2003). While this entitlement may initially allow individuals to act freely and without restraint, it can also create the illusion that phubbing is acceptable. Over time, this entitlement becomes a double-edged sword, as repeated instances of phubbing may lead to negative outcomes like decreased satisfaction and feelings of neglect.

For instance, studies like Roberts & David (2016) demonstrate that partner phubbing, even within loving or long-term relationships, leads to dissatisfaction, conflict, and feelings of neglect. A partner may begin to feel sidelined when their significant other consistently turns to their smartphone during moments meant for connection. These feelings can slowly chip away at emotional intimacy, weakening the bond that exists between partners.

Moreover, what might initially seem like an insignificant act can grow into a larger problem over time. In the short term, a friend may overlook or excuse instances of phubbing due to the closeness of the relationship. However, as these instances become more frequent, they may start to accumulate, creating a lasting impact on the relationship. Close friends might experience feelings of exclusion or reduced importance as they begin to view the smartphone as competition for their attention. Studies like Krasnova et al. (2016) have shown that such neglect can evoke jealousy or frustration, exacerbating conflicts and further deteriorating relationship quality.

Relational intimacy, which is often the bedrock of close relationships, can suffer under the weight of repeated phubbing. The emotional connection that comes from shared experiences and attentive communication is vital in maintaining strong friendships. Yet, phubbing disrupts this connection by signaling that the virtual world, accessed through a smartphone, is more important than the friend sitting right in front of them.

### 3.4.3. Impact on Interaction Quality and Friendship Satisfaction

Research consistently shows that the use of smartphones in the presence of friends can significantly harm the quality of social interactions (Omboni & Lopez, 2021). A study by Brown et al., (2016) found that when individuals use their smartphones during face-to-face interactions, it negatively impacts their friends' perceptions of the interaction quality. This perceived decline in interaction quality can lead to reduced satisfaction in the friendship (Wilson et al., 2015). The negative impact of such behaviour, extends beyond just the immediate interaction.

Phubbing has been shown to damage relational evaluation, which is the degree to which individuals perceive their relationships as valuable, important, or close (Leary &

Baumeister, 2000). This behaviour sends disconfirming relational messages, essentially signaling to the friend that they are less important than the smartphone, leading to feelings of ostracism and unmet needs for inclusion. Hales et al., (2018b) further emphasize that phubbing creates a "loss of face" for the person being ignored, making them feel undervalued and excluded.

Despite the awareness of these negative effects, individuals often avoid addressing phubbing behaviour directly due to concerns about threatening the other person's social face. This hesitation to confront the issue, as discussed by Bernhold et al. (2018), can perpetuate the problem, leaving the underlying issues unaddressed and potentially causing long-term damage to the friendship.

The use of phones during face-to-face interactions can have a profoundly negative effect on friendship quality by lowering perceived interaction quality, damaging relational evaluation, and causing feelings of ostracism. Addressing these issues is crucial to maintaining strong and healthy friendships.

In conclusion, friendship phubbing significantly undermines the quality of interpersonal interactions and overall friendship satisfaction. While smartphones are valuable communication tools, their misuse in social settings can transgress expectations in friendships, leading to feelings of neglect, exclusion, and dissatisfaction. To maintain and fortify friendships, it is crucial to prioritize genuine, undistracted interactions, demonstrating empathy, loyalty, and active participation. Understanding the dynamics of Fphubbing can help individuals navigate their friendships more effectively, fostering deeper connections and enhancing overall life contentment.

### 3.5. Boss Phubbing

During a counseling session with a client who was experiencing job dissatisfaction, we explored potential reasons for his struggles. The client expressed that during meetings with his boss, he felt ignored and undervalued. He mentioned, "Whenever I am struggling with my work and we have a meeting, my boss never pays attention to my needs and makes me feel like a worthless employee. Unlike you, who listens to me attentively, my boss is always engrossed in his smartphone, not paying attention to what I am saying."

This example reflects a common experience in today's workplace, where distractions such as smartphone use can significantly impact employees' perceptions of their value and job satisfaction. In the modern organizational environment, this technology-induced behaviour, known as Boss phubbing, poses significant disruptions.

Boss phubbing (B-Phubbing), where supervisors prioritize their smartphones over their employees during work interactions, is increasingly recognized as a major disruption in modern workplace dynamics. Unlike social settings, where phubbing can strain personal relationships, its occurrence in professional environments directly impacts job satisfaction, productivity, and employee well-being. Given that individuals often spend a significant amount of their day interacting with colleagues and supervisors, the effects

of phubbing at work can be more profound and far-reaching (Erzen et al., 2021a; Yasin et al., 2023).

Research shows that phubbing in the workplace is alarmingly common. For instance, a study by Sha et al. (2019) revealed that employees spend an average of more than one working day per Week equivalent to eight hours using their smartphones in the presence of others. This statistic underscores how ingrained smartphone use has become in daily professional life. When supervisors engage in phubbing behaviour, it signals to employees that their contributions and concerns are not important, causing feelings of dejection and frustration. Employees may perceive their work as undervalued, which can lead to a sense of worthlessness and disengagement.

The psychological impact of boss phubbing extends beyond momentary frustration. Roberts & David (2017) found that employees who experience boss phubbing are more likely to report diminished morale, lower job satisfaction, and reduced organizational commitment. In one real-world example, an employee struggling with work issues expressed feelings of worthlessness when his boss frequently used a smartphone during meetings. The employee felt ignored, undervalued, and unmotivated, leading to significant job dissatisfaction. This experience is echoed in the broader workplace, where bosses who consistently engage in phubbing undermine their subordinates' confidence and emotional connection to their roles.

The effects of B-Phubbing are not limited to the emotional or psychological well-being of employees. Workplace productivity also suffers, as smartphone interruptions can disrupt focus and workflow. Research has shown that after being interrupted by a smartphone, employees take an average of 25 to 30 minutes to regain full concentration (Aljomaa et al., 2016). This loss of productivity can accumulate over time, impacting overall organizational efficiency and performance. Furthermore, when employees feel disregarded by their supervisors, their motivation to perform at their best diminishes, leading to reduced engagement and a lack of enthusiasm for their work.

Phubbing in the workplace also affects the broader organizational culture. Supervisors who engage in phubbing create a ripple effect, signaling to their employees that such behaviour is acceptable. This can lead to a decline in team cohesion and collaboration, as employees may feel less connected to their supervisors and colleagues. Over time, this can foster a toxic work environment where employees feel isolated, undervalued, and unmotivated.

The negative consequences of boss phubbing extend to emotional connections within the organization as well. When supervisors are seen as disengaged or inattentive, employees may struggle to build meaningful relationships with their leaders. This lack of emotional connection can erode trust and loyalty, both of which are essential for maintaining a productive and supportive work environment. Han et al. (2022) found that employees who experience boss phubbing are more likely to feel emotionally disconnected from their work, leading to decreased job satisfaction and increased turnover intentions.

### 3.5.1. Impact on Trust and Job Satisfaction

Boss phubbing significantly impacts workplace dynamics by eroding trust and job satisfaction. When supervisors engage in phubbing, it damages the emotional bond between them and their subordinates. This breach not only affects interpersonal relationships but also influences critical aspects of employee performance and overall job satisfaction. Research indicates that when employees feel their concerns and contributions are not a priority, it becomes a major source of stress, leading to lower job satisfaction and hindered performance (Yousaf et al., 2020). The constant distraction caused by a supervisor's smartphone use signals a lack of engagement, making employees feel undervalued and overlooked, which in turn diminishes their motivation to excel in their roles.

Trust is one of the key factors directly influencing job satisfaction. Studies show that employees who trust their managers are not only more satisfied with their jobs but also perform better, as trust fosters a sense of security and collaboration in the workplace (MacKenzie et al., 2001; Mulki et al., 2006). Trust is particularly important during times of organizational change or uncertainty. When employees trust their managers, they are more likely to feel confident in their roles and less anxious about changes or challenges they might face (Gilstrap & Collins, 2012). However, the act of phubbing by supervisors severely undermines this trust. By failing to give full attention to their employees during interactions, managers send an implicit message that their employees' input is not valuable. This lack of engagement breaks down the trust that is essential for fostering a positive and productive workplace environment. A real-world example can illustrate this dynamic. Imagine an employee meeting with their manager to get feedback on an important project. During the conversation, the manager keeps checking their phone, scrolling, and replying to messages. This behaviour makes the employee feel that their work isn't valued. As a result, the employee may lose trust in the feedback, leading to misunderstandings or even a lack of respect for the manager.

Research supports the link between phubbing and reduced trust. A study by Khan et al. (2022) found that when supervisors engage in phubbing, employees report lower levels of job satisfaction and trust in their leaders. Phubbing not only diminishes the trust employees place in their supervisors but also signals a lack of respect, which can foster a toxic work culture where individuals feel disconnected and unmotivated.

Boss phubbing also acts as a significant workplace stressor. Employees who feel ignored by their supervisors may experience stress due to the lack of necessary resources and support to effectively carry out their tasks. Yousaf et al. (2020) highlight that boss phubbing directly reduces the resources employees need to perform well, such as guidance, feedback, and reassurance. This lack of support causes employees to feel isolated, leading to increased stress and decreased job satisfaction.

Additionally, boss phubbing is negatively correlated with employee engagement. When supervisors are distracted by their smartphones, employees are less likely to invest effort and dedication into their work. This disengagement stems from the perception that their contributions are not valued, which in turn lowers their commitment to organiza-

tional goals. Research by Roberts & David (2017) shows that employees who experience boss phubbing report lower self-reported effort, meaning they are less likely to go above and beyond in their roles. This decline in motivation ultimately affects overall workplace productivity and morale.

Moreover, Meng et al., (2017) argue that boss phubbing communicates insignificance, leading employees to feel neglected and underappreciated. As a result, their commitment to their work and the organization declines, contributing to a broader disengagement from their roles. Employees who feel unsupported by their managers are more likely to experience job dissatisfaction, higher turnover intentions, and decreased loyalty to the company.

### 3.5.2. Influence on Employee Engagement

In the corporate world, employee engagement is a critical factor for a company's success. It involves the dedication and commitment of employees to their roles, leading to higher creativity and productivity (Blickle et al., 2018; Schaufeli & Bakker, 2004). High engagement enhances employees' ability to utilize their skills effectively, which is crucial for performance evaluation (Kahn, 1990). Emotionally engaged employees are more committed to using their intellectual and psychological capabilities to innovate, resulting in increased productivity (Fredrickson, 2000). However, a supervisor's rudeness or disengagement, such as through "boss phubbing" (ignoring employees in favor of smartphones), can drive employees toward non-work activities, reducing engagement and productivity (Abdi et al., 2021). Boss phubbing lowers employee self-esteem and job enthusiasm by signaling managerial disinterest, which leads to diminished work effort (Harmon & Duffy, 2022). Furthermore, organizational pride, which reflects employees' admiration for and perceived value of their company, is negatively impacted by boss phubbing. This behaviour makes employees feel undervalued, reducing their sense of self-worth and leading to negative emotions and disinterest in the organization (Li et al., 2021; Mulki et al., 2015). Organizational pride encompasses feelings of joy, significance, dignity, and value (Tracy & Robins, 2007), and when this pride is diminished, it can have serious repercussions on overall employee engagement and organizational success.

### 3.5.3. Emotional Connection and Respect

Research by Nakamura (2015) indicates that smartphone use during conversations significantly undermines emotional connections. Frequent smartphone usage in the presence of others reduces eye contact, which is essential for building and maintaining emotional bonds (Shellenbarger, 2013). When a supervisor is distracted by their smartphone, it signals to employees that they are not a priority, thereby diminishing their sense of value and respect. This behaviour is perceived as rude and socially inappropriate (Abeele et al., 2016) and can severely reduce trust in the individual engaging in it (Cameron & Webster, 2011). Maintaining eye contact and giving full attention during interactions are crucial for fostering trust and emotional connection in professional relationships.

### 3.6. Academic Phubbing

In nearly every lecture, I notice students actively engaging with their smartphones, despite my clear instructions in both the syllabus and during the introductory session that phone use is strictly prohibited during class. I make it a point to stress that phones should be on silent, stored away in their bags, and not within sight. These guidelines are mutually agreed upon at the beginning of each lecture. However, despite these efforts, I still observe students scrolling through their screens. Similarly, many teachers are not immune to the temptation of their devices. It is not uncommon for a teacher's phone to buzz during academic consultations, leading them to momentarily divert their attention. A phone placed on the table can easily become a source of distraction with every notification. This behaviour from both students and teachers is a clear example of academic phubbing.

Academic phubbing refers to the act of students, supervisors, lecturers, or teachers disregarding face-to-face academic interactions by shifting their attention consciously or unconsciously to smartphones or digital devices during academic activities. This practice disrupts communication and reduces engagement, leading to a breakdown in meaningful interaction and weakening the academic relationship. Broadly, academic phubbing can be categorized into teacher phubbing (T-phubbing) and student phubbing (S-phubbing). The issue of phubbing in academic settings is still under-researched, with only a few studies examining its impact on academic relationships and the overall academic environment.

A study by Nazir (2020) offers important insights into this phenomenon. Nazir conducted a survey among students and interviewed academicians in Turkey to understand how student phubbing affects the job performance and motivation of teachers. The findings were telling: students often resorted to phubbing due to boredom, an inability to understand the lecture, poor communication from the lecturer, or a simple addiction to their phones. The study revealed that younger lecturers (aged 30–40) were particularly vulnerable, as they often took phubbing personally. This resulted in emotional distress, a negative self-assessment of their teaching abilities, and reduced motivation to prepare for lectures. Many of these younger lecturers began doubting their capacity to capture students' attention, attributing the disinterest to their own incompetence. In extreme cases, their reduced motivation led them to abandon rigorous preparation, as they believed no matter how well-prepared they were, students would still find their lectures uninteresting. Worse, some young lecturers responded with hostility towards students, ranging from strict reprimands to asking students to leave the classroom. In contrast, older lecturers (aged over 40) viewed phubbing as a generational issue and tended not to take it personally. They believed their students were capable of multitasking, unlike them, and so they didn't let the behaviour affect their confidence or teaching strategies. While these older lecturers found phubbing disrespectful, they generally chose to ignore it rather than confront it, leading to less emotional distress compared to their younger colleagues. This generational divide in how lecturers interpret and react to phubbing underscores the complex dynamics of behaviour in academic settings. Phubbing can have

far-reaching consequences, not only on the lecturer's emotional well-being but also on the academic atmosphere, making it an issue worth exploring in greater depth.

While the impact of student phubbing on teachers has been explored, the reverse scenarios teachers engaging in phubbing during academic consultations presents another equally significant issue. When a teacher checks their phone during critical moments, such as discussions about assignments or theses, it mirrors the same disregard for attention and respect that students display when phubbing. Koc & Caliskan (2023) found that teacher-initiated phubbing can have a detrimental effect on the student-teacher relationship, primarily by eroding students' trust in their supervisors. Trust is a key factor in student satisfaction and directly impacts their perception of how much value their supervisors add to their academic progress. When students feel neglected during important interactions, their trust in their mentors diminishes, weakening the relationship and reducing the effectiveness of academic supervision. Teacher phubbing conveys a sense of neglect, causing students to feel undervalued or dismissed. This is particularly harmful when students seek academic guidance on sensitive matters like their thesis work or personal academic development, as they expect the undivided attention of their instructors.

Phubbing in these contexts disrupts communication, leaving students feeling demotivated, unheard, and potentially alienated. This emotional disconnection can damage students' confidence and diminish their belief in their supervisor's ability to provide meaningful support. Moreover, when a teacher's attention is divided, the quality of feedback and advice provided during consultations may suffer. Such behaviour can contribute to a gradual decline in the overall quality of academic relationships, eroding the sense of academic community and mentorship. Given these consequences, it is vital to explore how teacher-initiated phubbing impacts students, their academic performance, and the long-term student-teacher dynamic. The potential for phubbing to disrupt academic relationships deserves deeper investigation, especially given its ability to diminish trust, motivation, and communication in educational settings. Understanding the full scope of phubbing's influence is essential for fostering healthier academic environments that prioritize respect and engagement.

The recent study by Barbed-Castrejón et al. (2024) on phubbing behaviour among school and university students in Spain highlights some of the mental health implications of this widespread phenomenon, especially in school settings. Phubbing behaviour in adolescents was found to be highly prevalent, with around 74% of students indicating that their phones were always within reach. This behaviour is not merely a matter of distraction; it correlates with significant mental health concerns. Specifically, phubbing is associated with lower self-esteem, higher levels of problematic internet use (PIU), and emotional regulation challenges. Moreover, the negative impacts of phubbing on social relationships and communication skills are well-documented, with adolescents who engage in phubbing experiencing lower life satisfaction, increased feelings of loneliness, and symptoms of depression (Barbed-Castrejón et al., 2024). These findings suggest that phubbing is more than a trivial distraction—it is linked to deeper issues, such as

social-emotional problems, academic disengagement, and potentially more severe consequences like addiction behaviours and depression.

The prevalence of phubbing among school and university students highlights the need for interventions in educational settings. Addressing phubbing requires not only technological solutions but also emotional and psychological support for students who are struggling with the addictive aspects of smartphone use. Integrating awareness campaigns, emotional regulation programs, and fostering environments that minimize the negative effects of smartphone addiction could be crucial steps toward reducing the prevalence of phubbing and its associated mental health risks.

### 3.7. Phubbing Manifestation in Other Scenarios

Phubbing's impact is not limited to the types of relationships discussed earlier in this chapter, nor is it confined to social dyadic interactions such as friendships or romantic partnerships. Its reach extends far beyond, affecting a wide array of interpersonal dynamics in numerous social settings. Wherever two or more people come together, and smartphones become a distraction, phubbing emerges. From family gatherings to religious sermons, marriages to funerals, phubbing has become pervasive, infiltrating moments meant for connection and reflection.

Even the most sacred and meaningful spaces are not immune. Reflecting on a religious pilgrimage I undertook in the winter of 2023, I found myself frequently using my smartphone during a sermon just before prayer. What struck me even more was that hundreds of others around me were similarly absorbed in their phones. Whether it had any impact on the preacher is a topic worthy of research. This experience highlighted the startling reality: phubbing is not only disrupting human-to-human connections but also our relationship with the divine, diminishing the spiritual depth of moments meant for introspection and devotion.

In family settings, phubbing can deeply erode relationships between parents, children, and siblings. For example, excessive phone use during shared moments such as meals or family gatherings undermines the quality of these interactions, limiting opportunities for emotional bonding and meaningful communication. This erosion of presence and attention weakens overall family cohesion and often leads to feelings of neglect and frustration among family members. Parents who phub their children may unintentionally signal disinterest, while children who engage in phubbing during family time may distance themselves emotionally, creating a rift in the parent-child relationship.

Phubbing and its impact on people who are struggling with mental health challenges are noteworthy here. It can be particularly harmful to individuals who already face serious mental health challenges, such as those with Autism Spectrum Disorder (ASD) or Attention Deficit Hyperactivity Disorder (ADHD). These individuals often struggle with understanding and interpreting social cues, and phubbing exacerbates their difficulties. In situations where clear and consistent face-to-face communication is essential, the distraction caused by phubbing can make social interactions even more confusing and

stressful. The absence of attention and direct communication may lead to increased feelings of isolation, anxiety, and frustration, as these individuals may perceive the behaviour as rejection or disinterest.

For those on the autism spectrum, who often find non-verbal communication challenging, phubbing can be particularly disorienting. Already struggling with interpreting subtle body language and facial expressions, the interruption caused by smartphone use compounds their difficulties in social situations. Similarly, individuals with ADHD, who often experience challenges with maintaining attention and regulating emotions, may feel even more dismissed or ignored when faced with a partner or family member engrossed in their phone. This neglect can intensify symptoms of anxiety, depression, or emotional outbursts, severely impacting their mental well-being and the dynamics of their relationships.

Thus, the consequences of phubbing extend beyond casual social scenarios, intersecting with more complex mental health issues. Phubbing is not merely a minor social faux pas but a behaviour with far-reaching psychological and relational implications, affecting family unity, mental health, and even our spiritual connections.

## Conclusion

In the digital age, phubbing has emerged as a multifaceted phenomenon that pervades various social and professional relationships, with profound implications for interpersonal connections. This chapter explored the distinct types of phubbing, categorizing them based on specific relationship dynamics, including partner, parental, academic, and boss phubbing, among others. Each category reveals unique behavioural patterns and highlights the subtle yet significant impact on relationship quality, trust, and emotional well-being. While research has predominantly focused on partner and friend phubbing, recent insights into academic and workplace phubbing underscore its disruptive effects on professional environments and educational settings, where trust and engagement are essential.

The pervasive nature of phubbing extends beyond traditional relationships, infiltrating contexts as varied as doctor-patient interactions, religious gatherings, and mental health support systems. This omnipresence signals that phubbing is not merely a superficial behaviour but a systemic issue with the potential to erode foundational aspects of human connection. Phubbing's impact on vulnerable populations, such as children in parent-child interactions or individuals with mental health challenges, reveals an even deeper societal concern, as these individuals face heightened emotional and psychological risks.

Ultimately, this chapter illuminates the far-reaching consequences of phubbing and calls for a critical awareness of how digital distractions can impair relational and emotional health. Understanding the nuanced manifestations of phubbing is essential for fostering healthier interactions, as well as for developing strategies to mitigate its impact on personal and professional relationships. This awareness is the first step toward

reclaiming attention and fostering meaningful, undistracted connections in an increasingly digital world.

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## CHAPTER IV.

# Digital Phubbing and Addiction: Definitions and Determinants

**Abstract:** This analysis examines phubbing as a modern manifestation of technological addiction, focusing on its definitions, characteristics, and underlying drivers. It explores how smartphones, with their multifaceted functionalities, contribute to compulsive behaviours resembling traditional addictions such as gambling and substance use. Key criteria loss of control, repetitive behaviour, and adverse social outcomes are analyzed to draw parallels between phubbing and established addiction frameworks. Drawing on theories like Carnes et al.'s "signs of addiction" and Brown's addiction components, the discussion evaluates whether phubbing qualifies as an addiction. Predictive factors such as smartphone addiction, personality traits, narcissism, boredom, deliberate avoidance, and the fear of missing out (FoMO) are critically examined. The neurological and psychological underpinnings of phubbing are also explored, highlighting links to dopamine-driven reward mechanisms, impulse control deficits, and mental health challenges, including ADHD, OCD, and depression. While phubbing exhibits addiction-like traits, the analysis concludes that its context-specific nature distinguishes it from more pervasive and severe forms of addiction.

**Keywords:** *Addiction, Compulsive behaviour, Predictors of Phubbing, Technological Addiction.*

### 4.1. Introduction

Phubbing has been regarded as a comprehensive technological addiction of the modern age (Han et al., 2022; Yam & Ilhan, 2020). The constant connectivity and access to a wide range of apps and features have made smartphones essential but also highly addictive for many users. Phubbing is often compared to other addictive behaviours due to its compulsive and disruptive nature. Earlier research has highlighted the similarities between phubbing and various forms of addiction, noting that both involve a loss of control, behavioural repetition, and a negative impact on personal relationships (Karadağ et al., 2016b). Like other addictive behaviours, phubbing tends to occur despite negative

consequences, such as causing rifts in social and romantic relationships. However, the debate around whether phubbing should be classified as an addiction remains unresolved. While there is growing evidence to suggest a link between phubbing and addictive tendencies, some researchers argue that phubbing should not be treated as a standalone addiction but rather as a behaviour with addictive elements.

One of the complexities of phubbing stems from the multi-dimensional nature of smartphones themselves. Unlike traditional addictions that might center around a specific substance or behaviour, smartphones offer a diverse array of features, from social media and games to productivity tools and news updates. This broad range of uses blurs the lines between necessity and addiction, making phubbing more challenging to classify. For some, smartphone use is essential for work or communication, while for others, it can become a compulsive habit that borders on addiction.

This chapter will delve into the concept of addiction to provide a clearer understanding of its core elements. It will then explore the similarities and differences between phubbing and established forms of addiction, such as those related to substance use or gambling. Finally, the chapter will discuss the key factors that contribute to phubbing behaviour and its potential classification as a form of technological addiction, shedding light on its complex relationship with addiction in the digital age.

## 4.2. Addiction

The word "addiction" is derived from the Latin term "addictus," which signifies an overindulgence in something that compromises one's freedom of choice, akin to enslavement. Historically, "addiction" meant being devoted or committed to something over generations. However, in the 19th century, the anti-opium and temperance movements reshaped this concept, associating "addiction" primarily with drugs, disease, and the experiences of tolerance and withdrawal symptoms. Consequently, many people equate addiction with drug use (Olsen, 2022), and most official definitions focus on drug ingestion. Examples of such definitions include:

- Webster's New International Dictionary, 3rd edition: "Addiction is the compulsive, uncontrolled use of habit-forming drugs."
- Concise Oxford Dictionary: "An addict is a person addicted to a habit, especially one dependent on a (specified) drug."
- World Health Organization: "Addiction is a state of periodic or chronic intoxication produced by repeated consumption of a drug, natural or synthetic."

Despite these drug-centric definitions, there is a growing movement that views a variety of behaviours as potentially addictive, extending beyond drug ingestion. These behaviours include gambling, mobile addiction, social media addiction, overeating, sex, exercise, computer game playing, pair bonding, wealth acquisition, and even activities like solving the Rubik's Cube. This diverse range of potentially addictive behaviours has led to new, comprehensive definitions of addiction. The modern definition of addiction

includes actions unrelated to substance use that result in issues and impairment, going beyond substance dependency (Van Rooij & Prause, 2014).

- American Psychological Association Dictionary: "Addiction is a state of psychological and/or physical dependence on the use of drugs or other substances, such as alcohol, or on activities or behaviours. The term is often used as an equivalent term for substance use disorder or substance dependence and can be applied to non-substance-related behavioural addictions, such as sex, exercise, and gambling."
- American Society of Addiction Medicine: "Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviours that become compulsive and often continue despite harmful consequences."

While many have a common-sense understanding of what constitutes "addiction," defining it precisely is challenging. It is akin to defining a "mountain" or a "tree"; no single set of criteria can capture all instances. The essence of addiction is often easier to recognize as a whole rather than by its parts. To determine whether non-chemical (i.e., behavioural) addictions are genuinely addictive, and one can compare them against clinical criteria for established drug-related addictions. This approach has been suggested for behavioural addictions such as "television addiction" (McIlWraith et al., 1991) and "amusement machine addiction" (Griffiths, 1991). Furthermore, authors like Carnes (1992) and Brown (1993) have proposed that addictions share several common components, and Carnes et al. (2004) identified ten "signs of addiction":

1. A pattern of out-of-control behaviour
2. Severe consequences due to behaviour
3. Inability to stop behaviour despite adverse consequences
4. Persistent pursuit of self-destructive or high-risk behaviour
5. Ongoing desire or effort to limit behaviour
6. Use of behaviour as a coping strategy
7. Increased amounts of behaviour as current levels become insufficient
8. Severe mood changes around behaviour
9. Inordinate amounts of time spent engaging in or recovering from behaviour
10. Sacrifice or reduction of important social, occupational, and recreational activities due to behaviour

Brown (1993) incorporated these signs into a set of six components: salience, euphoria, tolerance, withdrawal, conflict, and relapse:

- Salience: The activity becomes the most important aspect of the person's life, dominating their thoughts, feelings, and behaviour.

#### 4.2. Addiction

- Euphoria: The subjective "high" experienced from engaging in the activity.
- Tolerance: Increasing amounts of activity are required to achieve the same effect.
- Withdrawal symptoms: Unpleasant states are experienced when the activity is reduced or discontinued.
- Conflict: Interpersonal and intrapsychic conflicts arising from the activity.
- Relapse and reinstatement: The tendency for reversion to previous patterns of behaviour, even after long periods of abstinence or control.

By examining Carnes et al. (2004) ten "signs of addiction" and Brown's (1993) six components of addiction, we can explore whether phubbing qualifies as an addiction. This analysis will address the question of whether phubbing behaviour can be categorized as a type of addiction by evaluating its similarities to addictive behaviours.

Phubbing behaviour can be compared with addiction-related behaviours using several criteria. Both can involve a pattern of out-of-control behaviour, but phubbing is generally more situational and less pervasive than addiction. Phubbing occurs in social settings and involves ignoring others in favor of one's phone, while addiction-related behaviours can occur independently of social environments or the presence of other people. While severe consequences and inability to stop despite adverse effects are hallmark traits of addiction, phubbing's consequences are primarily social and context-dependent rather than self-destructive or high-risk. Phubbing behaviour can damage relationships and have social consequences.

Addiction often involves ongoing efforts to limit behaviour, driven by compulsive urges, whereas phubbing lacks this intense, persistent struggle. Both can use behaviour as a coping strategy and may see increases in behaviour when initial levels become insufficient, but phubbing does not typically involve the same progressive escalation seen in addiction. Severe mood changes and significant time spent on the behaviour can be present in both, but the impact of phubbing is generally less severe. Phubbing rarely leads to the sacrifice of important activities or the profound disruptions characteristic of addiction. While phubbing can serve as a coping mechanism and involve mood changes and significant time investment, it is typically situational and context dependent. Unlike addiction, which compels behaviour across various conditions and environments, phubbing is influenced by social settings and does not usually involve persistent, self-destructive behaviour. The consequences of phubbing are primarily social and less severe compared to the profound disruptions caused by addiction. Overall, phubbing lacks the compulsiveness and extensive impact on daily life seen in addiction, making it a more controllable and less pervasive behaviour.

According to Brown (1993), components of addiction; salience, euphoria, tolerance, withdrawal, conflict, and relapse are more applicable to addiction, where the activity becomes central to the individual's life and involves significant psychological and social consequences. In contrast, phubbing tends to be more controlled and context-specific, with a less severe impact on overall life and functioning.

In conclusion, the cross-comparison of Carnes et al. (2004) ten "signs of addiction" and Brown (1993) six components of addiction highlights that while phubbing shares some surface-level similarities with addictive behaviours, it falls short of meeting the deeper criteria that define addiction. Both phubbing and addiction can involve patterns of overuse and serve as coping mechanisms, but phubbing lacks the compulsiveness, persistence, and severe consequences typically seen in addiction. Phubbing is primarily situational and context-dependent, with social consequences being the main issue, whereas addiction is marked by profound disruptions across various aspects of life, including psychological and physical health. The absence of the intense psychological conflict, escalation, and inability to stop that are core elements of addiction suggests that phubbing, while concerning in social contexts, does not rise to the level of a full-blown addiction. Instead, it remains a more controlled and context-specific behaviour with a less pervasive impact on daily life.

While individuals who are addicted to the internet or mobile phones are more likely to engage in phubbing, it is important to note that not all phubbers exhibit phubbing as addictive behaviour. Some may engage in this behaviour occasionally or situationally without displaying the compulsive tendencies typically associated with addiction. Therefore, phubbing should be viewed as a complex social phenomenon that can arise from various factors rather than solely being a consequence of addiction.

### 4.3. Predictors of Phubbing

Scholars have identified several predictors for phubbing behaviour, including smartphone addiction, which encompasses addictions related to social media, gaming, and internet use. Other significant predictors are personality types, the fear of missing out (FOMO), deliberate ignoring, and boredom. The phubbing phenomenon is complex, making it difficult to attribute it to a single factor. It can be triggered by one determinant or by a combination of multiple determinants. For instance, if a person dislikes someone in a social setting, they might deliberately phub that person as a voluntary action, which has become a social norm understood as intentional ignoring. On the other hand, a person with a smartphone addiction might phub due to their compulsive need to engage with their device. Thus, no single predictor can fully explain phubbing behaviour.

Understanding these predictors is crucial for addressing and mitigating the negative effects of phubbing on social relationships and interactions. By recognizing the various factors that contribute to phubbing, we can develop strategies to reduce its prevalence and improve the quality of social interactions.

#### 4.3.1. Smartphone Addiction

Smartphones have revolutionized modern communication and access to information, becoming an indispensable part of daily life. They are preferred for their ease of use, portability, communication capabilities, and the ability to install applications tailored to individual needs. Additionally, smartphones provide quick access to the internet and social media platforms (Haug et al., 2015; Roberts et al., 2014; Talan et al., 2024). However,

alongside these benefits, the risk of smartphone addiction has emerged as a significant concern.

Smartphone addiction is characterized by an excessive need to use the device, leading to compulsive checking behaviours and a sense of anxiety or discomfort when the phone is inaccessible. This addiction manifests in various ways, including constant phone checking and a heightened state of restlessness in the absence of the device (Safaria et al., 2024). Such addictive behaviour not only affects the individual but also has broader social implications, particularly through the phenomenon of phubbing. Research has consistently identified smartphone addiction as a strong predictor of phubbing behaviour. For instance, Al-Saggaf et al. (2019) found that various forms of smartphone-related addictions, such as SMS addiction, social media addiction, internet addiction, and game addiction, significantly predict phubbing behaviour. These findings are corroborated by Karadağ et al. (2015) and Davey et al. (2020), who also reported similar associations.

Social media platforms like Instagram have become major contributors to phubbing behaviour, particularly due to their immersive design and constant flow of content. In the study by Balta et al. (2020), the overuse of Instagram on smartphones was found to significantly increase levels of phubbing. This is especially concerning as Instagram's interface is designed to encourage prolonged engagement, making it difficult for users to disengage once they start scrolling. The endless stream of images, stories, and notifications can quickly draw attention away from real-life interactions, causing users to ignore the people around them in favor of their screens.

For instance, consider a person who is out to dinner with friends. While their friends are talking, the individual might open Instagram to check a notification. What starts as a quick glance can turn into a prolonged period of scrolling through posts, liking photos, and replying to messages. As a result, the individual is not fully present in the conversation, effectively "phubbing" their friends. This behaviour is amplified by Instagram's algorithm, which continuously provides new content tailored to the user's interests, keeping them engaged for longer periods. Even if the user intends to quickly check their feed, the platform's design often leads to unintentional overuse, pulling them deeper into the app and away from the social environment.

Additionally, Instagram's popularity and its addictive features, such as likes, comments, and follower counts, can create a cycle of reward-seeking behaviour. Users may feel compelled to check their phones constantly for new notifications, which leads to more frequent phubbing. The gratification from receiving likes or comments reinforces the behaviour, making it harder for individuals to resist checking their phones, even in inappropriate settings. For instance, a person might feel an urge to check Instagram during a meeting or while spending time with family, even though it's socially disruptive. Thus, Instagram plays a significant role in driving phubbing by fostering addictive patterns of phone use. Its constant updates, personalized content, and social rewards contribute to higher levels of distraction, leading people to ignore those around them in favor of their screens.

Further research by Chotpitayasunondh & Douglas (2016) identified several key factors contributing to smartphone addiction, which in turn leads to higher levels of phubbing. One of the most prominent factors is internet addiction, where individuals feel compelled to stay connected online, often at the expense of real-world interactions. For example, someone who compulsively checks their phone for social media updates during a conversation is demonstrating internet addiction, which leads them to phub those around them. Another major factor is the lack of self-control closely linked to phubbing. Individuals who struggle with self-control find it difficult to resist checking their phones, even when they know it's inappropriate or socially disruptive. For instance, during a dinner conversation, someone may feel an urge to check their phone despite knowing it's rude, and they give in to that impulse. This inability to regulate phone use creates a habit where the person continually interrupts social interactions to attend to their smartphone, reinforcing phubbing behaviour.

These factors such as internet addiction, and lack of self-control create a cyclical relationship between smartphone addiction and phubbing. The addictive use of smartphones not only leads individuals to prioritize their devices over social interactions but also reinforces the habit, making it harder to break. As people become more dependent on their phones for social connection and validation, their phubbing behaviour intensifies, further distancing them from meaningful real-life interactions. For example, a person might start by checking their phone occasionally during social situations, but as their addiction grows, they may find themselves constantly scrolling through apps or refreshing notifications, even during important conversations or events. Over time, this behaviour erodes the quality of their relationships, as they become more focused on their smartphone than the people around them.

#### 4.3.2. Personality Traits

Understanding personality traits is crucial for comprehending how individuals relate to technology and develop behaviours like phubbing (Kircaburun & Griffiths, 2018). The Big Five model outlines five key personality factors: Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, each exhibited by individuals to varying degrees along a spectrum (Feng, 2024).

- Neuroticism: Associated with emotional characteristics, indicating levels of emotional stability and adjustment.
- Extraversion: Linked to sociability, including how communicative, active, and assertive a person is.
- Agreeableness: Pertains to the quality of interpersonal relationships and prosocial behaviours.
- Conscientiousness: Relates to the organization and direction of behaviour.
- Openness to Experience: Involves exploratory behaviours and the recognition of the importance of new experiences, creativity, intellectual interests, and aesthetic sensitivity (Costa & McCrae, 1992).

Research has shown that certain personality traits can predispose individuals to phubbing, with Openness being a significant factor (Erzen et al., 2021b; Parmaksiz, 2021). People high in openness tend to be curious, imaginative, and eager for new experiences, which makes them less likely to engage in phubbing. Their need for stimulation and variety is often better satisfied through direct, face-to-face interactions rather than restricted smartphone use. For instance, an individual with high openness may find social gatherings more engaging because they enjoy learning from others, exploring new ideas, or being part of stimulating conversations. They are more likely to immerse themselves in those interactions rather than retreat into their phones.

In contrast, someone with lower levels of openness may find face-to-face social interactions less fulfilling or stimulating, prompting them to turn to their phone for entertainment or escape. For instance, in a social setting where they feel uninterested or overwhelmed, such a person might prefer scrolling through social media or checking updates on their phone rather than actively participating in the conversation. This behaviour can easily lead to phubbing, as the individual seeks out quick gratification from their device, rather than engaging with the people around them.

Additionally, the need for novelty and mental stimulation that characterizes high openness often drives individuals to seek out rich, dynamic conversations that are difficult to replicate through smartphone interactions. For instance, someone high in openness may prefer the spontaneity of face-to-face communication, where they can pick up on body language, tone, and other subtle cues that make real-life interactions more engaging. These aspects of in-person communication are often missing in digital conversations, which might explain why those with high openness are less inclined to phub, as they feel more fulfilled by engaging with people directly.

Negative Emotionality, a component of neuroticism, significantly influences phubbing behaviour. Individuals high in negative emotionality experience frequent and intense negative emotions such as anxiety, sadness, and irritability. To cope with these feelings, they may turn to their smartphones, using them as a refuge from uncomfortable social situations. A person who frequently feels anxious or stressed might engage in phubbing by constantly checking their phone during social events. This behaviour helps them avoid facing their negative emotions directly and provides a temporary escape through digital interactions or distractions. They might scroll through social media, play games, or read news articles as a way to manage their emotional discomfort, rather than engaging with the people around them.

Moreover, individuals high in emotional instability may find face-to-face interactions particularly challenging. They might be more sensitive to social feedback and fear negative judgment or criticism. Someone who is easily upset by perceived criticism might avoid in-person conversations to escape the risk of negative feedback. Instead, they might prefer the controlled environment of smartphone use, where interactions are mediated through screens and feedback is less immediate or confrontational. For example, during a group conversation, a person with high negative emotionality might withdraw and focus on their phone if they feel overwhelmed by the discussion or anxious about how they are

being perceived. This allows them to avoid the discomfort of real-time social interactions and escape into a more manageable, controlled environment.

In essence, negative emotionality drives individuals to phub as a means of emotional relief and to avoid the stress and vulnerability associated with face-to-face interactions. By engaging with their smartphones, they can create a barrier between themselves and potentially distressing social situations, finding solace in the digital realm where feedback is more controlled and less immediate.

Neuroticism has been closely linked to phubbing, particularly through problematic Instagram use (Balta et al., 2020a). Individuals high in neuroticism are prone to excessive use of Instagram, driven by their tendency to seek distraction and escape from their negative emotions. For someone who frequently experiences anxiety might spend hours scrolling through Instagram to avoid dealing with their stress. This excessive use can lead to phubbing, as they may neglect real-life interactions and become absorbed in their online world. When at a social event, this person might continually check their Instagram feed, thus ignoring friends and family around them.

In contrast, Conscientiousness has been negatively associated with Instagram addiction. Individuals high in conscientiousness display greater self-discipline and time management skills, making them less likely to engage excessively with Instagram. A highly conscientious person might set specific limits on their social media use and stick to them, avoiding the compulsive checking of their phone. This self-regulation helps them maintain a balanced approach to social media, thereby reducing their likelihood of phubbing others during social interactions.

Similarly, Agreeableness is also negatively associated with Instagram addiction. Agreeable individuals are generally more empathetic and considerate of others' feelings, including how their phone use impacts those around them. Someone who is high in agreeableness might avoid checking their phone during a dinner with friends out of respect for their company and the desire to engage fully in the conversation. Their awareness of how their actions affect others helps mitigate excessive phone use and, consequently, reduces phubbing.

Both agreeableness and conscientiousness have shown negative correlations with overall internet addiction. Individuals high in these traits are more likely to manage their internet and social media use effectively, avoiding the patterns of excessive use that lead to phubbing. A conscientious person might create a schedule to manage their online time, while an agreeable person might avoid using their phone when it might disrupt social interactions, such as during meetings or family gatherings. Their self-discipline and sensitivity to social dynamics contribute to healthier phone use habits and less phubbing.

This complex interplay between personality traits and phubbing behaviour highlights the importance of considering individual differences when examining how people interact with technology and develop potentially unhealthy behaviours.

### 4.3.3. Narcissism

Narcissistic traits, which include an inflated sense of self-importance, a need for admiration, and a lack of empathy, have been correlated with low agreeableness (Miller et al., 2010, 2011). This low agreeableness has, in turn, been associated with smartphone-related addictions, including those involving social media platforms like Instagram and general internet use (Kircaburun & Griffiths, 2018; Zhou & Cole, 2017).

Given that smartphone and internet addictions are significant predictors of phubbing (Chotpitayasunondh & Douglas, 2016; T'ng et al., 2018), it is reasonable to expect that narcissistic traits would also be associated with technological addictions and problematic smartphone use. Research supports this connection, revealing a relationship between narcissism and excessive use of social media platforms such as Facebook (Błachnio & Przepiórka, 2018), as well as smartphone addiction (Pearson & Hussain, 2015). Individuals exhibiting narcissistic traits tend to demonstrate higher levels of problematic social media and smartphone use, likely due to their constant need for admiration and validation, which these platforms readily provide.

Narcissistic individuals may be particularly prone to phubbing due to their self-centered nature and preoccupation with their smartphones as tools for self-promotion and gratification. A study found that vulnerable narcissism directly predicted increased phubbing behaviour, both directly and indirectly, through factors such as social anxiety and problematic social media use (Li et al., 2024). These individuals often prioritize their own needs and desires over social etiquette and the feelings of those around them. This behaviour can manifest in social settings where a narcissist might frequently check their phone, post updates, or engage in online activities, effectively ignoring the people they are with.

Despite the apparent role of narcissism in technology use, research that specifically focuses on the relationship between narcissism and phubbing is limited. However, the existing literature on narcissism, smartphone addiction, and social media use provides a strong basis for understanding how narcissistic traits could predict phubbing behaviour. Chotpitayasunondh & Douglas (2016) identified key predictors of phubbing, such as internet addiction and lack of self-control, which are traits often associated with narcissism. Similarly, T'ng et al. (2018) highlighted the role of smartphone addiction in phubbing, further linking narcissistic tendencies to this disruptive behaviour.

More research is needed to directly link narcissistic traits to phubbing; the existing studies on narcissism, smartphone addiction, and social media use provide compelling evidence of this relationship. Narcissistic individuals are likely to engage in phubbing due to their preoccupation with their smartphones and social media, driven by their need for admiration and low levels of empathy. Addressing narcissistic traits and their impact on technology use is essential for understanding and mitigating phubbing behaviour, thereby promoting healthier social interactions.

#### 4.3.4. Deliberately Ignoring and Boredom

Phubbing can be influenced by factors like deliberate ignoring and boredom. This behaviour is often used to avoid social interactions, sending a subliminal message of disinterest or unavailability (Al-Saggaf, 2021). In different cultures, avoiding eye contact to ignore someone can be considered rude and disrespectful, but the use of smartphones to convey busyness or deliberate ignorance has become a socially accepted norm in many contexts. By focusing on their devices, individuals can avoid eye contact and the initiation of conversations, signaling that they are preoccupied or have no intention of engaging socially.

This behaviour is prevalent in modern social interactions, as highlighted by Roberts & David (2016). Their research indicates that phubbing is often used to subtly indicate disinterest or unavailability, reinforcing the idea that this behaviour has become culturally accepted in some contexts. Research by Dwyer et al. (2018b) found that individuals frequently use their smartphones to avoid conversations or social interactions. This practice, viewed as a form of phubbing, has become a common way to communicate disinterest or the desire to be left alone. The study suggests that in certain social contexts, phubbing is perceived as a norm (Leuppert & Geber, 2020), further entrenching the behaviour in everyday interactions.

In addition to deliberate ignoring, boredom is another significant predictor of phubbing (Al-Saggaf et al., 2019b). When people feel bored in social settings such as one-on-one conversations, office meetings, lectures, or family gatherings, they often turn to their smartphones for distraction. The easy access to various applications and social media platforms, designed to constantly attract and engage users, makes smartphones an appealing escape from unengaging situations.

A study by Kushlev et al. (2017) found that boredom is a major factor driving smartphone use in social settings. Their research shows that individuals often turn to their smartphones when they feel bored, using them to escape the monotony of their current environment. This behaviour is exacerbated by the design of smartphones and applications, which are specifically intended to capture and retain users' attention, making it difficult for people to resist the temptation to check their devices. The findings of Kushlev et al. (2017) align with the broader understanding of how smartphones are used to manage boredom. In situations where individuals find themselves disengaged, they quickly switch their attention to their smartphones, seeking stimulation and entertainment. This behaviour not only disrupts social interactions but also reinforces the habit of using smartphones as a default response to boredom.

Both deliberate ignoring and boredom are significant predictors of phubbing. Individuals use their smartphones to avoid social interactions, sending subliminal messages of disinterest or unavailability. Boredom is another trigger for this behaviour, as people turn to their devices for distraction in unengaging situations.

#### 4.3.5. Fear of Missing Out (FOMO)

The fear of missing out (FOMO) is a psychological phenomenon characterized by the desire to stay continuously connected with what others are doing and the belief that others are having more rewarding experiences in one's absence (Przybylski & Weinstein, 2013). This fear, particularly prevalent in the context of social media, drives individuals to remain constantly engaged with their smartphones to ensure they are not missing out on important updates or events in their social circles.

FOMO has been linked to smartphone overuse, which can subsequently lead to phubbing. Hong et al. (2012) found that the anxiety associated with missing out on social interactions or important information on social media can lead to excessive smartphone use. This behaviour, in turn, increases the likelihood of phubbing as individuals prioritize their online interactions over face-to-face conversations.

A study by Franchina et al. (2018) confirmed this potential relationship, finding that FOMO drives excessive smartphone use and consequently, phubbing behaviour among Flemish adolescents. The study highlighted that individuals with high levels of FOMO are more likely to engage in phubbing to remain updated with their online social networks, often at the expense of their real-world interactions. This tendency is particularly pronounced in adolescents, who are highly susceptible to social influences and peer validation.

Further research supports the link between FOMO and phubbing. Balta et al. (2020b) suggested that individuals with high levels of FOMO are prone to overusing their smartphones, leading to more frequent phubbing behaviours as they seek to stay constantly connected online. Chotpitayasunondh & Douglas (2016) also found that FOMO is a significant predictor of phubbing, as the need to stay updated with social media often outweighs the importance of engaging with people physically present.

Additionally, Davey et al. (2018) indicated that the fear of missing out contributes significantly to phubbing behaviour. Their research showed that individuals who experience FOMO are more likely to divert their attention to their smartphones during social interactions, thereby neglecting those around them. This behaviour not only disrupts social cohesion but also reinforces the cycle of smartphone dependency and phubbing.

Empirical studies consistently demonstrate that FOMO can significantly contribute to phubbing behaviour. People with high FOMO tendencies often overuse their smartphones, driven by the need to stay connected and not miss out on social experiences or information. This overuse often manifests as phubbing, where individuals prioritize their virtual interactions over real-world connections. The fear of missing out is a substantial predictor of phubbing. Individuals who experience FOMO are more likely to overuse their smartphones and engage in phubbing behaviours to stay updated with their online social networks. Addressing FOMO and its impact on smartphone use is crucial for reducing phubbing and promoting healthier social interactions.

#### 4.3.6. Age

Phubbing affects individuals of all ages, not just the young. However, the impact and perception of phubbing can vary across different life stages. Older adults, for instance, are generally less tolerant of phone use in social interactions compared to their younger counterparts. There are distinct perceptions of phubbing prevalence and social approval within younger and older phone user groups. In the company of older individuals, young adults tend to reduce their phubbing behaviour. This adaptation may reflect a respect for the social norms of the older generation, or it may be a conscious effort to avoid conflict. Regardless of the reason, it indicates that age does matter when it comes to phubbing. Interestingly, earlier studies indicate no significant differences in phubbing behaviour when younger and older adults interact with the other generation and suggest that while age might influence our attitudes towards phubbing, it does not necessarily dictate our behaviour (Al-Saggaf, 2022).

Higher levels of phubbing are often driven by young people and teenagers, who are most susceptible to smartphone or Internet addiction (Savci, 2017). Young adults exhibit more phubbing behaviour in social interactions compared to older adults (Capilla Garrido et al., 2024). However, when in the company of older individuals, young adults tend to reduce their phubbing behaviour. This reduction may reflect their adaptability to different social environments and their understanding of human behaviour. Recognizing the social norms of the older generation, they adjust their behaviour to avoid causing offense. Despite this adaptability, the need to address phubbing among young adults remains crucial. Age can act as a predictor of phubbing, but due to significant technological intrusions in our lives, phubbing across various age groups is also influenced by social settings. For example, older people often consider social settings where their dignity and reputation are at stake and where they are seen as role models. A study by Lee (2017) found that older adults are more likely to be mindful of their behaviour in public to maintain their social image and serve as positive role models. On the other hand, young adults and teens may not perceive social settings in the same way, particularly regarding respect, dignity, and serving as role models to others. This difference in perception is supported by research indicating that younger individuals are less concerned with social judgment and more focused on personal gratification (Brown & Tiggemann, 2016).

#### 4.3.7. Neurological and Psychological Dimensions

The neurological dimension of phubbing involves a complex interplay of brain processes, including neurotransmitter activity and the functioning of specific brain regions that influence behaviour. A key element in understanding phubbing is the brain's reward system, driven by dopamine, which is released during smartphone use. Each time a notification is received, this triggers the brain's mesolimbic pathway involving the ventral tegmental area (VTA) and the nucleus accumbens reinforcing the habit of checking phones (Berridge & Kringelbach, 2015; Ikemoto, 2010). This dopamine release provides a sense of pleasure and satisfaction, reinforcing the behaviour in a manner like other addictive patterns like Internet Addiction (IA) (Bisen & Deshpande, 2018).

However, focusing solely on dopamine underrepresents the broader neurobiological mechanisms that may contribute to phubbing. In addition to dopamine, the serotonin system, which regulates mood and social behaviours, plays a crucial role in behaviours associated with social connectivity and anxiety (Banskota et al., 2019; Harmer et al., 2017; Zarrindast & Khakpai, 2015). Imbalances in serotonin levels can lead to increased reliance on digital devices as individuals seek comfort or distraction from negative emotions, thereby facilitating phubbing behaviours. Additionally, oxytocin often referred to as the "bonding hormone," is involved in social interactions and attachment (Stevens et al., 2013). Deficits in oxytocin could explain why some individuals prefer virtual communication via smartphones over face-to-face interactions, as they may experience weaker bonds in direct social situations.

Another critical neurological factor is the prefrontal cortex, which is responsible for impulse control, attention, and decision-making. Dysfunction or underdevelopment in this region, particularly in younger individuals, can result in difficulties with self-regulation and an increased tendency toward compulsive behaviours like phubbing (Veissière & Stendel, 2018). Research has shown that individuals with impaired executive functions in the prefrontal cortex are more susceptible to the constant distractions provided by smartphones (Hartanto & Yang, 2016; Moriguchi & Hiraki, 2013). Moreover, the overuse of smartphones, particularly at night, disrupts circadian rhythms, which further impairs cognitive function and emotional regulation, leading to irritability and difficulties in social interactions (Touitou et al., 2016). This disruption in sleep patterns creates a feedback loop where poor sleep quality exacerbates the tendency to engage in phubbing as a maladaptive coping strategy.

The psychological dimension of phubbing is equally important and encompasses mental health conditions, personality traits, and emotional regulation. Research has consistently linked phubbing with several mental health disorders (Ergün et al., 2023), including Attention Deficit Hyperactivity Disorder (ADHD), Obsessive-Compulsive Disorder (OCD), Social Anxiety Disorder (SAD), Depression, and Internet Addiction (IA). Studies suggest that individuals with these conditions often struggle with impulse control, attention, and social interaction, all of which can contribute to habitual phubbing behaviours (Tsitsika et al., 2016). For example, ADHD and social anxiety are commonly associated with problematic internet use and smartphone dependency (Demirtaş et al., 2021), further reinforcing the connection between these disorders and phubbing. Individuals with ADHD, for instance, often struggle with maintaining focus and attention, which leads to frequent shifts between their phones and real-life interactions (Cibrian et al., 2022). These individuals may find it particularly challenging to resist checking their phones, as the constant influx of notifications provides instant gratification, reinforcing their distractibility.

Phubbing shares significant similarities with compulsive behaviours observed in OCD, where individuals feel compelled to perform repetitive actions despite understanding the negative social consequences. For example, compulsive phone-checking can mirror ritualistic behaviours in OCD, driven by the anxiety of missing out on important

updates or communications (Figue et al., 2016). Furthermore, individuals with SAD often experience heightened discomfort in face-to-face social interactions, leading them to seek refuge in their phones. By avoiding direct contact, they create a psychological buffer to protect themselves from social anxiety, but this ultimately worsens feelings of isolation and deepens their reliance on digital communication (Bitar et al., 2023).

Additionally, depression can play a significant role in phubbing behaviours. Depressed individuals may turn to their smartphones as a form of distraction or comfort, yet this only exacerbates feelings of loneliness and disconnection (Liu et al., 2021). Rather than alleviating their symptoms, the superficial engagement provided by phone use often fails to offer the deep, meaningful connections needed to improve mental health. In fact, studies suggest that individuals who frequently engage in phubbing report lower life satisfaction, greater loneliness, and deteriorating social relationships (Chotpitayasunondh & Douglas, 2016).

Beyond these disorders, emotional regulation is a key psychological factor in understanding phubbing. Individuals who struggle to manage their emotions effectively are more likely to turn to their phones as a coping mechanism when faced with stress, anxiety, or discomfort. Phubbing, in this sense, acts to escape or distract from emotional challenges rather than confronting them directly (Billieux et al., 2015). This aligns with the broader understanding of phubbing as a behaviour that, while appearing innocuous, can mask more serious emotional difficulties.

Phubbing, when examined through both neurological and psychological lenses, emerges as a behaviour deeply rooted in complex cognitive, emotional, and biological processes. It shares significant overlaps with disorders such as ADHD, OCD, SAD, and Depression, while also involving reward-driven behaviours reinforced by the brain's dopaminergic system. However, it is critical to expand beyond a dopamine-centric view of phubbing and acknowledge the role of other neurochemical and biological factors, such as serotonin and oxytocin, in shaping social behaviours and attachment. These broader neurobiological systems help explain why individuals may prefer virtual interactions over face-to-face communication and why phubbing persists despite its negative social consequences.

Psychologically, phubbing can be viewed as part of a larger constellation of behaviours associated with emotional regulation and mental health conditions. The compulsive nature of phubbing, particularly when linked to disorders like OCD and Internet Addiction, points to deeper psychological challenges that manifest in this socially disruptive behaviour. Emotional regulation difficulties further compound the issue, as individuals often resort to their phones to manage or escape from uncomfortable emotions. These patterns, when unaddressed, can lead to a cycle of avoidance, isolation, and dissatisfaction, thereby reinforcing phubbing behaviours.

While phubbing shares characteristics with addictive behaviours, it may not fit neatly within traditional models of addiction. Instead, phubbing can be understood as existing on a spectrum, ranging from habitual, low-level engagement to more compulsive

and problematic use associated with underlying psychological disorders. This spectrum reflects the variability in individual experiences of phubbing, with some engaging in it occasionally as a social habit while others exhibit more entrenched, compulsive behaviours that mirror addiction.

In a nutshell, phubbing should not be reduced to a mere social nuisance or digital distraction; rather, it is a multifaceted behaviour shaped by both neurological and psychological dimensions. Understanding the complex interplay between the brain's reward system, emotional regulation, and mental health disorders provides valuable insights into why phubbing is so pervasive and why it is challenging to disengage from. As research continues to evolve, further exploration of individual differences in susceptibility to phubbing, as well as the broader societal and environmental factors that reinforce it, will be crucial for developing more comprehensive interventions to mitigate its impact on social relationships and mental well-being.

## Conclusion

Phubbing is a complex and multifaceted behaviour, influenced by various predictors deeply rooted in addiction and social psychology. This chapter has explored several key factors contributing to the prevalence of phubbing in modern social interactions. Smartphone addiction plays a significant role, as the compulsive need to engage with smartphones often leads individuals to ignore those around them. Narcissistic traits further exacerbate this behaviour, with individuals seeking constant validation and attention through their online presence. Deliberate ignoring and boredom also drive phubbing, as people use their phones to avoid uncomfortable social interactions or to escape unengaging situations. Additionally, the fear of missing out (FOMO) propels individuals to stay perpetually connected to their social networks, often at the expense of face-to-face communication.

Understanding these underlying factors is crucial for addressing and mitigating phubbing. By recognizing the impact of smartphone addiction, narcissism, deliberate ignoring, boredom, and FOMO, we can develop strategies to promote healthier and more attentive social relationships. Interventions and awareness campaigns targeting these predictors can help individuals balance their online and offline lives, fostering more meaningful and engaged interactions. As we navigate an increasingly digital world, it is essential to address the root causes of phubbing to enhance the quality of our social connections and ensure that technology enhances, rather than detracts from, our interpersonal relationships.

From a neurological and psychological perspective, phubbing is not merely a surface-level social habit, but a deeply ingrained behaviour shaped by cognitive and biological processes. The neurological dimension, involving the brain's reward system, particularly highlights how dopamine release during smartphone use reinforces addictive behaviours, similar to substance addiction. Regions like the ventral tegmental area (VTA) and the nucleus accumbens are central to this process, reinforcing rewarding behaviours

like habitual phone-checking. The role of the prefrontal cortex, associated with impulse control, further explains why individuals struggle to resist the urge to engage with their phones during social interactions. On a psychological level, phubbing mirrors behaviours found in ADHD, OCD, social anxiety, depression, and internet addiction, all of which involve attention deficits, compulsive behaviours, and difficulties in social interactions. These dimensions underline how deeply intertwined phubbing is with broader mental health challenges.

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# CHAPTER V.

## Digital Grip

**Abstract:** This analysis investigates the far-reaching impact of the attention economy, where digital platforms are deliberately designed to capture and retain user attention for profit. It examines the use of psychological and cognitive strategies, such as intermittent rewards, autoplay, and infinite scrolling, to foster addictive user behaviours. The concept of "surveillance capitalism" is explored, illustrating how user data is leveraged to maximize engagement, aligning with advertising-driven revenue models. The discussion extends to the psychological consequences, including cognitive overload, diminished attention spans, and behavioural conditioning that prioritizes digital interactions over face-to-face communication. The role of algorithms and user interface designs in reinforcing these patterns is critically analyzed, focusing on their contribution to behaviours like phubbing. Broader societal impacts, including social fragmentation and mental health challenges, are also addressed. The analysis concludes by advocating for more ethical and user-centric technology practices that promote well-being and encourage balanced digital engagement, mitigating the adverse effects of the attention economy on human relationships and connections.

**Keywords:-** *Cognitive Overload, Digital Interactions, Intermittent Rewards, Surveillance Capitalism.*

### 5.1. Introduction

Technology companies are in a relentless race to capture and retain user attention in an increasingly digital world. This has led to what many scholars call the "attention economy," where platforms and applications are meticulously engineered to draw in users and keep them engaged. From the endless scrolling feature on social media to autoplay on streaming platforms, these elements create immersive experiences that captivate users, often at the expense of real-world engagement. The concept of "surveillance capitalism," outlined by Zuboff (2019), illustrates how tech companies exploit user data to drive engagement, collecting and analyzing patterns to tailor content that maximizes time spent on their platforms. This design intention aligns with a larger business model

where user attention is paramount, directly correlating with advertising revenue and platform profitability.

The tactics used by these platforms, including intermittent rewards and personalized content, leverage principles of human psychology to foster habitual use. By delivering unpredictable rewards, similar to those in gambling, social media platforms stimulate the brain's dopamine system, heightening anticipation and creating a cycle of habitual checking. This cycle is compounded by psychological triggers, such as notifications and likes, designed to capture user attention and encourage a return to the platform. Studies by Montag et al. (2019) reveal that these intermittent rewards reinforce engagement, ultimately reducing users' capacity for sustained, face-to-face interaction.

As technology companies intensify their focus on keeping users online, they employ specific metrics like dwell time and click-through rates to track engagement and refine platform design. The longer users remain on the platform, the more exposure they have to targeted advertisements, which boosts revenue. Studies like those of McNamee (2020) highlight that up to 90% of social media revenue stems from advertising, incentivizing companies like Facebook and Instagram to prioritize features that maximize user engagement. Algorithms further bolster these efforts by personalizing content based on previous interactions, enhancing users likelihood of being engaged. Research by Van der Crujisen et al. (2019) confirms that personalized recommendations contribute significantly to extended usage. Yet, they also subtly shift user behaviour towards more device-dependent habits, often at the cost of in-person relationships.

The effects of this constant digital engagement are visible in social settings, where people increasingly check their phones, even in the presence of others. This phenomenon is not simply a byproduct of individual choice; instead, it is an outcome influenced by tech companies' designs that subtly but effectively encourage digital over physical engagement.

## 5.2. The Science of Attention and Human Psychology

The science of attention is integral to understanding human psychology, particularly in today's digital era where cognitive demands are high. Attention, as a selective cognitive process, allows individuals to focus on specific stimuli amidst a many distractions. Through understanding the mechanisms of attention, psychologists and neuroscientists provide insights into how individuals manage information and make decisions in a world inundated with constant digital engagement. These insights inform how digital platforms are designed to capture and retain user attention.

### 5.2.1. The Psychological Basis of Attention

From a psychological perspective, attention is a cognitive process essential for managing the vast amounts of information humans encounter daily. Attention allows individuals to selectively focus on specific stimuli while filtering unnecessary data, enabling effective information processing. Cognitive psychologists define two main types of attention: focused attention, where a person dedicates their concentration to a single

task, and selective attention, which allows a person to tune out competing stimuli to concentrate on one focal point (Kahneman, 1973). Selective attention, however, is limited by cognitive capacity, which is often referred to as cognitive load—the total amount of mental effort being used in the working memory (Sweller, 1988).

Research on cognitive load reveals that humans can only process a limited amount of information at a time, leading to potential issues when multiple stimuli demand attention. With the proliferation of digital platforms, cognitive overload has become a common problem, as users are exposed to vast quantities of information simultaneously, resulting in divided attention and reduced task efficiency (Ophir et al., 2009). Neuroscience research also demonstrates that information overload can impair the brain's ability to make decisions and retain information, as excessive multitasking reduces attention spans and memory retention (Hembrooke & Gay, 2003). These findings underscore the importance of understanding how attention functions psychologically, especially in digital environments where information is continuously abundant.

### 5.2.2. Techniques Used to Capture Attention

Digital platforms employ a range of psychological techniques to capture and retain user attention. Many of these techniques exploit natural cognitive tendencies, particularly our susceptibility to intermittent reinforcement and cognitive biases. These methods are designed to trigger habitual use and keep users engaged, often bypassing conscious control mechanisms. For instance, push notifications serve as constant reminders of digital content, triggering the user's curiosity and fear of missing out (FOMO). Research has shown that notifications increase user engagement by periodically redirecting their attention, reinforcing the habit of returning to the device (Ronkainen, 2023).

Infinite scrolling is another widely used technique that promotes prolonged engagement by eliminating natural stopping points. Studies indicate that this design choice taps into the human tendency for completion bias, where individuals feel compelled to continue until a task is finished even if there is no clear endpoint in the case of infinite scrolling (Hinsch & Sheldon, 2013). This design promotes a flow state in which users lose track of time, enhancing the duration of their interaction with the platform.

The autoplay feature is a particularly effective attention-capturing mechanism, commonly seen in video streaming services such as YouTube and Netflix. Autoplay removes users' need to decide whether to continue, reducing friction and encouraging binge-watching behaviour (Alter, 2017). This tactic leverages our cognitive biases toward ease of access and has been shown to increase total viewing time significantly. Autoplay exploits the operant conditioning principles initially developed by B.F. Skinner, particularly the concept of intermittent rewards. By offering unpredictable but rewarding content, digital platforms maintain user engagement similarly to how intermittent reinforcement in gambling keeps players hooked (Skinner, 1953). Studies on this reinforcement pattern suggest that intermittent rewards create a powerful loop that keeps users returning to the platform, hoping for new and engaging content each time (Montag et al., 2019).

Research in cognitive psychology highlights how these design features can exploit natural cognitive biases, leading to habitual engagement. For instance, Zuboff (2019) notes that platforms leverage behavioural manipulation by using data-driven insights to tailor user experiences, leading to deeper engagement. This approach not only boosts user retention but also heightens the revenue generated from prolonged user interactions. Variable reward systems, such as the notifications and recommendations seen on social media, create an addictive loop where the uncertainty of reward delivery (i.e., what content or notification will appear next) enhances user dependence (Eyal, 2014).

In a nutshell, digital platforms are designed with sophisticated attention-capturing techniques rooted in psychological principles. By utilizing intermittent rewards, removal of stopping cues, and push notifications, technology companies create immersive experiences that extend user engagement, often at the expense of other activities and real-life social interactions. These mechanisms contribute to behaviours such as phubbing, where individuals prioritize digital content over face-to-face communication, as they become conditioned to respond immediately to digital prompts.

### 5.3. Technological Design and User Experience

In today's digital landscape, technological design and User experience (UX) are pivotal in shaping user interactions and influencing behaviour across various platforms. With the rapid evolution of technology, companies invest heavily in understanding how design elements can facilitate seamless, engaging, and, often, addictive user experiences. Effective technological design goes beyond mere aesthetics; it involves crafting interactive environments that encourage users to explore and engage. These designs create smooth, visually appealing user journeys through intuitive interfaces and strategic layouts that reduce friction and elevate satisfaction, fostering deeper user engagement and loyalty.

Central to the successful technological design is aligning with user expectations and behaviours. By utilizing data-driven insights, tech platforms can predict and cater to user needs, streamlining functionality and enhancing the overall experience. For example, tech giants like Google and Apple employ human-centered design principles, focusing on usability and accessibility to ensure their products remain intuitive and accessible to diverse user bases. In this context, UX is about making applications easy to use and embedding mechanisms that subtly guide user actions, maximizing engagement by creating interfaces that feel effortless and rewarding.

#### 5.3.1. User Interface / User Experience Design Targeting Engagement

User interface (UI) and User Experience (UX) design are crucial in shaping how users engage with digital platforms. In the competitive attention economy, tech companies meticulously design interfaces to be intuitive, engaging, and, often, addictive. This approach is rooted in persuasive design, a methodology that leverages psychological principles to influence user behaviour and maximize engagement. For instance, features like buttons on social media platforms offer immediate feedback, activating the brain's

reward system and encouraging repetitive use (Meshi et al., 2015). Similarly, story features on platforms like Instagram and Facebook, which present content with a 24-hour expiration, create a sense of urgency that compels users to check updates more frequently to avoid missing out (Rauch, 2018).

In addition to basic engagement features, tech platforms incorporate gamification elements, such as streaks on Snapchat, badges, and achievements, which apply game-like rewards to non-gaming contexts (Hristova et al., 2020). These features encourage consistent use by leveraging the psychological concept of the goal gradient effect: the closer individuals are to reaching a reward, the more motivated they become to achieve it (Nunes & Drèze, 2006). Research on persuasive design shows that integrating such visual and auditory cues keeps users engaged by providing intermittent rewards, which increase engagement and foster habitual interaction (Fogg, 2002). Moreover, designers use color psychology and animation to highlight interactive elements, making these features visually appealing and psychologically compelling, enhancing the likelihood of continued interaction (Purpura et al., 2011). A study by Harris (2016) highlights how tech platforms use visual and auditory cues to subtly direct user behaviour and extend engagement time. Notifications with red badges, for example, capture user attention due to the color's association with urgency, prompting users to address them immediately. Combined with sound alerts, these notifications reinforce an immediate response, reducing the user's likelihood of ignoring them (Alter, 2017). This blend of visual and auditory cues and intuitive, reward-based features, form the foundation of persuasive UI/UX design that maximizes user retention by creating a seamless and stimulating experience.

### 5.3.2. A/B Testing and Data-Driven Design

To optimize user engagement, tech companies routinely employ A/B testing and data-driven design. A/B testing, or split testing, involves running two or more versions of a feature with different user groups to determine which version elicits the highest engagement. This data-centric approach allows companies to fine-tune UI/UX elements in real-time based on actual user responses, creating incrementally optimized designs to retain attention (Kohavi et al., 2007). For example, Facebook and Instagram frequently run A/B tests to evaluate engagement features placement, color, or wording like reaction buttons or comments to see which configurations maximize clicks and interactions (Bakshy et al., 2015).

A notable instance of A/B testing is Netflix's recommendation algorithm and content display. The company tests multiple thumbnail images and layout variations for each show or movie, tailoring visuals based on individual viewing history to capture attention instantly (Gomez-Uribe & Hunt, 2016). A study by Tucker & Zhang (2011) reveals that platforms like Netflix use behavioural data to curate content, which keeps users engaged for extended periods. These techniques result in longer viewing times, as users are more likely to click on a thumbnail or engage with content that resonates with their preferences, further reinforcing the loop of attention capture.

Instagram, for instance, relies heavily on data-driven design by constantly analyzing how users interact with features like the Explore page and Stories. Through A/B testing, Instagram adjusts these features based on user engagement patterns, including how long users spend on certain types of content and their scrolling behaviours. Researchers by Di Gangi & Wasko (2016) indicate that by analyzing extensive behavioural data, Instagram adjusts its algorithms to show more content that aligns with the user's interests, making the platform more engaging and challenging to leave. This approach increases session duration and keeps users returning to the app, reinforcing habitual usage patterns.

Overall, A/B testing and data-driven design allow tech platforms to iteratively refine their engagement strategies, creating an optimized, individualized user experience. Companies create platforms that fulfill their primary objective maximizing user engagement by testing and analyzing which features hold user attention the longest. The result is a cycle where user behaviour data continuously informs design decisions, each iteration fine-tuning the user experience to increase interaction time, which indirectly impacts in-person interactions by fostering an environment that encourages device engagement over real-life social connections.

## 5.4. Social Media and the Race for Attention

Social media has fundamentally reshaped how we communicate, consume information, and engage with others. The primary goal of most social media platforms is to capture and maintain user attention for as long as possible. This relentless race for attention is driven by the competition among platforms to increase user engagement, which directly correlates with revenue generation, predominantly through advertising. As a result, social media platforms design their interfaces and user experiences to be as engaging and immersive as possible, often leveraging human psychology to ensure users remain connected and active. This race creates a cycle in which users are exposed to a continuous stream of content designed to hold their attention, from posts tailored by complex algorithms to influencer-created media to spark interest and interaction. The implications of this race go beyond user engagement, influencing mental health, societal norms, and the balance between profit and ethical responsibility.

### 5.4.1. The Social Media Business Model

Social media platforms like Facebook, Twitter, and Instagram operate on a business model that profits directly from capturing and sustaining user attention. This model hinges on advertising revenue, whereby platforms generate income by displaying ads to users. The longer users engage with the platform, the more advertisements they see, increasing the revenue for the platform. To achieve this, platforms design their user experience to maximize time spent on the platform, employing sophisticated techniques to keep users scrolling, liking, and sharing content.

For instance, Facebook's advertising model utilizes targeted advertising based on user data, including browsing behaviour, interaction history, and demographic information. Studies show that this targeted approach is highly effective; Lambrecht & Tucker (2013)

found that personalized advertising substantially increases user click-through rates, benefiting advertisers and the platform alike. This model has been remarkably lucrative, with reports indicating that up to 98% of Facebook's revenue is derived from advertising (Facebook, 2021). This revenue structure incentivizes platforms to prioritize user engagement above other considerations, leading to concerns over the commodification of user attention. Scholars like Zuboff (2019) argue that the value of attention has led to what she terms "surveillance capitalism," where platforms collect, analyze, and exploit user data to fuel continuous engagement, often at the cost of user well-being.

However, this business model raises ethical concerns. As social media companies prioritize engagement to increase ad revenue, they often disregard the potential psychological effects of their design strategies on users. Excessive social media use has been linked to declines in mental health, including increased anxiety, loneliness, and reduced self-esteem (Twenge & Campbell, 2018). The commodification of attention, whereby user engagement is turned into profit, has led to criticism over social media's responsibility in prioritizing revenue over users' mental health and well-being.

#### 5.4.2. The Algorithmic Control of Attention

The algorithms that determine what content users see are central to social media's ability to retain user attention. Algorithms curate content in ways that maximize engagement by promoting posts and videos likely to attract user interest based on previous behaviour. For instance, YouTube's recommendation engine is designed to suggest videos that will keep users watching longer. According to Covington et al. (2016), YouTube's recommendation algorithm prioritizes "watch time" as a key metric, meaning it promotes content that increases the amount of time users spend on the platform. This optimization is not neutral; the algorithm can amplify sensational or extreme content if it holds user attention, raising concerns over the platform's role in spreading misinformation and polarizing views (Hussein et al., 2020).

This focus on engagement over content quality has profound implications for user experience and societal impact. In a study analyzing Facebook's algorithm, Bakshy et al. (2015) found that content promoting strong emotional reactions is more likely to be shared and recommended, which incentivizes the platform to promote highly emotive or divisive content. This strategy can create echo chambers, where users are exposed primarily to content that reinforces their views, potentially distorting their perception of reality. Consequently, while algorithms are effective in maximizing engagement, they often do so without regard for the user's mental and social health, creating ethical challenges for platforms as they balance profitability with responsible content curation.

#### 5.4.3. The Role of Content Creation in the Attention Economy

In addition to algorithmic control, social media has spurred the rise of influencers and content creators who are incentivized to produce attention-grabbing content. These individuals play a pivotal role in the attention economy, as platforms reward creators who can draw large audiences with higher visibility and monetization options. Platforms

like YouTube and Instagram offer monetization opportunities through ad revenue, partnerships, and sponsorships, encouraging creators to generate engaging, often sensational content that attracts views and interactions (Abidin, 2016). Influencers, in turn, contribute to the platform's engagement metrics, as their followers are more likely to spend extended time engaging with the content, thus driving up advertising revenue.

However, this model creates incentives that may lead creators to prioritize engagement over authenticity or informational value. Research by Duffy & Hund (2015) highlights how influencers often employ sensationalism and emotional appeals to capture attention, creating a “performance of authenticity” where content is carefully crafted to appear genuine. This approach can lead to a cycle of escalation, as content becomes progressively more sensational to maintain viewer interest, impacting users' perceptions and potentially leading to addictive use patterns.

The attention economy's reliance on influencers influences broader cultural dynamics, as content creators set trends that users feel compelled to follow. A study by Remya (2024) notes that the influencer-driven nature of social media fosters a “culture of comparison,” where users feel pressure to emulate the idealized lifestyles portrayed by influencers, which can harm mental health by fostering unrealistic expectations and social comparison.

## 5.5. The Impact on Society and Human Behaviour

The proliferation of social media and the underlying attention economy has deeply influenced human behaviour and societal structures. By prioritizing user engagement and time spent on platforms, social media companies have fostered an environment where attention is a commodity traded for profit. This shift has repercussions that extend far beyond individual screen time, affecting collective mental health, cognitive capacities, and social interactions. The constant push for engagement leads to overstimulation and changes how people process information, socialize, and form opinions. As users are exposed to an unending stream of tailored content, their behaviours adapt, sometimes in ways that have unintended negative consequences. This transformation affects personal well-being and social dynamics, including how individuals interact, connect, and align with their communities. Understanding these broader societal impacts sets the stage for a deeper examination of the mental health effects and social fragmentation the attention economy fosters.

### 5.5.1. The Attention Economy's Effects on Mental Health

The relentless pursuit of user attention in the digital age has brought about significant mental health challenges. As users are exposed to a constant influx of information, they experience information overload a state in which the sheer volume of content exceeds their cognitive processing capacity, leading to stress, distraction, and decreased productivity. Research by Misra & Stokols (2012) indicates that information overload is associated with mental fatigue and emotional exhaustion, as individuals struggle to continuously process the vast quantities of content that digital platforms deliver. This

constant digital engagement has been linked to digital addiction, a behavioural condition where users feel compelled to engage with their devices excessively, often leading to interference with daily life (Kuss & Griffiths, 2017).

One notable psychological impact of social media overuse is the Fear of Missing Out (FOMO), a pervasive anxiety that others might be experiencing enjoyable activities or acquiring new information that one is missing. FOMO is exacerbated by platforms like Instagram and Facebook, where users are constantly exposed to curated content showcasing others' experiences. A study by Przybylski & Weinstein (2013) found that FOMO is strongly associated with greater social media use, which in turn is linked to feelings of inadequacy, loneliness, and depression. Furthermore, research by Lin et al. (2016) shows that prolonged social media use correlates with increased risks of depression and anxiety, as users frequently compare themselves to idealized portrayals of others, leading to negative self-perception.

Moreover, constant digital engagement has negatively impacted attention spans and cognitive control. Studies have found that individuals who engage heavily with digital media are more prone to distraction and less capable of sustained attention (Rosen et al., 2013). This phenomenon is compounded by the design features of social media, which often encourage rapid attention shifts scrolling, swiping, and liking multiple posts in quick succession. As users become accustomed to these brief bursts of information, they may find it challenging to focus on tasks requiring sustained concentration, potentially impacting productivity and overall cognitive health (Wilmer et al., 2017). Collectively, these mental health concerns underscore the costs associated with the attention economy's demands, with profound implications for users' psychological well-being.

### 5.5.2. *Social Fragmentation and the Attention Economy*

In addition to individual mental health effects, the attention economy has broader social implications, particularly in its contribution to social fragmentation. Platforms like Facebook, Twitter, and YouTube prioritize sensational and emotionally charged content, which captures attention more effectively than neutral or balanced information. This prioritization can lead to the creation of filter bubbles and echo chambers, where users are primarily exposed to content that aligns with their existing beliefs, further isolating them from opposing viewpoints. (Sunstein, 2018) describes echo chambers as self-reinforcing environments that limit users' exposure to diverse perspectives, contributing to ideological polarization and reinforcing biased views.

Empirical research supports the role of social media algorithms in fostering filter bubbles. For instance, a study by Bakshy et al. (2015) found that Facebook's algorithm tends to recommend content that aligns with users' preferences, leading to a reduction in cross-ideological exposure. This selective content exposure exacerbates social fragmentation by segregating users into like-minded groups. Over time, these groups become isolated, with each member receiving primarily homogeneous information that reinforcing their beliefs. As a result, users may become more polarized and less empathetic toward opposing perspectives (Flaxman et al., 2016).

The effects of filter bubbles extend beyond individual beliefs, as they also facilitate the spread of misinformation. Algorithms optimized for engagement tend to promote sensationalist content, often including misinformation, conspiracy theories, and exaggerated news stories. Vosoughi et al. (2018) found that false information spreads more rapidly on Twitter than true information, primarily due to its novelty and emotional impact, which capture user attention more effectively. This environment encourages content creators to prioritize sensationalism over accuracy, as emotionally charged content is more likely to be shared. Consequently, the attention economy fuels the propagation of polarizing and often false information, contributing to societal divisions.

These dynamics, driven by the attention economy, ultimately fragment social cohesion. Social media encourages divisive discourse by incentivizing platforms to promote content that appeals to biases and evokes strong emotional responses. This can lead to hostility among groups with differing viewpoints and decreased social trust. In the long term, the attention economy's focus on polarizing content has profound implications for societal unity, as people become less likely to encounter or engage with diverse perspectives, potentially eroding democratic processes and interpersonal understanding (Pariser, 2011).

## 5.6. Regulatory and Ethical Challenges

Social media's rapid growth and influence have brought significant regulatory and ethical challenges to the forefront. While these platforms have transformed how people communicate and access information, they have also raised concerns about how user attention is exploited and manipulated for profit. The business models of tech companies often prioritize user engagement at any cost, leveraging psychological tactics that can have detrimental effects on mental health and overall well-being. These issues are especially critical for vulnerable groups, such as children and adolescents, who may be more susceptible to the negative impacts of these design choices.

Calls for regulation are growing as the implications of these practices become clearer. Policymakers and advocacy groups are increasingly demanding accountability and legislative action to protect users from manipulative design features and ensure greater transparency in how personal data is collected and used.

### 5.6.1. Ethical Considerations of Exploiting User Attention

The relentless pursuit of user attention by tech companies raises substantial ethical concerns, particularly regarding the exploitation of vulnerable populations, such as children and adolescents. These groups are especially susceptible to manipulative design features because of their developing cognitive and emotional capacities, which can make them more impulsive and less capable of discerning when they are being influenced. For example, features like autoplay, push notifications, and infinite scroll exploit basic psychological principles to keep users engaged for extended periods, often without them being fully aware of the mechanisms driving their behaviours (Anderson & Jiang, 2018).

Critics argue that these design tactics effectively manipulate users' attention and behaviour, raising questions about the ethical implications of such strategies. Tristan

Harris, a former Google design ethicist and co-founder of the Center for Humane Technology, has been a vocal advocate for ethical design practices that respect users' well-being rather than solely pursuing engagement. Harris has highlighted the potential harms of persuasive design, arguing that technology companies bear a moral responsibility to consider the consequences of their designs on users' mental health and life choices (Harris, 2016). The Center for Humane Technology and other advocacy groups have called for a shift toward humane technology that prioritizes human values, proposing ethical standards to ensure tech products support rather than exploit user autonomy and agency.

Ethical concerns extend to the mental health implications of constant digital engagement. Adolescents and children who frequently engage with social media and digital content have been shown to experience higher levels of anxiety, depression, and decreased self-esteem (Twenge & Campbell, 2018). Critics argue that platforms designed to maximize screen time at the expense of psychological well-being place profit over people, exploiting attention in ways that can lead to long-term harm. These ethical challenges underscore the need for tech companies to adopt more responsible practices that consider the well-being of users, particularly vulnerable demographics.

### 5.6.2. Calls for Regulation

In response to growing concerns over the impact of technology on mental health, well-being, and privacy, policymakers and advocacy groups have increasingly called for the regulation of tech companies. Regulatory bodies focus on curbing manipulative design practices and enforcing stricter standards to protect user privacy. The European Union's General Data Protection Regulation (GDPR), implemented in 2018, set a precedent by establishing comprehensive data protection and privacy standards for tech companies operating in the EU. GDPR mandates that companies must secure explicit user consent before collecting personal data and emphasizes the user's "right to be forgotten" to limit the perpetual access that platforms have to user information (Ture, 2021).

The debate over regulating tech companies has gained momentum in the United States, with congressional hearings exploring the ethical implications of social media's design choices and data practices. In 2021, Facebook whistleblower Frances Haugen testified before Congress, revealing internal documents that showed the company's knowledge of Instagram's adverse effects on teenagers' mental health. Haugen's testimony amplified calls for stricter regulation of tech companies to address the ethical and social harms associated with their business models (Di Salvo, 2022).

## Conclusion

The analysis of "Digital Grip" reveals that phubbing is deeply embedded in the structure of the attention economy. The chapter illustrates that digital platforms are engineered to capture attention through various psychological, cognitive, and design

strategies, creating habits that prioritize digital interactions over in-person connections. Phubbing emerges as a predictable result of these mechanisms, as users become conditioned to respond to digital prompts that disrupt face-to-face engagement.

It is clear that addressing phubbing requires more than just individual awareness and calls for a societal and technological shift toward designs that enhance, rather than detract from, human connection. Integrating this perspective, we can further explore solutions to mitigate phubbing, such as promoting digital mindfulness, enhancing public awareness of persuasive design, and advocating for regulatory measures that encourage more balanced technology use.

The attention economy exerts a profound influence on human behaviour, reshaping social interactions and placing digital engagement at the forefront. By examining the psychological principles and technological strategies that drive user attention, it becomes clear how digital habits such as phubbing are cultivated. Insights into a cognitive load, persuasive design, and algorithmic control reveal how technology capitalizes on inherent cognitive tendencies to encourage continuous engagement, often at the expense of real-life connections.

Phubbing is not just an individual issue but a result of sophisticated design by tech companies aiming to maximize user attention. Features like infinite scrolling, autoplay, and targeted notifications create habitual phone-checking behaviours that disrupt personal relationships. These digital design choices contribute to broader social and psychological effects, such as cognitive overload, diminished attention spans, and increased social fragmentation, which make maintaining meaningful face-to-face interactions more challenging.

The ethical responsibilities of tech companies and the importance of prioritizing user well-being are critical discussions. There is a pressing need for humane technology and responsible design that supports healthy digital habits and nurtures real-world human connections. Promoting a balanced approach to technology use is crucial to counteracting the adverse effects of the attention economy, such as phubbing, and fostering environments where digital tools enhance, rather than hinder, human interaction.

Ultimately, understanding the driving forces behind digital behaviour and its implications invites a more mindful engagement with technology. A shift towards more conscious, human-centered use is necessary to mitigate digital dependency and ensure that technology serves as a tool for connection rather than an obstacle to it. Recognizing these impacts emphasizes the importance of advocating for a future where technology supports and uplifts human relationships rather than diminishing them.

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# CHAPTER VI.

## Theoretical Explanations of Phubbing

**Abstract:** This analysis explores theoretical frameworks to understand phubbing, a social behaviour where smartphone use precedes face-to-face interactions. It examines key theories, including the Theory of Interpersonal Behaviour (TIB), Theory of Planned Behaviour (TPB), Social Norms Theory (SNT), Politeness Theory, and Bandura's Social Learning Theory, to uncover the social, psychological, and contextual factors influencing phubbing. These frameworks provide insights into behavioural intentions, the influence of social norms, learned behaviour, and the role of habitual smartphone use. However, existing theories often fail to capture the full scope of digital engagement's impact on human interaction. The Digital Displacement Theory (DDT) is introduced to address this limitations proposing that digital interactions displace real-world communication by leveraging psychological rewards and reinforcement mechanisms. DDT explains how emotional, cognitive, and social displacement sustains phubbing, resulting in habitual or compulsive behaviours. This perspective provides a deeper understanding of how digital engagement disrupts social cohesion and interpersonal relationships in a technology-driven world, emphasizing the need for a multidimensional approach to studying phubbing.

**Keywords:** *Digital Displacement, Interpersonal Behaviour, Planned Behaviour, Social Norms Theory, Politeness Theory.*

### 6.1. Introduction

Phubbing, a behaviour increasingly prevalent in today's tech-driven society, poses significant challenges to interpersonal relationships and social cohesion. As individuals become more attached to their smartphones, the act of ignoring those physically present in favor of engaging with a digital device has emerged as a modern social dilemma. To fully understand why people engage in phubbing and how this behaviour affects social interactions, it is essential to delve into various theoretical frameworks that explain this phenomenon.

To build a deeper understanding of phubbing, this chapter reviews key theoretical frameworks that illuminate its underlying causes and dynamics. By examining models such as the Theory of Interpersonal Behaviour (TIB) and Social Norms Theory (SNT), we can understand how social and psychological factors drive individuals to prioritize their smartphones over direct communication. Psychological theories addressing addiction and self-control provide insights into the compulsive nature of smartphone use, highlighting its addictive tendencies and the challenges in resisting the urge to check one's device.

The Expectancy Violation Theory (EVT) adds another dimension to this understanding by explaining how deviations from expected communication behaviours such as ignoring someone in favor of a device can lead to discomfort, frustration, or a breakdown in interpersonal relationships. By violating the unwritten rules of social interaction, phubbing can damage the quality of relationships, contributing to a sense of disconnection even in physically close environments.

In addition to these frameworks, Albert Bandura's Social Learning Theory offers a powerful lens to explain how phubbing is learned and contextually regulated. Phubbing behaviour may be acquired through observation and imitation, especially in environments where it is normalized and carries little social cost. The behaviour is reinforced when individuals witness others phubbing in casual settings without negative consequences. However, phubbing is less likely to occur in environments with fear of punishment or social backlash, such as professional or hierarchical settings.

Finally, this chapter will propose a new theoretical framework, the Digital Displacement Theory (DDT), to explain phubbing. DDT posits that digital interactions are displacing face-to-face communication, shifting the priority from physical to digital engagement. This theory seeks to explain how digital immersion affects social dynamics and contributes to the rise of phubbing as a widespread behaviour. Together, these theoretical models provide a comprehensive foundation for exploring the rise of phubbing and its impact on modern social interactions.

Although classical models like the Theory of Planned Behavior and Social Norms Theory offer valuable insights into human behavior, their relevance to digital contexts remains limited. As phubbing emerges from rapidly evolving technological and communicative norms, these models must be adapted or expanded. The Digital Displacement Theory (DDT), proposed in this chapter, addresses this gap by incorporating the psychological gratifications, habitual responses, and emotional shifts unique to digital interaction. This framework aims to offer a more nuanced, context-sensitive understanding of phubbing in today's digitally immersive environments.

## 6.2. The Theory of Interpersonal Behaviour (TIB)

The Theory of Interpersonal Behaviour (TIB), developed by Triandis (1977), provides a comprehensive framework for explaining behaviour in interpersonal settings. It considers multiple factors, including behavioural intentions, habits, and facilitating conditions,

which can be applied to understand phubbing a behaviour where individuals engage with their smartphones at the expense of face-to-face conversations.

### 6.2.1. Behavioural Intention

In TIB, behavioural intention represents a conscious decision to engage in a particular behaviour. A combination of attitudes, social influences, and emotional states shapes this intention. In the case of phubbing:

- *Attitudes*: Someone's attitude toward phubbing depends on their view of whether smartphone use during conversations is acceptable. For instance, some may believe it enhances productivity (positive attitude), while others might see it as damaging to face-to-face interactions (negative attitude).
- *Outcome Beliefs*: These beliefs refer to expected consequences. If individuals perceive phubbing as harmful to their relationships, they are likely to develop negative intentions toward it. On the other hand, those who see no harm may have positive intentions.
- *Social Factors*: Social norms, roles, and self-concept significantly influence behaviour. If a person is in a social group where phubbing is common, they may view it as acceptable. Similarly, people's roles (e.g., a manager versus an employee) or self-concept (e.g., viewing oneself as a multitasker) can influence whether they engage in phubbing.

### 6.2.2. Habits

TIB emphasizes the role of habit, highlighting that many behaviours, including phubbing, are habitual rather than intentional. Over time, regularly checking phones during conversations can become an automatic, unconscious response. Once a habit, phubbing becomes challenging to control, even if individuals realize it harms their relationships. This habitual nature makes it a significant element of phubbing, as the behaviour often occurs automatically, bypassing conscious decision-making.

### 6.2.3. Facilitating Conditions

Facilitating conditions refer to environmental or situational factors that either enable or restrict behaviour. In the context of phubbing, the availability of smartphones, constant notifications, and social norms that permit phone use are all facilitating conditions. Even if someone intends not to phub, the ever-present accessibility of phones and notifications may lead to phubbing. Facilitating conditions can also reduce phubbing, such as when phones are banned in specific settings.

### 6.2.4. Limitations of Theory of Interpersonal Behaviour

While TIB provides valuable insights into the behaviour, it has several limitations:

- *Overemphasis on Individual Factors*: TIB emphasizes personal attitudes and habits but underestimates the broader social and cultural contexts that heavily influence

behaviour. Group norms and societal expectations often shape whether phubbing is acceptable, yet these factors are less emphasized in TIB.

- **Compulsive Nature of Smartphone Use:** TIB focuses on intentional and habitual behaviours but does not fully address the compulsive aspect of smartphone use. Phubbing can be more than a habit; it can become compulsive, with individuals feeling an overwhelming urge to check their phones, even when it harms relationships. This compulsive element often overrides the conscious decision-making process that TIB emphasizes.

### 6.3. Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), developed by Ajzen (1985), is widely used to predict and understand human behaviour by considering three key components: attitudes, subjective norms, and perceived behavioural control. In the context of phubbing, TPB sheds light on how individuals make decisions regarding their smartphone use in various settings like friendships, romantic relationships, workplace interactions, and academic environments.

#### 6.3.1. Attitudes Toward Phubbing

According to TPB, attitudes reflect a person's positive or negative evaluation of a behaviour. Regarding phubbing, an individual's attitude largely determines whether they engage in it. For example, someone may justify phubbing if they see smartphone use as beneficial or harmless, such as by staying updated or multitasking efficiently. Attitudes toward phubbing can vary depending on the context: in friendships, it may be seen as more acceptable, whereas in romantic relationships, phubbing could be perceived as neglectful or disrespectful. Students may develop a positive attitude toward phubbing in academic settings if they find lectures unengaging. At the same time, teachers might have a negative attitude toward the behaviour, viewing it as disruptive or disrespectful.

#### 6.3.2. Subjective Norms and Social Influence

Subjective norms refer to the perceived social pressure to engage in or refrain from a specific behaviour. These social norms often shape phubbing. Individuals may feel compelled to conform if phubbing is commonplace within a peer group. For instance, in a group where phone-checking is frequent, an individual is likelier to think that phubbing is socially acceptable. This also applies to romantic relationships where established boundaries influence behaviour, and in professional settings, where workplace culture might dictate norms around phone use. In academia, if most students use phones during lectures, others may feel pressured to follow suit, reinforcing phubbing as the norm.

#### 6.3.3. Perceived Behavioural Control

Perceived behavioural control is the individual's belief about how easy or difficult it is to perform a behaviour, influenced by internal and external factors. When applied to phubbing, individuals may feel that their ability to refrain from checking their phones

is limited due to the addictive nature of smartphone use or constant notifications. For instance, someone might want to avoid phubbing during a romantic dinner but may feel compelled to check their phone due to work-related messages. In professional or academic settings, perceived behavioural control is influenced by those environments rules or cultural expectations. Strict rules about phone use can enhance self-control, whereas a relaxed atmosphere might reduce it.

#### 6.3.4. Intention and Phubbing Behaviour

TPB argues that attitudes, subjective norms, and perceived behavioural control collectively shape intentions, influencing behaviour. For phubbing, this means that a person's intention to engage in the behaviour will be influenced by how they evaluate phubbing, the social pressures they experience, and how much control they believe they have over their phone use. For example, if student have a positive attitude toward phubbing, feel that their peers also phubb, and believe they have little control over their phone habits, they are likely to phubb during a class.

#### 6.3.5. Limitations of Theory of Planned Behaviour (TPB)

While TPB provides valuable insights into the cognitive processes behind phubbing, it has several limitations, especially in addressing compulsive smartphone use:

- **Overestimation of Rationality:** TPB assumes that behaviour is a product of rational decision-making, with individuals having high control over their actions. However, phubbing often involves automatic, unconscious responses to smartphone notifications, and people might not always deliberate over their phone use.
- **Compulsive Nature of Smartphone Use:** TPB does not adequately account for the compulsive aspects of phubbing. While it emphasizes the role of behavioural intentions, many people engage in phubbing due to addictive tendencies, where conscious control over the behaviour is diminished.
- **Habitual Behaviour:** The theory underestimates the role of habitual or automatic behaviours, such as the reflexive nature of checking phones when they beep or buzz. Phubbing often occurs without deliberate intention, which TPB fails to address fully.

### 6.4. Social Norms Theory (SNT)

Social Norms Theory (SNT), developed by Perkins & Berkowitz (1986), explores how societal expectations influence individual behaviour. The theory distinguishes between two types of norms: descriptive norms, which explain what most people do, and injunctive norms, which describe what people believe should be done. These norms play a crucial role in shaping behaviours like phubbing, where individuals' actions are often influenced by their perceptions of social acceptability.

### 6.4.1. Descriptive Norms and Phubbing

Descriptive norms significantly impact phubbing by shaping perceptions of how common the behaviour is within a given social group. If people observe that others frequently engage in phubbing, they are more likely to view it as acceptable and adopt the behaviour themselves. This aligns with Expectancy Violation Theory (EVT), where repeated exposure to phubbing adjusts people's expectations, making the behaviour more normalized and less likely to be viewed negatively (Leuppert & Geber, 2020). For instance, in a group where everyone frequently checks their phone during conversations, individuals are more likely to follow suit, believing that this behaviour is typical and acceptable.

### 6.4.2. Injunctive Norms and Phubbing

Injunctive norms refer to what individuals perceive as socially approved or disapproved behaviour. These norms can either discourage or encourage phubbing, depending on the context. For example, in professional settings where attentiveness is highly valued, phubbing may be considered a serious breach of social etiquette and result in negative social consequences (Cialdini & Goldstein, 2004). In contrast, injunctive norms may be more lenient in more relaxed social settings, such as casual gatherings, allowing for occasional phubbing without significant social repercussions.

### 6.4.3. Cultural Variations in Social Norms

The acceptance of phubbing can vary considerably across cultures. In cultures where digital engagement and multitasking are highly valued such as in many parts of East Asia phubbing may be more socially acceptable, thus altering both descriptive and injunctive norms (Nazir & Piskin, 2016). Conversely, phubbing may be seen as more disruptive in cultures that prioritizes face-to-face communication. For example, research by Koç et al. (2022) on academic phubbing in Turkey illustrates how even in professional settings, phubbing can become normalized. Despite its negative implications, students often considered supervisor phubbing acceptable, partly due to their habitual smartphone use, which highlights how descriptive norms can normalize this behaviour in unexpected contexts.

### 6.4.4. Limitations of Social Norms Theory

While SNT offers valuable insights into the social forces that shape phubbing, it has limitations in fully capturing the complexity of the behaviour:

- **Overemphasis on Social Awareness:** SNT assumes that individuals are always consciously aware of and responsive to social norms. However, phubbing is often impulsive or habitual, occurring without actively considering norms. The theory does not account for how people may engage in phubbing automatically in response to digital distractions, bypassing social expectations.

- **Neglect of Internal Factors:** SNT primarily focuses on external social pressures, often overlooking internal personal factors such as emotional states, cognitive overload, or addiction. People may phub not due to social norms but because of internal drivers, like managing anxiety or emotional discomfort, even when they are aware that phubbing is socially disapproved. This limitation highlights how the theory fails to address the psychological or emotional components of phubbing.
- **Failure to Address Smartphone Addiction:** In cases of smartphone addiction, the desire to engage with digital devices can override social expectations, even in contexts where phubbing is explicitly discouraged. SNT does not adequately explain why individuals may continue phubbing in settings where it is considered unacceptable, suggesting the need for a more nuanced understanding that incorporates habitual or compulsive behaviour.

## 6.5. Politeness Theory and Phubbing

Politeness Theory developed by Penelope Brown and Stephen Levinson (1987), provides a compelling framework for understanding phubbing and its impact on social interactions (Brown & Levinson, 1987). At its core, Politeness Theory is concerned with the concept of “face,” which refers to the public self-image that individuals seek to maintain during social interactions. It emphasizes two primary face needs: positive face, the desire to be liked, appreciated, and accepted by others, and negative face, the desire to have autonomy and freedom from imposition. Phubbing where someone diverts attention from the person in front of them to their smartphone disrupts these face needs, making it a Face-Threatening Act (FTA) that can harm the dynamics of various relationships.

### 6.5.1. Threat to Positive Face

Phubbing primarily undermines a person’s positive face by signals disinterest or a lack of respect. Individuals expect to be acknowledged, valued, and treated with attention in social interactions. When someone is phubbed, whether by a friend, partner, teacher, or colleague, it communicates that they are not as important as the interaction happening on the phone. This can create feelings of rejection, neglect, or exclusion. For instance, in a friendship, phubbing can make one person feel as though their presence is undervalued, diminishing the sense of emotional closeness. In romantic relationships, phubbing can lead to feelings of emotional neglect, where one partner may feel that their needs for connection and attention are being overlooked. In professional settings, such as a boss-employee relationship, phubbing can be perceived as a lack of respect for the employee’s contributions or concerns. Similarly, in academic environments, students who phub their teachers may convey disrespect, impacting the teacher’s sense of authority and self-worth. In all of these cases, the phubber threatens the positive face of the other person by not offering the validation and attention that is expected in that interaction.

### 6.5.2. Threat to Negative Face

Phubbing also threatens an individual's negative face by disrupting the flow of communication and denying the other person the freedom to engage in an undivided, meaningful interaction. When people enter into conversations, there is often an unspoken agreement that each party will give their full attention to the exchange. Phubbing breaks this agreement by introducing a distraction, which can make the person being phubbed feel that their right to a focused, respectful interaction has been violated. For instance, in a professional setting, if a boss is phubbing during a one-on-one meeting, the employee may feel that their input is not given the full consideration it deserves. This disrupts the employee's expectation for a focused dialogue and can create frustration. In academic consultations, when a teacher phubbs a student, it can signal that the student's academic concerns are not important enough to warrant the teacher's full attention, leading the student to feel undervalued or unsupported. In these scenarios, phubbing acts as an intrusion, violating the negative face need for an uninterrupted and autonomous exchange.

### 6.5.3. Phubbing as a Face-Threatening Act (FTA)

From the perspective of Politeness Theory, phubbing is clearly a Face-Threatening Act (FTA) because it disrupts both positive and negative face in social interactions. It directly challenges the mutual respect and attention that individuals expect in relationships. As a result, phubbing can lead to misunderstandings, conflict, and a breakdown in communication. In romantic relationships, for example, phubbing can create tension because one partner may interpret the act as a sign that they are not valued. In professional environments, employees may feel less engaged or committed when their supervisors phub them, as it suggests that their contributions are not being taken seriously. In academic settings, both students and teachers can experience a breakdown in their roles if phubbing occurs, as it undermines the mutual respect and focus necessary for effective learning and communication.

### 6.5.4. Mitigating Phubbing with Politeness Strategies

Politeness Theory also provides insight into how the negative effects of phubbing can be mitigated through various politeness strategies.

- **Positive politeness strategies** involve acknowledging the other person's feelings and reinforcing their value in the conversation. For example, if someone quickly checks their phone during a meeting, they could apologize and emphasize that they value the other person's input. This helps to restore the positive face of the phubbed individual by reaffirming their importance in the interaction.
- **Negative politeness strategies** might involve offering an apology for the disruption and acknowledging the other person's right to an undivided conversation. For example, if a teacher checks their phone during a student consultation, they might say, "I

apologize for the distraction—I want to give you my full attention.” This respects the student’s need for a focused and respectful interaction, restoring their negative face.

Viewed through the lens of Politeness Theory, phubbing is not just a minor annoyance but a significant disruption to social norms and expectations. It undermines both positive and negative face by signaling a lack of respect and attention, whether in personal relationships, academic environments, or professional settings. Understanding phubbing as a Face-Threatening Act provides a deeper appreciation for its emotional and relational impact, helping to explain why it often leads to feelings of rejection, frustration, and alienation in those who are phubbed. By employing politeness strategies, individuals can mitigate the harmful effects of phubbing and restore the balance of respect and attention in their interactions.

### 6.5.5. Limitations of Politeness Theory

While Politeness Theory is effective at explaining how phubbing disrupts interpersonal dynamics by threatening face, it has several limitations in addressing phubbing in modern digital contexts:

- **Limited Insight into Motivation:** Politeness Theory focuses on the social consequences of phubbing but does not explain the motivations behind phubbing. It assumes that individuals are aware of the social harm they cause and consciously choose to phub. However, many instances of phubbing are impulsive or driven by compulsion, not deliberate disregard for politeness.
- **Does Not Address Compulsive Behaviour:** Politeness Theory does not fully account for the compulsive nature of smartphone use. Many people phub not because they consciously prioritize their phone over social interactions, but because they are conditioned to respond to constant notifications or the rewards associated with smartphone use, which are often beyond conscious control.
- **Overlooks Technological Affordances:** The theory does not consider how technological design (such as notifications, apps that encourage constant engagement, etc.) contributes to phubbing. The tech-saturated environment plays a critical role in perpetuating phubbing, but this is not adequately addressed by Politeness Theory.

## 6.6. Uses and Gratifications Theory and Phubbing

The Uses and Gratifications Theory (UGT) proposed by Blumler & Katz (1974) offers a powerful framework for understanding the underlying motivations behind phubbing. This theory, which suggests that individuals actively seek out and use media to satisfy specific personal and social needs, is particularly relevant in explaining why people turn to their smartphones during face-to-face interactions. Phubbing is not simply a passive behaviour, but a deliberate choice driven by the perceived gratifications one can obtain from digital engagement.

According to Uses and Gratifications Theory, individuals engage with their phones for a variety of reasons, ranging from entertainment and information-seeking to maintaining

social connections or escaping uncomfortable situations. In moments where people feel bored, disengaged, or overwhelmed by the face-to-face interaction, the digital world offers an immediate and often more gratifying alternative. The constant availability of smartphones provides an easy outlet for individuals to meet their emotional or social needs, even if it comes at the cost of interpersonal connection in the physical world.

The act of phubbing, therefore, can be understood as a way for individuals to fulfil immediate gratifications such as the desire for stimulation, distraction, or connection with those not physically present. For instance, checking a social media feed, responding to messages, or browsing the internet may offer more instant rewards than the ongoing face-to-face conversation, leading individuals to divert their attention from the real-world interaction.

Uses and Gratifications Theory explains how modern media, particularly smartphones, cater to a wide range of needs, from staying socially connected to fulfilling curiosity or escaping stress. Phubbing, as a behaviour, arises from this ability of smartphones to instantly meet these needs, even in moments when social etiquette or the context might demand attention to the people present.

In essence, the Uses and Gratifications Theory positions phubbing as an intentional behaviour, driven by individuals' active efforts to satisfy personal needs and desires through digital engagement. This perspective sheds light on why phubbing occurs so frequently in modern social interactions, highlighting the powerful draw of digital media and the ease with which it can disrupt face-to-face communication in pursuit of personal gratification.

### 6.6.1. *Limitations of Uses and Gratifications Theory*

While UGT provides valuable insight into the personal motivations behind phubbing, it has notable limitations when applied to modern digital behaviour:

- **Overemphasis on Rationality:** UGT assumes that individuals are rational actors who actively seek out media to satisfy specific needs. However, much of the behaviour associated with smartphone use, including phubbing, is habitual or impulsive rather than consciously directed. People often phub out of habit responding reflexively to notifications or checking their phones without a specific goal in mind. UGT does not fully address these unconscious, automatic behaviours.
- **Neglect of Compulsive Smartphone Use:** UGT does not account for the addictive or compulsive elements of smartphone use, where individuals may be drawn to their phones even when they have no conscious need for gratification. In these cases, phubbing may be less about fulfilling a personal need and more about responding to a compulsive urge driven by the design of smartphone apps and notifications.
- **Focus on Individual Agency:** UGT places significant emphasis on individual agency, assuming that people use media to meet personal needs. However, it overlooks broader social and cultural factors that can influence phubbing. For example, societal pressures to stay constantly connected or the normalization of phone use in

social settings can drive phubbing behaviour, even when individuals do not actively seek gratification from their phones.

- **Technological Design:** UGT fails to address how smartphones and apps are deliberately designed to capture and hold users' attention. Features like notifications, likes, and scrolling feeds are engineered to keep individuals engaged, which can override their intentions to focus on real-world interactions.

## 6.7. The Expectancy Violation Theory (EVT)

Expectancy Violation Theory (EVT), proposed by Burgoon (1993), is a communication theory that explores how people react to unexpected behaviours in social interactions, particularly focusing on nonverbal communication (Burgoon, 1993). According to EVT, individuals develop expectations about others' behaviours based on a range of factors, such as their appearance, social status, personality traits, and past behaviours. When someone acts contrary to these expectations, it creates an "expectancy violation." This deviation from the anticipated behaviour causes cognitive arousal and uncertainty in the observer, prompting them to evaluate the behaviour and the person either positively or negatively.

EVT explains that not all violations are inherently negative. Minor deviations from expectations, especially in meaningful relationships, can sometimes lead to positive outcomes by prompting adjustments in how people view each other. In such cases, these small violations can enhance the relationship by fostering flexibility and openness. However, when violations are more significant or uncomfortable, they often result in negative evaluations, pushing the violator to either justify their behaviour or repair the relational damage. EVT emphasizes that these expectancy violations are crucial moments of change, offering an opportunity for individuals to manage how they are perceived and influence relational outcomes in either a positive or negative direction.

When applied to phubbing behaviour the act of ignoring someone in favor of using a smartphone, EVT provides a valuable framework for understanding the social disruptions this behaviour causes. Phubbing represents a violation of communication expectations, particularly in contexts where people anticipate full attention and engagement. To break down this process, EVT uses three key concepts: expectancies, violation valence, and communicator reward valence.

- **Expectancies** refer to the behaviours that people anticipate in a given situation, shaped by social norms and prior experiences. In interpersonal communication, individuals expect a certain degree of attention and active engagement from their conversation partners. When these expectations are violated by phubbing, it often leads to feelings of disrespect and devaluation (Burgoon & Hale, 1988). The flow of communication is disrupted, and the non-phubbing individual may feel ignored, triggering a negative emotional response such as frustration or hurt. In this sense, the violation of expectancies damages the overall quality of the interaction.

- **Violation valence** pertains to the perceived positivity or negativity of the unexpected behaviour. In the case of phubbing, this valence is typically negative, as it undermines social connection and attentiveness. The person being ignored may feel unsatisfied with the interaction, which can escalate into conflict, especially in important relationships. However, how negative the violation is perceived depends on the context and the relationship. If the phubber's behaviour is seen as understandable or acceptable in the specific situation, the violation may be less damaging (Burgoon, 1993).
- **Communicator reward valence** explains how the value of the communicator influences how their behaviour is interpreted. This concept highlights that the same action such as phubbing can be judged differently depending on how positively or negatively the individual is viewed overall. If the phubber is a valued individual (a high-reward communicator), their behaviour may be seen as a minor inconvenience, and the relationship may remain relatively unaffected. On the other hand, if the communicator is viewed less favourably (a low-reward communicator), the same act of phubbing is likely to be interpreted more negatively, potentially leading to stronger negative feelings or relational conflict (Burgoon, 1993).

By examining phubbing through these EVT components, we can better understand why this behaviour often leads to feelings of disconnection, dissatisfaction, and conflict in social interactions. Phubbing represents a violation of fundamental social expectations about attention and presence, and depending on the context and relationship, this violation can significantly influence how people evaluate each other and the quality of their communication.

### 6.7.1. Limitations of Expectancy Violation Theory

While EVT explains the negative reactions to phubbing as a violation of social norms, it has limitations:

- **Lack of Insight into Motivations:** EVT focuses on the receiver's emotional response but does not address why people phub. It overlooks the personal, psychological, and situational factors that drive individuals to violate these social expectations in the first place.
- **Focus on Receiver Reactions:** The theory emphasizes the reactions of the person being phubbed rather than offering a comprehensive understanding of the decision-making process or the compulsive nature of phubbing. It thus misses a deeper exploration of technology's role in shaping these behaviours, particularly how smartphones are designed to capture and hold attention.

## 6.8. Social Learning Theory and Phubbing

Albert Bandura's Social Learning Theory (1977) can offer valuable insights into the spread of phubbing in modern society. This theory, which emphasizes learning through observation, imitation, and modeling, can explain how phubbing has become a normalized behaviour in social settings. Social Learning Theory posits that people observe the

behaviours of others, internalize these actions, and eventually imitate them, particularly when they see positive outcomes from such behaviours. Phubbing, as a socially learned behaviour, fits seamlessly into this framework.

### 6.8.1. Attention: The First Step in Learning Phubbing

For any behaviour to be learned, the individual must first pay attention to it. In the case of phubbing, smartphones ubiquitous in modern life are constantly present in social settings. Whether it's at a family dinner, a workplace meeting, or a gathering with friends, people are continuously exposed to others using their phones, sometimes even in inappropriate situations. These instances capture attention, especially when everyone at the table shifts focus from face-to-face conversation to their devices.

Consider a common scenario: a group of friends meets at a café for what is supposed to be a social catch-up. Yet, halfway through the conversation, one person casually takes out their phone to check a message. Gradually, others notice this behaviour and can do the same. The attention that should have been directed toward conversation is now drawn to the smartphone. This social shift becomes ingrained in the observers, signalling that phubbing is an acceptable response in similar settings.

### 6.8.2. Retention: Storing Phubbing as a Learned Behaviour

Once people have paid attention to phubbing, they retain this behaviour in their memory for future use. The repetitive exposure to such instances, particularly in environments where technology dominates social interactions, solidifies the behaviour. The more often individuals witness phubbing, the more likely they are to internalize it as part of their social repertoire.

Take, for example, a student who notices that during every family dinner, their parents, instead of engaging in conversation, are absorbed in their phones. Over time, the student unconsciously learns this behaviour and begins doing the same with their friends. The memory of such repetitive situations becomes stored, leading to automatic reproduction of the behaviour in future social settings.

### 6.8.3. Reproduction: Imitating Phubbing Behaviour

Once phubbing has been observed and retained, individuals are likely to reproduce it. The ease of this behaviour's reproduction is one of the reasons for its rapid spread. Unlike complex actions that require practice or skill, phubbing is a behaviour that virtually anyone can imitate it simply involves diverting attention from the person in front of you to your phone.

Imagine a situation where colleagues are having a work meeting. Midway through, one person takes out their phone to check an email or text message. Another colleague, seeing this, does the same, thinking, "If they can do it, I can too." What starts as a small, seemingly innocuous action spreads quickly across the group, with everyone eventually

focusing more on their screens than the discussion at hand. The ease with which phubbing can be replicated makes it a behaviour that spreads effortlessly in social contexts.

#### 6.8.4. Motivation: Reinforcement Driving Phubbing Behaviour

Motivation is critical in determining whether a person chooses to engage in a behaviour, and reinforcement plays a major role in phubbing. People are often motivated to phub because they experience immediate rewards—whether it's the thrill of a new notification, the satisfaction of checking social media, or the need to escape a dull conversation. These positive reinforcements make phubbing a behaviour that is likely to be repeated.

A classic example is a social gathering where conversations become less engaging. Instead of enduring the boredom, one person turns to their phone to scroll through social media. They receive likes, messages, or interesting content, which provides instant gratification. Observing this, others in the group may feel motivated to do the same, as they too, seek out the rewards their phones offer. Over time, people can get conditioned to believe that phubbing leads to positive outcomes, reinforcing the likelihood of repeating the behaviour in future social interactions.

Phubbing is often motivated by the lack of immediate consequences in many social situations. When everyone in a group is engaged in phubbing, there's minimal to no social cost for ignoring face-to-face conversations. For example, during a family dinner where all members are focused on their phones, there's usually no backlash or reprimand for disengaging from the conversation. This absence of negative feedback allows the behaviour to persist and become habitual. However, the same person would be less likely to phubb in a situation where there is a risk of punishment or negative consequences. For instance, in a corporate setting, an employee would likely avoid phubbing in front of their boss due to the potential for reprimand. Similarly, someone in the military would not phubb their commanding officer, as the hierarchical structure and the fear of repercussions would prevent them from engaging in such behaviour.

#### 6.8.5. Phubbing and Media: Indirect Social Learning

Social Learning Theory also emphasizes the role of media in the learning process. With the pervasiveness of smartphones in television shows, movies, and advertisements, people are constantly exposed to phubbing through media portrayals. Popular culture normalizes this behaviour by presenting characters who disengage from conversations to focus on their devices without facing social repercussions.

For instance, in many TV shows, characters are shown checking their phones during group hangouts or at work. Viewers observe this behaviour being modeled without any adverse outcomes, which leads to the internalization that phubbing is a socially acceptable, even desirable, act. Media thus serves as an indirect model that people learn from and imitate in their own lives.

### 6.8.6. The Social Learning Cycle of Phubbing

Social Learning Theory ultimately shows how phubbing, though a relatively new phenomenon, has become deeply embedded in everyday social interactions. It begins with attention seeing others engage in phubbing. Retention of this behaviour leads to reproduction in similar situations. Finally, motivation driven by the immediate rewards of smartphone use and lack of punishment solidifies phubbing as a learned and repeated behaviour.

This theory highlights how, through social and media observations, people can adopt phubbing not just as an individual action but as a learned behaviour shaped by societal norms, technological integration, and reward-driven motivations. Just as Bandura suggested, behaviours that are reinforced are more likely to be Repeated. In today's tech-saturated world, phubbing has become a widely reinforced and therefore widespread social behaviour.

Social Learning Theory (SLT) effectively explains how phubbing can be learned through observation and imitation but tends to underemphasize individual agency and choice. It assumes that behaviours like phubbing are primarily adopted through social modeling, potentially overlooking the role of personal motivation, self-control, or individual psychological factors that influence why some people are more prone to phubbing than others. Furthermore, SLT does not adequately explain the compulsive nature of phubbing, mainly how addiction or repetitive behaviour patterns contribute to its persistence beyond observational learning.

### 6.8.7. Limitations of Social Learning Theory

While Social Learning Theory effectively explains how phubbing is learned through observation and imitation, it has limitations:

- **Overemphasis on Social Modeling:** SLT focuses heavily on how people adopt behaviours through observing others, potentially overlooking individual factors like personal motivation or self-control. Not everyone exposed to phubbing models will automatically imitate the behaviour; some individuals may resist based on their values or the interaction context.
- **Underexplored Role of Compulsive Behaviour:** SLT does not sufficiently explain the compulsive nature of phubbing. While the theory emphasizes reinforcement through observation, it does not delve into the habitual, addictive aspects of smartphone use. Phubbing can become a deeply ingrained behaviour driven by social observation and compulsive smartphone habits, which SLT does not fully address.
- **Individual Agency and Psychological Factors:** SLT assumes that behaviour is shaped predominantly by social learning, yet it may underplay the individuals agency. People may phub due to personal psychological factors like anxiety, boredom, or avoidance rather than solely because they've seen others do it.

## 6.9. Psychological Theories: Addiction and Self-Control

Phubbing, the act of ignoring someone in favor of using a smartphone, can be examined through psychological theories of addiction and self-control. The compulsive nature of phubbing shares similarities with addictive behaviours, where individuals struggle to resist checking their phones during social interactions. While these theories provide useful insights into the internal mechanisms driving phubbing, they also have limitations, mainly when applied to modern digital behaviours.

### 6.9.1. Phubbing as an Addictive Behaviour

Addiction theory suggests that behaviours offering immediate satisfaction or relief, like phone-checking, can become compulsive (West & Brown, 2013). In phubbing, individuals seek instant rewards from social media notifications, likes, or online validation, reinforcing the behaviour (Roberts & David, 2016). This creates a feedback loop driven by dopamine surges from digital interactions, making it difficult to disengage, even when social relationships suffer (Burke, 2019). However, this perspective risks over-pathologizing phubbing by framing it strictly as an addiction. Not all instances of phubbing reflect true addiction; social norms, multitasking, or boredom drive many. Billieux et al. (2015) argue that smartphone use is motivated by varied factors, such as social connection or information seeking not solely addiction. Thus, phubbing should be viewed as existing on a spectrum, where some instances are habitual rather than compulsive. A key limitation of addiction theory is its focus on internal compulsions, often neglecting external factors such as workplace or school environments where phone use is normalized. In such settings, phubbing may be encouraged or tolerated, complicating the understanding of it as purely an addictive behaviour.

### 6.9.2. Phubbing and Self-Control

Self-control theory posits that individuals with lower self-control are more prone to behaviours that provide immediate gratification, such as phubbing (Baumeister et al., 2007). People may struggle to resist the temptation of checking their phones, even when aware of the negative social consequences. This theory is helpful in explaining why some individuals find it harder to resist the pull of digital engagement.

However, self-control theory is too reductionist to focus solely on individual traits. It overlooks situational factors that may encourage phubbing, even among those with strong self-control. In professional environments, where constant connectivity is expected, or academic settings that require frequent phone checks for coursework updates, even individuals with high self-control may engage in phubbing (Panek, 2014).

### 6.9.3. Limitations of Addiction and Self-Control Theories

Both addiction and self-control theories offer valuable insights into phubbing but fail to fully account for the broader social, technological, and environmental contexts in which this behaviour occurs. External factors like social norms, cultural expectations,

and the design of smartphone technologies also play significant roles in shaping behaviour.

For instance, social norms in certain environments may make phubbing more acceptable, even for those not addicted or lacking in self-control. In professional settings, employees may feel compelled to phub due to the expectation of constant availability. Furthermore, smartphone app designs intentionally capture attention, reinforcing frequent phone use regardless of self-control levels (Kuss & Griffiths, 2017).

Additionally, phubbing may stem from cognitive overload rather than addiction or self-control issues. Managing multiple tasks or competing demands for attention can lead individuals to phub as a coping mechanism for cognitive load (Wilmer et al., 2017). Therefore, a more comprehensive understanding of phubbing must consider these external and situational factors rather than focusing solely on internal psychological processes.

## 6.10. Digital Displacement Theory (DDT): A New Framework for Understanding Phubbing

The existing theories offer valuable insights into phubbing's social, psychological, and normative aspects. They each fall short of providing a holistic explanation for why individuals so frequently engage in this behaviour. For instance, TIB focuses on the interaction between behavioural intentions, habits, and external conditions but doesn't fully capture how compulsive digital engagement can override intentional control. SNT emphasizes societal expectations and norms but overlooks phubbing's habitual and compulsive nature that often bypasses these social norms. EVT and Politeness Theory explain how phubbing violates social expectations but do not address why individuals continue to engage in the behaviour despite the negative social consequences.

Social Learning Theory (SLT) adds the dimension of how individuals imitate the phubbing behaviour of those around them, especially in environments where digital engagement is accepted. Still it doesn't fully account for how the reinforcement mechanisms of digital platforms encourage such behaviour to become habitual. Similarly, UGT sheds light on how people seek digital content to fulfil their emotional or informational needs. Yet, it doesn't explain how these gratifications contribute to the displacement of in-person interactions.

TPB focuses on the role of behavioural intentions and perceived control over actions but overlooks the powerful psychological and technological forces that drive compulsive phone-checking. Finally, psychological theories related to addiction and self-control describe phubbing as a compulsive, reward-seeking behaviour. Still they often fail to consider the broader social, environmental, and technological factors that contribute to this behaviour's prevalence.

Each theory touches upon specific elements—such as social norms, behavioural intentions, or emotional reactions—yet they often overlook the deeper digital dynamics at play, particularly how technology has fundamentally shifted human interaction. These

existing frameworks do not fully address how digital ecosystems, with their intentional design to maximize user engagement, interact with emotional, cognitive, and social needs, and how habitualization and social learning reinforce phubbing behaviour.

To address these limitations, I propose the Digital Displacement Theory (DDT). DDT introduces a more comprehensive understanding of phubbing by emphasizing how digital engagement gradually displaces real-world interactions. This theory provides a framework for examining the cognitive, emotional, and social processes that lead to individuals prioritizing their smartphones over face-to-face communication, ultimately making phubbing a deeply ingrained, habitual, and sometimes compulsive, even addictive, behaviour

### 6.10.1. The Core Concept of Digital Displacement Theory (DDT)

Digital Displacement Theory posits that phubbing arises from a dynamic process in which individuals consciously or subconsciously replace real-world interactions with digital engagement. Unlike existing frameworks, which often isolate specific aspects of phubbing, DDT explains how the psychological rewards of smartphone use, combined with the pervasive presence of digital technology, create a displacement of emotional, cognitive, and social focus. This process happens gradually but consistently, leading to habitual phone use even in socially inappropriate settings. As digital engagement becomes more frequent, the compulsive checking of phones fuelled by dopamine-driven feedback loops can result in addictive behaviour patterns (Greenfield, 2021), further reinforcing the displacement of real-world interactions.

At its core, DDT argues that phubbing is not merely a result of poor self-control or social norm violations but is driven by more profound digital dynamics that pull individuals away from face-to-face communication. Smartphones, with their ability to provide instant gratification and emotional regulation (Shi et al., 2023), become a primary mode of interaction, shifting priority from the physical world to the digital one.

### 6.10.2. Key Dimensions of Digital Displacement

#### 6.10.2.1. Emotional Displacement

One key component of DDT is emotional displacement, where individuals turn to their smartphones to regulate emotions, particularly during moments of discomfort, boredom, or social anxiety (Shi et al., 2023). Rather than addressing the emotional needs presented by face-to-face interaction, people increasingly rely on digital content—whether it's social media, texting, or entertainment as a quick way to alleviate emotional tension. Studies show that individuals frequently use their phones to distract themselves from uncomfortable or emotionally charged social situations (Hoffner & Lee, 2015), which reinforces the displacement of emotional engagement from the physical to the digital sphere.

### 6.10.2.2. Cognitive displacement

Cognitive displacement occurs when individuals shift their focus away from cognitively demanding tasks, such as engaging in meaningful conversations, and instead focus on the more immediately gratifying stimuli provided by their smartphones (Schimming, 2022). This cognitive shift is particularly pronounced in environments that require sustained attention, such as classrooms, work meetings, or social gatherings. Research indicates that the instant rewards offered by digital devices such as notifications or social media engagement create a powerful pull that disrupts attention and facilitates the habit of checking one's phone, even in socially meaningful interactions (Karadağ et al., 2016). Over time, this cognitive displacement becomes ingrained, making it increasingly difficult for individuals to resist digital distractions.

### 6.10.2.3. Social Displacement

DDT also emphasizes social displacement, which refers to the tendency to disengage from face-to-face interactions in favor of digital communication (Verduyn et al., 2021). Phubbing can be a method of avoiding or minimizing social obligations, particularly when individuals feel overwhelmed or uninterested in the social dynamics of a situation. Smartphones offer an immediate and easy escape, allowing users to appear engaged with their devices rather than those around them. Over time, this behaviour can become normalized through social learning, as individuals observe others phubbing without facing serious social consequences. This normalization perpetuates the displacement of real-world interactions by digital engagement, contributing to the widespread occurrence of phubbing across various social contexts.

### 6.10.2.4. Displacement of Status and Control

The use of smartphones during interactions can also be an attempt to assert status or control within a social hierarchy. For example, in professional settings, a superior might use their phone during a meeting to signal power and disengage from interactions they deem less necessary. This behaviour is learned through social modeling—individuals observe others in positions of authority engaging in phubbing, normalizing the idea that attention can be selectively given or withheld. The repetitive nature of these actions reinforces the displacement of social obligations by digital distractions.

## 6.10.3. Learning and Sustaining Phubbing through DDT

Digital Displacement Theory goes further than existing theories by exploring how phubbing behaviour is both learned and sustained.

### 6.10.3.1. Social Learning

Phubbing behaviour can be learned by observing others, particularly in environments where digital engagement is accepted or tolerated. In social groups, academic settings, or workplaces where phubbing is common, individuals mimic this behaviour, reinforcing its legitimacy. For instance, if students observe their peers frequently phubbing during

a lecture without repercussions, they are likely to replicate this behaviour. Similarly, in romantic relationships or friendships, individuals may normalize phubbing to manage social or emotional discomfort.

### 6.10.3.2. Reinforcement

Phubbing can often be sustained through positive and negative reinforcement. Positive reinforcement occurs when the individual feels rewarded by the gratification they receive from their phone (Wang & Lee, 2020) whether through social media validation, entertainment, or information. Negative reinforcement happens when phubbing helps an individual avoid uncomfortable or undesirable interactions, such as emotional vulnerability or demanding social obligations. Each successful "escape" reinforces the likelihood of future phubbing behaviour.

### 6.10.3.3. Habitualization

Over time, phubbing can become an ingrained habit. Smartphones offer instant access to gratifying content, creating a behavioural loop where individuals habitually turn to their phones during interactions. This habitualization is strengthened by the dopamine-driven rewards of digital engagement, making it difficult to break the cycle (Ferenczi et al., 2016). As individuals increasingly rely on their phones to manage emotions, cognitive effort, and social demands, phubbing becomes a default mode of interaction.

### 6.10.4. Conclusion: The Unique Contribution of Digital Displacement Theory (DDT)

The Digital Displacement Theory (DDT) provides a comprehensive understanding of how phubbing is learned, reinforced, and sustained. It highlights the dynamic process of displacement, where individuals divert their attention from face-to-face interactions toward digital engagement to satisfy emotional, cognitive, and social needs. Through social learning, reinforcement, and habitualization, phubbing becomes an entrenched behaviour in various social contexts. By understanding the underlying mechanisms of displacement, Digital Displacement Theory sheds light on the pervasive nature of phubbing and its impact on modern interpersonal relationships.

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## CHAPTER VII.

### Phubbing Interventions

**Abstract:** The Chapter focuses on strategies to mitigate phubbing, a widespread behaviour where individuals prioritize smartphone use over face-to-face interactions, negatively impacting personal and professional relationships. It examines the consequences of phubbing, including reduced communication quality, increased disconnection, and diminished trust, emphasizing the need to recognize it as a disruptive behaviour. The discussion outlines practical interventions at individual and communal levels, such as establishing phone etiquette, promoting digital detox practices, and creating tech-free zones to encourage mindful digital use. Psychological drivers of phubbing, including addiction and the fear of missing out (FOMO), are addressed with recommendations for mindfulness techniques, professional support, and structured communication approaches. Public campaigns and educational initiatives are proposed to raise awareness and foster healthier smartphone habits. By implementing these strategies, individuals and communities can balance digital engagement with in-person interactions, strengthening relationships and enhancing overall well-being. The analysis concludes that addressing phubbing requires collective action and a shift in social norms to prioritize meaningful human connections over digital distractions.

**Keywords:** *Communication, Fear of missing out, Interventions, Mindfulness Techniques, Trust.*

#### 7.1. Introduction

In today's hyper-connected world, the urge to stay constantly plugged into the digital realm, driven by an addiction to smartphones and the fear of missing out (FOMO), has given rise to phubbing. Phubbing, where individuals prioritize their phones over the people physically around them, reflects a significant societal shift. The increasing reliance on smartphones for instant gratification and continual connectivity has fundamentally transformed interpersonal communication, often to the detriment of face-to-face interactions. While smartphones offer unprecedented convenience and digital engagement, they erode the depth and richness of real-world relationships, creating a paradox where

people feel more connected yet socially distanced from those closest to them (Misra et al., 2016; Przybylski & Weinstein, 2013).

Phubbing is not merely an inconvenience; it has emerged as a critical issue that affects individuals across all demographics. Research indicates that if left unchecked, phubbing can lead to serious social consequences, including deteriorating relationships, diminished communication quality, and increased feelings of disconnection and disrespect (Chotpitayasunondh & Douglas, 2018b). Studies have shown that the presence of a smartphone during conversations whether it is actively in use can weaken feelings of connection, reduce conversational satisfaction, and even lead to the perception of disengagement (Przybylski & Weinstein, 2013). These effects hold true across various settings, from personal to professional environments, demonstrating the broad reach of phubbing's impact.

As our digital lives increasingly encroach upon our physical interactions, the challenge of maintaining meaningful, in-person connections has become more pronounced. With the constant bombardment of notifications and the allure of instant entertainment, individuals often struggle to resist the impulse to check their phones. This behaviour compromises the quality of interpersonal communication and contributes to a broader societal disconnect. The rise of phubbing highlights a growing tension between digital and real-world engagement balancing the two has become an urgent challenge in modern society.

Adding to the complexity is the predatory influence of tech companies, which continuously evolve smartphone technologies to make them increasingly irresistible. By integrating more sophisticated software, artificial intelligence-driven features, and fast internet connectivity, tech giants have created devices designed to capture and hold attention. This has led to smartphones becoming status symbols and indispensable tools for social image and business operations. A simple notification sound can trigger a flood of curiosity, driving individuals to reach for their phones, often without conscious thought, even in socially inappropriate settings.

To effectively address phubbing, it is crucial to recognize that the behaviour stems from both individual and environmental factors. On the individual level, psychological triggers like anxiety, boredom, or the need for social validation often prompt people to turn to their phones. At the environmental level, the omnipresence of smartphones and the societal normalization of digital engagement make it difficult to resist phubbing. Thus, any intervention strategy must address these two dimensions the personal motivations and the broader environmental context that reinforces the behaviour.

In this chapter, we will explore various interventions to reduce phubbing, focusing on individual behavioural changes and environmental adjustments. By understanding and addressing the factors that drive phubbing, we can develop strategies that encourage healthier digital habits while fostering more meaningful face-to-face interactions.

## 7.2. Phubbing Interventions

### 7.2.1. Recognition of Phubbing Behaviour

The first and most crucial step in mitigating phubbing is recognizing its presence in social settings, as phubbing is increasingly becoming normalized in many cultures. Despite its growing prevalence, it is vital to understand that phubbing is not a benign or harmless behaviour; rather, it has significant implications for the quality of our interactions and the health of our relationships. Phubbing fundamentally disrupts communication by diverting attention from the interaction, creating a disconnection between individuals. This behaviour often leads to feelings of being ignored or undervalued, which can accumulate over time, resulting in long-lasting emotional and relational damage. Recent studies have shown that phubbed individuals frequently report feelings of social exclusion, lower self-esteem, and increased stress levels, underscoring the profound impact of this behaviour on mental well-being (Liu et al., 2021; Zhang et al., 2024).

For many individuals, particularly those in close relationships, the silent suffering of being a phubbee is compounded by an inability to confront the phubber or effectively articulate the impact of phubbing on their emotional state. This lack of communication often perpetuates a cycle of resentment and withdrawal, further eroding the relationship. It is essential to recognize that phubbing not only disrupts communication but also generates negative emotions, such as frustration, sadness, and even anger. Over time, these emotions can lead to feelings of disrespect and devaluation, which are highly detrimental to the health of interpersonal relationships.

The long-term implications of phubbing are particularly concerning when considering its impact on vulnerable relationships, such as those between parents and children. For example, parents who engage in phubbing must understand that this behaviour can have profound and lasting effects on their children's emotional development. Studies have reinforced earlier findings, showing that children who are frequently subjected to parental phubbing are more likely to experience feelings of neglect and emotional insecurity (Shi et al., 2024). These children often struggle with developing healthy attachment patterns, which can impede their overall emotional and social development (He et al., 2022). Moreover, the sense of being ignored by a parent can lead to increased behavioural issues and a greater risk of developing anxiety or depressive disorders as the child matures.

Similarly, phubbing within romantic relationships, among friends, or in professional settings such as between bosses and employees must be recognized and addressed for the health of these relationships. In romantic relationships, the consistent interruption of intimacy and connection through phubbing has been linked to a decrease in relationship satisfaction and trust. Research has highlighted that couples who frequently engage in or experience phubbing report higher levels of relationship dissatisfaction and a weakening of emotional bonds over time (Mahmud et al., 2024). This behaviour undermines the foundation of trust and mutual respect critical for sustaining healthy and fulfilling relationships.

In professional settings, the consequences of phubbing are equally significant. Studies had revealed that phubbing in the workplace can lead to decreased work engagement, reduced productivity, and a breakdown in team cohesion (Yuda & Suyono, 2024). When employees perceive their superiors as distracted or disengaged due to phubbing, it diminishes their respect for authority and erodes the trust necessary for effective collaboration and leadership. Addressing phubbing in professional environments is therefore essential for maintaining a positive and productive work culture.

In conclusion, recognizing and addressing phubbing behaviour is critical across all types of relationships. The growing body of research makes it clear that phubbing is not merely a social faux pas but a behaviour with severe implications for emotional well-being and relational health. By acknowledging the harm caused by phubbing, individuals and communities can take steps to foster more meaningful and respectful interactions, ultimately leading to stronger and healthier relationships.

### 7.2.2. Balancing Online Presence and Real-Life Engagement

Balancing online presence with real-life engagement has become increasingly challenging in today's digital era. While writing this chapter during my personal time, I realized I am a member of around twenty academic WhatsApp groups, many connected to my university lectures. Constant notifications, particularly from students, disrupt my personal time. Despite my efforts to resist, curiosity often compels me to check. This behaviour frequently spirals, as opening one notification leads to distractions like Instagram, consuming more time than intended, even during social interactions.

Smartphones have woven into the fabric of our daily lives, keeping us perpetually connected through apps, notifications, and alerts. These devices constantly demand our attention, dividing it between the real and digital worlds. This persistent distraction compromises the quality of in-person interactions, undermining face-to-face communication. Research highlights that even the mere presence of a smartphone can diminish the sense of connection between individuals, eroding the depth of social exchanges (Przybylski & Weinstein, 2013).

To mitigate the negative impacts of smartphones on interpersonal relationships, individuals can adopt strategies such as establishing personal boundaries for phone use or designating 'tech-free zones' during certain times. Setting clear limits on online engagement helps individuals reconnect with the present moment and enhances the quality of their face-to-face interactions. Research supports this approach, showing that conversations free from the distraction of smartphones lead to more meaningful and productive exchanges (Misra et al., 2016). Establishing such boundaries is essential for reclaiming the depth of real-world relationships while navigating the digital demands of modern life. For instance, one can schedule specific time periods during which notifications are allowed, ensuring that during personal time with family, the smartphone remains silent.

Similarly, setting professional boundaries is essential. Clear guidelines should be established regarding communication through social media, such as informing students

or coworkers of the official and appropriate methods to send messages. Defining these standards, helps maintain a balance between professional responsibilities and personal life, reducing the intrusion of digital distractions into face-to-face interactions.

### 7.2.3. Establishing 'Phone Etiquette'

Establishing 'phone etiquette' can effectively intervene in different settings, such as family homes, workplaces, schools, and social gatherings. Setting boundaries around phone use during meals or creating tech-free zones in family environments can foster more meaningful interactions. Some families place smartphones in a designated basket upon entering the home to encourage full engagement without digital distractions. Regulating Wi-Fi usage, particularly for children, through mutually agreed-upon schedules can also help balance online and offline activities, promoting healthier relationships with technology. By following these rules, parents' model balanced digital habits, reinforcing their role as examples for their children.

In workplaces, introducing phone-free policies during meetings or establishing clear guidelines for appropriate phone use can significantly enhance productivity and communication. These policies should be applied uniformly across all hierarchical levels to ensure effectiveness. This ensures that even senior leaders, such as managers or bosses, follow the same rules, setting a positive example for employees. When leaders model appropriate smartphone use, it reinforces healthier digital habits in the workplace, fostering a more professional environment while reducing distractions caused by constant notifications.

At schools and universities, enforcing phone etiquette during lectures and study sessions is crucial to maintaining focus and academic integrity. "No-phone zones" in libraries or classrooms encourage students to engage deeply with their studies. In some institutions, teachers are required to submit their phones to the authorities or store them in cupboards, using them only during intervals, ensuring that neither they nor their students are distracted. Institutions should draft clear, comprehensive guidelines for teachers and students regarding phone usage policies on campus to maintain a productive academic environment.

In social gatherings, implementing phone-free practices, such as placing devices in a basket upon entry or creating phone-free zones, encourages guests to remain fully engaged, promoting stronger interpersonal connections. This reduces the likelihood of phubbing and fosters meaningful face-to-face communication. It's important not to accept phubbing as a normal social behaviour; instead, individuals should confront the phubber and encourage them to seek help, as habitual phubbing is detrimental to relationships and not a healthy or acceptable behaviour in any social setting.

By establishing phone etiquette across various settings, individuals can create a healthier balance between their digital and physical lives, reducing phubbing behaviours and fostering profound meaningful interactions.

### 7.2.4. Social Media-Induced Phubbing

Social media platforms are key drivers of phubbing, as constant notifications and alerts lure individuals into frequently checking their smartphones, often at the expense of real-life interactions. This persistent digital engagement disrupts face-to-face communication and diminishes the quality of interpersonal relationships.

Reducing social media-induced phubbing requires a conscious, proactive approach. Strategies such as turning off notifications during family time or in professional settings can significantly minimize distractions. This intentional disconnection allows individuals to be more present in their interactions, enhancing the quality of social engagement.

One effective method to address this issue is through digital detox practices, where individuals deliberately limit their screen time and disengage from social media for designated periods. Digital detoxes encourage people to reconnect with their surroundings, reduce dependency on constant digital interaction, and allocate more time to meaningful, real-world activities. Research indicates that taking intentional breaks from social media can significantly improve mental well-being, reduce anxiety, and foster deeper connections with family, friends, and colleagues. A study conducted in 2022 showed that participants who took a one-week break from platforms like Facebook, Instagram, and Twitter experienced noticeable reductions in anxiety and depression, along with increased well-being (Lambert et al., 2022). Similar findings suggest that limiting social media use to 30 minutes per day can lead to lower levels of anxiety, depression, and fear of missing out (FOMO), enhancing overall mental health and personal relationships (Brailovskaia et al., 2023; Faulhaber et al., 2023).

Additionally, promoting social awareness about the impacts of phubbing is crucial. Conversations around social media use should emphasize the importance of healthy digital habits. For instance, workplaces, educational institutions, and social groups can advocate for scheduled social media use or tech-free periods, encouraging individuals to remain engaged with those around them rather than retreat into their digital devices. By adopting these strategies, individuals can mitigate the effects of social media-induced phubbing, fostering healthier relationships and a more balanced approach to technology use.

### 7.2.5. Phubbing Interventions in Romantic Relationships

To address the issue of phubbing in romantic relationships, it is crucial to implement targeted interventions that promote healthier communication and mutual respect. One effective strategy involves establishing clear boundaries on phone use, where couples openly discuss and agree on specific times to put away their phones, such as during meals, date nights, or bedtime. This helps minimize the potential for phubbing and ensures that partners are fully present with each other during important moments (Roberts & David, 2016). Another essential approach is enhancing communication through structured dialogues, like the Imago Dialogue, which encourages partners to speak and listen without interruption. This method fosters empathy and understanding, enabling couples

to collaboratively address the underlying issues contributing to phubbing and develop mutually agreed-upon solutions (Hendrix, 2007).

Additionally, encouraging mindful technology use can be highly beneficial. Mindfulness practices, such as conscious breathing or meditation, help couples become more attuned to their interactions and the impact of their phone use on each other, thereby reducing the impulse to engage with their devices during shared time (Karremans et al., 2020). Implementing regular digital detox periods, where couples take breaks from their phones and other digital devices, can also strengthen their relationship by providing opportunities for meaningful, face-to-face interactions. These detox periods can be scheduled weekly or monthly, deepening the emotional connection between partners and mitigating the adverse effects of phubbing (Wilmer et al., 2017). In cases where phubbing has led to significant relationship distress, seeking professional support from a therapist or counselor may be necessary. Couples therapy can offer a safe space to explore the underlying issues driving phubbing behaviour and develop strategies for improving communication and relationship satisfaction (McDaniel & Coyne, 2014). By implementing these interventions establishing clear boundaries, enhancing communication, practicing mindfulness, engaging in digital detoxes, and seeking professional support couples can effectively address phubbing and foster a healthier, more fulfilling relationship that withstands the challenges of the digital age.

#### 7.2.6. Addressing Phubbing Across Different Age Groups

Though prevalent across all age groups, phubbing manifests differently depending on age and social contexts. Younger individuals, such as adolescents and young adults, tend to view constant smartphone use as a social norm, with many perceiving it as a way to stay "connected" and maintain social status. However, this often leads to an over-reliance on digital engagement at the expense of face-to-face interactions. To address this, educational settings can incorporate programs that raise awareness about the negative social impact of phubbing. Parents play a crucial role in modeling healthy digital habits for their children. By setting boundaries around phone use such as implementing tech-free times during meals and family activities parents not only help their children develop healthier relationships with technology but also contribute to breaking the cycle of phubbing.

In contrast, older adults may engage in phubbing less frequently, but their behaviour can be influenced by the digital habits of their peers or younger family members. Phubbing in intergenerational interactions often causes discomfort, as older adults may feel disrespected or marginalized by younger individuals absorbed in their smartphones. Interventions for older adults could focus on reinforcing the value of traditional communication practices while balancing the necessity of staying connected. In workplace settings, where older adults frequently interact with younger colleagues, etiquette training on appropriate smartphone use during meetings or collaborative activities can help create a more focused and respectful communication environment.

Establishing clear smartphone use boundaries whether through phone-free zones, time-limited usage, or digital detox periods can foster deeper engagement in personal

relationships for all age groups. Raising social awareness about the importance of being present during interactions and discouraging phubbing can help shift societal norms toward healthier communication habits. Ultimately, the key to reducing phubbing across different age groups is promoting mindful, intentional technology use and encouraging people to prioritize face-to-face connections over digital distractions.

### 7.2.7. Spreading Awareness About Phubbing

Raising awareness about the implications of phubbing is essential for reducing its negative impact on social interactions. Public campaigns and educational initiatives can help individuals recognize how excessive smartphone use during social moments can erode the quality of relationships. For instance, a European restaurant implemented an innovative strategy by placing a sign that read, "Imagine it's the 1990s, and there is no Wi-Fi, so enjoy the meal with your partner." This indirect reminder encourages patrons to focus on their dining companions rather than their phones. Similarly, some restaurants and cafes have offered discounts to customers who voluntarily put away their smartphones during meals, promoting in-person engagement.

In workspaces, offices can display signs in meeting rooms that remind employees to limit phone use and prioritize focused communication. Such visual cues are constant reminders to resist the urge to check notifications, fostering more productive and meaningful interactions. Educational institutions can also integrate posters and messages in common areas, encouraging students and staff to limit smartphone use during key social and academic moments.

By implementing these small yet powerful interventions whether through signs, posters, or social campaigns organizations and institutions can gradually reshape norms around phone use, encouraging people to be more present in their relationships and social interactions. This collective effort across public spaces, workplaces, and educational settings can contribute to a broader cultural shift away from phubbing and towards more mindful communication.

### 7.2.8. Seeking Psychological Help

One of the main drivers of phubbing is various forms of addiction, including social media addiction, internet addiction, and Fear of Missing Out. Research has shown that social media addiction can significantly impair face-to-face interactions and contribute to phubbing behaviours (Andreassen et al., 2016). Similarly, studies on internet addiction have found that excessive use can reduce the quality of personal relationships and increase phubbing (Kuss & Griffiths, 2017). Furthermore, FOMO has been linked to increased social media use and subsequent phubbing, as individuals prioritize their online presence over real-life interactions (Shuvo, 2024).

For individuals struggling with these issues, seeking psychological support is crucial. Addiction-related behaviours require therapeutic intervention, and it is essential to address these issues to prevent phubbing from damaging relationships further. Professional

help can give individuals the tools they need to manage their smartphone use and develop healthier habits.

## Conclusion

Phubbing, a byproduct of our hyper-connected digital world, has become a pervasive issue that transcends demographic boundaries and infiltrates nearly every social interaction. The evidence shows that phubbing is not merely a minor social annoyance but a behaviour with serious long-term consequences for personal and professional relationships.

To combat phubbing, individuals must recognize the damaging effects of this behaviour on themselves and others. Awareness is the first step toward change, and public campaigns, educational programs, and individual mindfulness practices can significantly reduce phubbing behaviours. Establishing clear guidelines, both personal and communal, for smartphone use such as tech-free zones, digital detoxes, and phone etiquette can help individuals regain control over their digital habits and foster more meaningful, in-person interactions.

Moreover, individuals struggling with compulsive smartphone use, whether due to social media addiction or the fear of missing out (FOMO), should not hesitate to seek psychological help. Addressing the underlying triggers of phubbing whether they are rooted in anxiety, boredom, or addiction is essential for developing healthier habits. Recognizing phubbing as a severe behavioural issue rather than a trivial social norm, is crucial for motivating oneself and others to act. Through mindfulness, intentional technology use, and professional support, individuals can reclaim the depth and richness of their relationships, ensuring that technology serves them rather than dominates their lives.

Ultimately, overcoming phubbing requires a collective effort individuals must hold themselves accountable, confront phubbing behaviour in others, and cultivate a culture that values real-world connections over digital distractions. By doing so, we can foster robust, healthier, and more fulfilling relationships in an increasingly digital age.

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## CHAPTER VIII.

### Future Research Directions in Understanding Phubbing

**Abstract:** This analysis outlines future research directions to deepen understanding of the complex phenomenon of phubbing as it evolves alongside technological advancements and Artificial Intelligence (AI) integration. Moving beyond its impact on interpersonal communication, the discussion highlights the need to explore self-phubbing smartphone use during moments of solitude and its potential cognitive and emotional consequences. The dual role of AI in exacerbating and mitigating phubbing through personalized engagement demands critical examination. Cultural influences and the effects of globalization are emphasized, revealing how social norms shape and adapt to phubbing behaviours, while cross-age-group studies are encouraged to uncover age-specific impacts and vulnerabilities. Research into diverse social contexts, such as healthcare, religious gatherings, and civic settings, is deemed essential for understanding the broader implications for mental health, cognitive functions, and social empathy. Ethical considerations in investigating neural mechanisms and data-driven interventions are also stressed to ensure responsible research practices. This forward-looking approach aims to generate culturally sensitive insights and strategies that promote healthier digital habits, fostering meaningful in-person connections in an increasingly digitized society.

**Keywords:** *Artificial Intelligence, Culture, Ethics, Future Directions, Technology.*

#### 8.1. Introduction

As our understanding of phubbing evolves, it becomes increasingly clear that there are numerous avenues for future research that could expand and deepen our knowledge of this complex social behaviour. This chapter outlines key themes that should guide future investigations, including the emerging concept of self-phubbing, the impact of technological advancements, cultural considerations, long-term social implications, and ethical concerns. By exploring these themes, researchers can contribute to a more nuanced and comprehensive understanding of phubbing and its effects on individuals and society.

However, future research will not come without challenges, particularly as technology and Artificial Intelligence (AI) continue to advance rapidly. The rise of data-driven technologies, AI algorithms, and corporate interests aimed at maximizing user engagement has created a new battleground. Data-hungry corporations increasingly design platforms and apps to keep individuals glued to their smartphones, often at the expense of healthy face-to-face social interactions. These companies prioritize user engagement and profit over the long-term societal consequences, contributing to the normalization and perpetuation of phubbing behaviours.

At the same time, individuals are engaged in a growing struggle to balance their dependence on smartphones with their need for meaningful in-person connections. This tug of war between corporate influences that encourage constant phone use and individuals' efforts to reclaim control over their social interactions is a critical area of future research. As AI-driven technologies continue to evolve, phubbing research will need to address how these systems manipulate behaviours, the ethical implications of data collection, and the social costs of corporate-driven digital addiction.

Future research must also investigate strategies for mitigating phubbing in an increasingly digitized world, exploring how individuals can resist the pull of smartphones while participating in social settings. Researchers must grapple with the ethical dilemmas surrounding corporate practices and consider how technological advancements such as AI and the Internet of Things (IoT refers to the network of physical devices such as smart appliances, vehicles, sensors, and other connected objects that are embedded with software, sensors, and communication technologies, enabling them to collect and exchange data over the internet) further entrench phubbing behaviour. Understanding these dynamics is essential to developing interventions that not only address individual behaviour but also challenge the broader systemic forces driving the rise of phubbing.

## 8.2. Broadening the Scope of Phubbing Research

Current research on phubbing has primarily focused on its occurrence in interpersonal settings, framing it as a behaviour that disrupts face-to-face communication. However, future studies should broaden this scope by incorporating interdisciplinary approaches from multiple fields, including psychology, sociology, communication studies, anthropology, and technology studies.

Psychological research could delve deeper into the cognitive and emotional mechanisms that drive phubbing behaviour. For example, how might issues such as social anxiety, self-esteem, or smartphone addiction influence the propensity to phub? While studies have highlighted the role of smartphone addiction in exacerbating phubbing (Safdar Bajwa et al., 2023), more nuanced research is needed to understand the long-term emotional and cognitive consequences of habitual phone use in social settings.

From a sociological perspective, understanding the role of social norms and technological advancements is key. How do different societies perceive phubbing, and how are these perceptions shaped by the rapid adoption of smartphones? Studying these

dynamics would help to understand phubbing not just as a technological behaviour, but as a socially embedded phenomenon influenced by societal and technological factors.

Communication studies could investigate how phubbing alters interaction dynamics across various communication mediums—whether in romantic relationships, family settings, or professional environments. Studies have already suggested that phubbing can erode relationship satisfaction and intimacy (Yam, 2023), but there is a need for further investigation into how this effect varies across different relationship types and communication settings, especially in the workplace and in education.

Expanding phubbing research into workplace and educational settings is another critical area. In professional environments, phubbing may affect team dynamics, productivity, and even employee morale. Meanwhile, in educational contexts, phubbing's impact on teaching and learning outcomes (Al-Saggaf et al., 2019a) is particularly relevant, as digital distractions continue to grow in classrooms worldwide.

By adopting an interdisciplinary research approach, scholars can provide a more holistic and comprehensive view of phubbing. This broader research framework would allow for an exploration of its impact in various fields such as education, the workplace, and communication, revealing the complex and multifaceted nature of phubbing in a rapidly advancing digital world.

### 8.3. Self-Phubbing: An Emerging Area of Interest

One of the most promising areas for future research is the phenomenon of self-phubbing, which refers to the conscious or habitual act of individuals engaging in phubbing behaviour even when they are alone. In contemporary society, the ubiquitous presence of smartphones has significantly transformed the way people interact with their daily routines, including moments traditionally reserved for personal solitude. While the book previously discussed the importance of social context specifically, the presence of more than one person as a defining feature of phubbing, it is also valuable to examine the impact of phone use during moments meant for connecting one's body and mind. This exploration considers how mobile distractions might interfere with individual mindfulness practices, personal introspection, or self-connection activities that require focused attention. For instance, activities such as enjoying a meal, exercising at the gym, taking a morning walk, or attending to basic physiological needs are now frequently accompanied by the habitual use of smartphones. This often involves activities such as engaging with social media, browsing shopping websites, or consuming short form podcastse, video content. It is crucial to recognize, however, that these moments may be better utilized as opportunities for the mind and body to achieve a state of harmony, free from external stimuli. Unfortunately, the persistent intrusion of smartphones has created a substantial barrier to attaining this essential balance, a phenomenon that can be aptly described as self-phubbing.

This phenomenon, not yet extensively studied, raises important questions about the psychological and social implications of smartphone use in solitude. Self-phubbing may

lead to self-isolation, reduced self-awareness, and diminished mental health, as individuals increasingly substitute meaningful activities with aimless smartphone interactions.

Recent studies on digital well-being suggest that excessive smartphone use can lead to negative outcomes such as decreased mental health and increased feelings of loneliness (Zhou & Shen, 2024). However, the specific dynamics of self-phubbing remain underexplored. Future research should investigate the prevalence of self-phubbing, its psychological correlates, and its long-term effects on well-being. For instance, studies could explore whether self-phubbing is associated with specific personality traits, such as introversion or neuroticism, or whether it serves as a coping mechanism for stress or anxiety.

Additionally, self-phubbing's implications for personal productivity and goal achievement warrant further investigation. As individuals increasingly use their smartphones to avoid confronting difficult tasks or emotions, they may find themselves trapped in a cycle of procrastination and self-distraction. Understanding these dynamics could inform interventions aimed at reducing self-phubbing and promoting healthier digital habits.

## 8.4. Technological Advancements, Artificial Intelligence, and Phubbing

As technology continues to evolve, new forms of phubbing are likely to emerge, driven by innovations in smartphones, wearable devices, and the integration of Artificial Intelligence (AI). AI represents one of the most significant technological advancements in human history, fundamentally reshaping how people live and interact. Its integration into nearly every aspect of daily life from digital assistants to social media algorithms has revolutionized daily tasks, making them more efficient and personalized. However, while AI offers numerous benefits, it also introduces potential complications, particularly in the context of phubbing.

AI's pervasive influence on smartphone use directly contributes to the dynamics of phubbing. AI algorithms meticulously track digital footprints, analyzing user behaviour to predict and influence future actions. This capability is harnessed by multinational corporations, who use sophisticated AI algorithms to understand consumer behaviour and develop tools designed to increase user engagement with their devices (Oh & Pham, 2022). For instance, social media platforms like Facebook and Instagram leverage AI to personalize the content users see, using data on which posts are liked, shared, or commented on to curate an engaging feed. As users spend more time interacting with these tailored recommendations, they may become more disconnected from their surroundings and the people around them, thus contributing to phubbing behaviour (Carr & Hayes, 2019).

This influence is not limited to social media platforms. Online shopping sites like Amazon or entertainment services like Netflix also employ AI to recommend products or content aligned with the user's preferences (Rahaman, 2022). These recommendations, while convenient, often lead to prolonged smartphone use, further intensifying

phubbing. The constant need to check notifications whether prompted by a new social media update or a personalized ad creates a cycle of engagement that makes it difficult for individuals to disengage from their devices, even in social settings.

Moreover, AI-driven notifications and reminders are designed to bring users back to their devices, often disrupting face-to-face interactions. The immediate impulse to check a device in response to a notification can easily lead to phubbing, especially as the fear of missing out (FOMO) encourages people to stay constantly connected. AI's role in targeted advertising adds another layer to this issue, with highly personalized ads embedded within apps or social media feeds designed to capture attention. This increases the likelihood of users becoming engrossed in their devices during conversations or social interactions.

However, while AI contributes to phubbing by encouraging more frequent and prolonged smartphone use, it also has the potential to mitigate this behaviour. For example, AI-driven tools could be developed to monitor and manage screen time, sending reminders to users to take breaks from their devices and engage in face-to-face communication. AI-powered apps could also detect when a user is in a social setting and limit non-essential notifications during these times, reducing the temptation to engage in phubbing. This form of intervention could play a crucial role in promoting mindful smartphone use and balancing digital engagement with real-world social interactions.

Looking to the future, Augmented reality (AR) and Virtual reality (VR) technologies pose both challenges and opportunities. On one hand, AR applications like Pokémon Go, which blend virtual and real-world elements, demonstrate how technology can blur the boundaries between physical and digital spaces, creating new forms of phubbing where users neglect their social environment in favor of digital content (Aagaard, 2020). As VR technologies become more immersive, individuals may become further detached from their surroundings, deepening the impact of phubbing. On the other hand, AI could be used within these technologies to create more inclusive digital experiences that encourage group participation, fostering social connection rather than isolation.

Future advancements in AI could also extend to wearable devices, where real-time monitoring of user behaviour in social contexts could enable subtle interventions to prevent phubbing. For instance, by analyzing body language, facial expressions, and environmental cues, AI could offer gentle reminders to stay present during conversations. Similarly, AI-driven digital assistants like Siri or Google Assistant, which are already integrated into daily life, could evolve to reduce phubbing by allowing users to complete tasks hands-free, fostering more direct interpersonal engagement.

As AI continues to advance, researchers must explore its dual role in both contributing to and mitigating phubbing. Understanding this dynamic is crucial for developing strategies that harness the benefits of AI while minimizing its negative effects on social interactions. By focusing on how AI impacts digital footprints and phubbing behaviour, future studies can pave the way for innovations that promote healthier, more balanced relationships between individuals and their devices (Andrejevic, 2019).

In nutshell, the relationship between technological advancements, AI, and phubbing is complex and multifaceted. While AI-driven innovations like personalized content and immersive technologies may exacerbate phubbing, they also offer opportunities to design interventions that encourage mindful technology use. The challenge lies in leveraging these technologies to enhance social engagement rather than disconnection, ensuring that future developments in AI and related technologies contribute to healthier, more fulfilling interpersonal relationships.

## 8.5. Cultural and Cross-Cultural Perspectives on Phubbing

Phubbing is a global phenomenon, yet its manifestations and perceptions can differ significantly across cultural contexts. While the behaviour itself may be widespread, how it is interpreted, tolerated, or resisted depends on deeply ingrained cultural norms, values, and communication practices. Understanding these differences is crucial for developing a comprehensive theory of phubbing that reflects the diversity of human experiences.

In cultures that place high value on face-to-face communication and interpersonal relationships, such as many Asian societies, phubbing may be seen as a more disrespectful behaviour. In these contexts, social harmony, respect for elders, and maintaining strong personal bonds are central values, and behaviours that disrupt these norms such as disengaging from a conversation to check a phone are likely to be frowned upon (Nazir & Piskin, 2016). For example, in Japan, where non-verbal cues and the art of listening are essential to maintaining social harmony, phubbing could be seen as a significant breach of etiquette. Similarly, in India or South Korea, where collective values emphasize family and community interactions, phubbing during a family gathering or social event could be interpreted as a sign of disrespect.

In contrast, cultures that prioritize individualism, multitasking, and efficiency may be more accepting of phubbing behaviours. For instance, in many Western societies, where independence and the pursuit of personal goals are highly valued, individuals may be more tolerant of behaviours that emphasize productivity or multitasking, even if it comes at the cost of social engagement. The use of smartphones in these settings may be viewed as a necessary aspect of modern life, allowing people to stay connected with larger social or professional networks, which could explain why phubbing might be perceived as less offensive in such contexts.

The role of globalization further complicates these cultural distinctions. As smartphones become universal tools, global communication patterns increasingly converge, which can standardize behaviours like phubbing across different societies. Globalization facilitates the spread of technology and, along with it, behaviours that were once culturally specific are now becoming common across the world. For example, Western practices of constant connectivity, often supported by social media and digital work platforms, have begun to influence other cultures, particularly in urban areas where the use of technology is seen as essential for economic and social participation. This can lead to the erosion of traditional, non-digital forms of communication that were once central to specific cultures.

Globalization also raises important questions about the preservation or adaptation of traditional communication practices. In societies that have long valued in-person conversations, there may be a conscious effort to preserve these modes of interaction despite the pressures of digital culture. For instance, some communities in rural or indigenous areas may resist the encroachment of smartphone use during important cultural or social rituals, viewing phubbing as an intrusion into sacred or meaningful social exchanges. On the other hand, urbanization and modernization may lead to hybrid forms of communication, where traditional methods are adapted to coexist with digital technologies. In some cultures, there may be efforts to integrate technology in a way that respects cultural norms, such as setting aside times during social gatherings when smartphones are put away to prioritize personal interaction.

The impact of globalization on phubbing also includes the ways in which phubbing is portrayed in global media and popular culture. How different societies portray phubbing in films, television shows, or social media can shape public perceptions of the behaviour. In some cultures, phubbing may be depicted humorously, downplaying its negative consequences. For example, in Western media, it might be portrayed as a light-hearted or relatable behaviour that everyone engages in. Conversely, in cultures where interpersonal relationships are highly valued, media representations of phubbing might highlight its disruptive potential, framing it as a serious issue that undermines social cohesion.

Research into how phubbing is portrayed in different cultural narratives can provide valuable insights into how global and local factors intersect to shape attitudes towards phubbing. For instance, a comparative analysis of advertisements or social media campaigns in different countries might reveal differing attitudes toward digital engagement. In some places, advertisements may encourage smartphone use as a symbol of progress and modernity, while in others, campaigns may promote mindfulness and digital detoxes, signaling a cultural resistance to the constant use of technology.

To fully understand the global phenomenon of phubbing, future research should investigate the role of globalization in standardizing phubbing behaviours, while also examining how different societies preserve or adapt their traditional forms of communication in the face of these pressures. Comparative studies could shed light on the commonalities and differences in how phubbing is perceived and dealt with across various cultures. Such studies could also explore how phubbing's spread through globalization may disrupt existing social norms, as well as how cultures might push back against these changes by fostering more mindful or deliberate technology use.

In nutshell, while phubbing is becoming a global behaviour, it is essential to consider the cultural nuances that shape its perception and social acceptability. Globalization plays a crucial role in spreading digital habits across different societies, but it also poses a challenge to preserving traditional forms of communication. Understanding these dynamics will be essential for developing culturally sensitive strategies to address phubbing and promote healthier social interactions in a digital age.

## 8.6. Phubbing and Its Long-Term Social Implications

The long-term effects of phubbing on social interactions, relationships, and community cohesion warrant further investigation. As phubbing becomes more prevalent, it may contribute to a gradual erosion of social bonds, leading to increased feelings of isolation and alienation. Studies have shown that individuals who frequently experience phubbing report lower levels of relationship satisfaction and higher levels of depressive symptoms (Garrido et al., 2024; Van Kraalingen & Beames, 2024).

Future research should examine the potential for phubbing to reshape social norms and communication practices, particularly among younger generations who have grown up with smartphones. Longitudinal studies could track changes in social behaviour over time, providing valuable insights into the lasting impact of phubbing on society. These studies could also explore how phubbing might intersect with other social issues, such as the decline of face-to-face interactions in public spaces or the increasing reliance on digital communication.

Additionally, research could investigate how phubbing influences community dynamics, such as the weakening of social ties in neighborhoods or the decline of civic engagement. Understanding these broader social implications could inform efforts to foster stronger, more connected communities in an increasingly digital world.

## 8.7. Neuroscience of Phubbing: Future Research Directions

A promising area for future research on phubbing lies in understanding its neurological basis. Exploring what happens in the brain during phubbing behaviours could shed light on the psychological and biological mechanisms that drive this phenomenon. While phubbing may seem like a simple act of disengaging from a conversation to focus on a smartphone, the underlying neural processes are likely much more complex, drawing from research on addiction, reward systems, and attention.

One of the key neurological mechanisms that future studies could investigate is the role of the brain's reward system, particularly how phubbing might activate dopamine pathways. Dopamine, a neurotransmitter associated with pleasure and reward, is released in the brain in response to stimuli that provide positive reinforcement, such as using a smartphone or receiving social media notifications. Research on social media and smartphone use has shown that these activities can trigger dopamine release, creating a cycle of gratification that can lead to compulsive behaviours. Each time a smartphone user receives a "like" on a post or a notification of a new message, their brain experiences a small dopamine surge, reinforcing the desire to check their phone more frequently. This reward-driven behaviour might contribute to phubbing by making it difficult for individuals to resist the urge to engage with their devices, even when it interrupts social interactions.

Understanding phubbing through the lens of addiction research is another important direction for future studies. Neuroimaging studies on social media addiction and internet use disorder have revealed that excessive engagement with digital devices can alter brain

activity in ways similar to substance addiction. For example, the prefrontal cortex, which is responsible for decision-making, impulse control, and social behaviour, may become less active during compulsive smartphone use. This reduction in cognitive control could explain why some individuals find it challenging to refrain from checking their phones, even in the middle of a face-to-face conversation, leading to phubbing behaviour. Similarly, areas of the brain related to attention, such as the anterior cingulate cortex and the parietal lobes, may be involved in the constant shifting of focus between in-person interactions and digital content, a hallmark of phubbing.

Moreover, future research could draw on studies of attention and cognitive overload to understand how the brain navigates the competing demands of real-world and digital stimuli. Phubbing often involves switching attention between a conversation and a smartphone, which places demands on the brain's limited attentional resources. Cognitive load theory suggests that humans can only process a finite amount of information at any given time, and when this limit is exceeded, performance declines. During phubbing, the brain may struggle to balance the demands of attending to digital content with the need to engage in meaningful social interactions. This could lead to a degradation of social and conversational quality, as the person phubbing may not be fully present in either sphere.

The concept of neural habituation could also be relevant to future research on the neuroscience of phubbing. Neural habituation refers to the process by which the brain becomes accustomed to certain stimuli over time, reducing its response to them. As individuals become more accustomed to constant smartphone notifications, they may develop a habitual response of checking their phones without even realizing it, further reinforcing phubbing behaviour. The brain's reward pathways become desensitized to the initial stimuli, leading users to seek out more frequent or intense digital engagement, which might explain why phubbing behaviours can become so ingrained.

In addition to these reward and attention mechanisms, future research should also explore the emotional and social aspects of phubbing from a neurological perspective. Social interactions are governed by complex neural networks that involve emotional processing and empathy, which are essential for building and maintaining relationships. Phubbing, by interrupting these social interactions, could impair the activation of neural circuits involved in empathy and emotional resonance. Neuroimaging studies that focus on the neural correlates of social exclusion and emotional disconnection could provide insights into how phubbing disrupts social bonds at the brain level.

Finally, research into the neurological basis of phubbing could provide valuable insights for developing interventions to mitigate this behaviour. For instance, by understanding which brain areas are most activated during phubbing, researchers could design digital tools or apps that help reduce compulsive phone-checking behaviours. These tools could use AI-driven reminders to encourage users to stay engaged in social situations or monitor dopamine levels to suggest moments of disconnection, promoting more balanced smartphone use.

In nutshell, the neuroscience of phubbing presents a compelling avenue for future research. By investigating the brain's reward systems, attention networks, and emotional circuits, researchers can gain a deeper understanding of why phubbing occurs and how it affects human behaviour. Drawing from studies on addiction, attention, and social neuroscience, future research could uncover the underlying neural mechanisms that contribute to phubbing, paving the way for interventions that promote healthier, more mindful smartphone use.

## 8.8. Ethical Considerations in Phubbing Research

Finally, it is important to consider the ethical implications of researching phubbing, particularly concerning privacy, consent, and the potential consequences of labeling certain behaviours as problematic. Researchers must ensure that their studies respect participants' autonomy and do not stigmatize individuals for their smartphone use. For example, care should be taken to avoid framing all smartphone use in social settings as inherently negative, as this could reinforce harmful stereotypes or ignore the potential benefits of digital communication.

Additionally, future research should address the ethical challenges associated with digital surveillance and data collection, particularly when studying behaviours that occur in private or semi-private settings. For instance, studies that rely on smartphone tracking or monitoring apps must navigate the tension between collecting accurate data and respecting participants' privacy. Researchers should also be mindful of the potential for their findings to be misused, such as by employers seeking to monitor and control employees' smartphone use in ways that could infringe on their rights.

By adhering to ethical guidelines and promoting responsible research practices, scholars can contribute to a more informed and compassionate understanding of phubbing. This approach will not only advance the field but also help ensure that research on phubbing is conducted in a way that respects the dignity and autonomy of all individuals involved.

## 8.9. Impact of Phubbing on Mental Health Beyond Loneliness

While the links between phubbing, loneliness, and anxiety are well-established in current research, the broader mental health implications of phubbing remain an underexplored area. Phubbing's impact may extend beyond feelings of social isolation, potentially affecting various aspects of mental health, including attention span, emotional intelligence, decision-making, and empathy. Future research could delve deeper into these areas to provide a more comprehensive understanding of the cognitive and emotional consequences of phubbing.

One area ripe for exploration is the impact of phubbing on attention spans. As individuals engage in phubbing, they are continuously shifting their focus between their smartphones and their physical surroundings, which can fragment their attention. Over time, this habit of dividing attention may weaken the ability to concentrate on a

single task or interaction for extended periods. Research on smartphone use has already highlighted concerns about diminishing attention spans, and phubbing may exacerbate this issue by normalizing constant multitasking in social contexts. Future studies could investigate whether chronic phubbing leads to long-term deficits in attention control or contributes to conditions like attention deficit hyperactivity disorder (ADHD) symptoms in certain populations.

Another potential consequence of phubbing is its effect on emotional intelligence. Emotional intelligence—the ability to recognize, understand, and manage one's own emotions and the emotions of others—plays a crucial role in fostering strong interpersonal relationships. Phubbing interrupts face-to-face interactions, which are essential for practicing and developing emotional intelligence. Over time, individuals who habitually phub may become less attuned to social cues, facial expressions, and non-verbal communication, leading to a decline in their ability to empathize with others. This emotional detachment could have long-term consequences for social bonding and relational satisfaction, suggesting that future research should investigate the relationship between phubbing and diminished emotional intelligence. Such studies could explore how frequent phubbing affects individuals' capacity to read emotions, regulate their own emotional responses, and build emotional connections with others.

In addition to emotional intelligence, phubbing may have broader cognitive effects, including impairments in decision-making. Decision-making is often influenced by the ability to focus, reflect, and weigh various factors before arriving at a conclusion. However, the constant distractions associated with phubbing might lead to more impulsive or less considered decisions. For instance, in situations where individuals are engaged in social interactions while also receiving notifications or engaging with digital content, their ability to process information thoroughly could be compromised. This diminished cognitive engagement could lead to poor decision-making in both personal and professional contexts. Future research could examine whether habitual phubbing alters the cognitive processes involved in decision-making and whether these effects vary depending on the context, such as work versus social settings.

Furthermore, phubbing may affect empathy, a critical component of healthy social interactions. Empathy involves understanding and sharing the feelings of others, and it is often cultivated through meaningful, face-to-face communication. When phubbing occurs, individuals may miss important emotional cues or signals, reducing their capacity to engage empathetically with others. Over time, this detachment could lead to a decline in social empathy, making it harder for habitual phubbers to maintain deep and meaningful relationships. Future research could explore how phubbing disrupts the neural mechanisms that support empathy, potentially leading to emotional disconnection that extends beyond the immediate experience of social isolation.

Moreover, future studies could explore how phubbing influences stress and cognitive load, which are interconnected with mental health. The mental strain of constantly switching attention between digital content and interpersonal interactions could increase stress levels over time. Phubbing may heighten cognitive load, which refers to the mental

effort required to process information. High cognitive load can overwhelm the brain's capacity to function efficiently, leading to burnout, fatigue, and decreased mental well-being. This area of research could explore how phubbing-induced cognitive overload affects mental health in the long term, particularly in high-stress environments like the workplace or school.

Finally, it is essential to consider the potential long-term impact of phubbing on social connectedness and overall mental well-being. While loneliness and anxiety have been the primary mental health issues studied in relation to phubbing, this behaviour could also contribute to more subtle forms of emotional detachment and alienation. For example, individuals who frequently engage in phubbing may struggle to form deep, trusting relationships, as their behaviour signals a lack of presence and attention to those around them. Over time, this could result in a sense of emotional numbness, where social interactions feel less meaningful or rewarding. Future research should investigate whether phubbing contributes to a broader disengagement from social life, examining its role in fostering feelings of disconnection and emotional apathy that go beyond traditional understandings of loneliness.

In nutshell, the mental health effects of phubbing extend beyond the well-documented issues of loneliness and anxiety. Future research should broaden its scope to examine how phubbing affects cognitive functions such as attention span and decision-making, as well as emotional intelligence and empathy. By exploring these areas, researchers can gain a deeper understanding of the complex ways in which phubbing influences mental health and develop more targeted interventions to mitigate its negative effects on both individuals and their social relationships.

## 8.10. Phubbing in Different Social Settings

While much of the current research on phubbing focuses on its impact in the workplace and educational environments, future studies should expand to explore how phubbing manifests and affects interactions in other critical social settings, such as healthcare, religious settings, and political or civic engagement. These contexts are vital to society and human well-being, making them essential for understanding the broader social consequences of phubbing.

### 8.10.1. Phubbing in Healthcare

One particularly important context for future research is phubbing in healthcare settings, especially in patient-doctor interactions. The quality of communication between patients and healthcare providers is crucial for accurate diagnosis, effective treatment, and fostering trust. Phubbing could disrupt this interaction by reducing attentiveness on both sides. For instance, if a doctor is checking their phone during a consultation, the patient may feel devalued or neglected, which could compromise the therapeutic relationship. Similarly, if patients engage in phubbing, they may miss important information about their diagnosis or treatment plan.

Future research could investigate how phubbing affects the dynamics of healthcare communication, particularly in terms of trust, patient satisfaction, and treatment outcomes. Studies might explore whether phubbing leads to more frequent misunderstandings, errors, or delays in care. Research could also consider the impact of digital health technologies, such as telemedicine or electronic health records, which may inadvertently encourage phubbing behaviours as doctors and patients interact with screens rather than with each other. Understanding these dynamics is essential for developing guidelines that foster more mindful, present communication in healthcare settings.

### 8.10.2. Phubbing in Religious and Spiritual Settings

Phubbing in religious and spiritual settings is another area that warrants attention. Religious ceremonies and spiritual gatherings are traditionally spaces for reflection, connection, and community building. However, with the rise of smartphone use, there is growing concern that phubbing may detract from the sanctity of these experiences. For example, individuals checking their phones during religious sermons or rituals may appear disengaged, which could disrupt the collective focus and detract from the shared spiritual experience.

Future research could examine how phubbing impacts the communal aspects of religious participation. Does the presence of smartphones during services dilute the sense of sacredness or alter the emotional and psychological benefits people derive from religious activities? Research could also explore whether religious communities are adapting their practices to discourage phubbing or whether they are incorporating digital tools into worship in ways that maintain engagement without causing distraction. Understanding how phubbing influences spiritual and communal well-being could lead to strategies that balance the integration of technology with the preservation of meaningful, reflective spaces.

### 8.10.3. Phubbing in Political and Civic Engagement

Political and civic engagement is another critical area where phubbing could have significant social implications. In the political arena, attention, presence, and active participation are essential for democratic processes. Whether it is during public debates, community meetings, or voting, being fully present is crucial for understanding issues, participating in discussions, and making informed decisions. Phubbing in these contexts could undermine the quality of political discourse and civic participation by shifting focus away from the issues at hand and towards personal digital content. For example, during political rallies, town hall meetings, or public forums, individuals who engage in phubbing may miss critical arguments or fail to participate fully in discussions. Politicians or public figures who phub during key moments may come across as disinterested or disengaged, eroding public trust. Phubbing could also detract from activism and community organizing efforts, where collective attention and collaboration are necessary to mobilize change.

Future research could explore how phubbing affects political engagement at both the individual and community levels. Studies might investigate whether phubbing contributes to political apathy, reduced civic participation, or lower voter turnout. Alternatively, research could consider how political campaigns, or civic organizations use digital platforms to engage citizens in ways that minimize the negative impacts of phubbing. As digital communication becomes increasingly integrated into political and civic life, understanding how to balance technology use with active participation is critical for maintaining healthy democratic processes.

#### 8.10.4. Phubbing in Social and Familial Gatherings

Beyond these formal settings, phubbing in social and familial gatherings is another important area of study. Family dinners, social outings, and gatherings with friends are traditionally spaces for bonding and maintaining close relationships. However, phubbing during these occasions can disrupt the quality of social interactions, leading to feelings of disconnection or neglect. Individuals who phub during social gatherings may appear emotionally unavailable, which could erode trust and intimacy over time.

Future research could focus on how phubbing affects family dynamics, friendships, and social cohesion. Are certain social contexts, such as family meals or holidays, more susceptible to the negative impacts of phubbing? How do different generations perceive and respond to phubbing within the family? Research could also explore the long-term effects of phubbing on relationship satisfaction and emotional well-being, providing insights into whether this behaviour contributes to social fragmentation or reduces the overall quality of personal relationships.

#### 8.10.5. Phubbing in the Hospitality and Service Industry

Phubbing in the hospitality and service industry is another area for future research. In service settings such as restaurants, hotels, or retail environments, interactions between customers and service providers are essential for ensuring customer satisfaction and loyalty. Phubbing, whether by customers or staff, can disrupt these interactions. For example, a server checking their phone while attending to a customer could create a negative impression, signaling inattentiveness or a lack of professionalism. Conversely, customers who phub during their interactions with service staff may fail to communicate their needs effectively, leading to misunderstandings or dissatisfaction.

Research in this area could examine the impact of phubbing on customer satisfaction, employee performance, and business outcomes. How does phubbing affect the quality-of-service interactions, and what strategies can businesses adopt to reduce its occurrence? Understanding these dynamics could help businesses create more engaging and attentive environments that foster positive customer experiences.

In nutshell, while phubbing has been extensively studied in workplace and educational settings, there is a clear need for future research to explore its impact across a wider range of social contexts. From healthcare and religious settings to political engagement and hospitality, phubbing can disrupt essential social interactions and erode trust, atten-

tiveness, and meaningful communication. By expanding the scope of research to these diverse social settings, scholars can gain a deeper understanding of the broader societal implications of phubbing and develop strategies to mitigate its negative effects across multiple domains.

## 8.11. Phubbing Among Different Age Groups: Future Research Directions

While much of the existing research on phubbing has centered on young adults, the behaviour is becoming increasingly prevalent across all age groups as smartphone adoption grows. However, the way phubbing manifests and its social or psychological impacts may vary significantly across different age demographics. Future research should investigate these age-related variations, particularly how phubbing behaviours differ in older adults compared to younger populations and what unique challenges or consequences arise in each group.

### 8.11.1. Phubbing in Adolescents and Young Adults

Research has traditionally focused on adolescents and young adults, as they are often the most active users of smartphones and digital platforms. In these age groups, phubbing is commonly linked to social media use, fear of missing out (FOMO), and the need for constant connectivity. Young adults, especially college students, may engage in phubbing during social interactions or academic settings, where multitasking between real-life interactions and digital engagement is normalized. For young people, phubbing can negatively impact the development of social skills, relationship quality, and academic performance.

Future studies could further explore how phubbing affects developmental milestones in adolescence and young adulthood. Does phubbing delay the acquisition of critical interpersonal skills or reduce the quality of peer relationships during these formative years? Additionally, research could investigate whether young adults are more prone to developing phubbing-related addictive behaviours, such as compulsive smartphone use, and how this impacts their mental health and well-being. Understanding these dynamics will be crucial for designing interventions tailored to younger populations, particularly in educational or social settings.

### 8.11.2. Phubbing in Middle-Aged Adults

As smartphones become ubiquitous, middle-aged adults are also increasingly engaging in phubbing behaviours. However, their patterns of smartphone use, and phubbing may differ from those of younger generations. Middle-aged adults are often juggling professional responsibilities, family obligations, and social relationships, and smartphones are a valuable tool for managing these aspects of life. For this group, phubbing might occur more frequently in professional or family settings, potentially leading to different social consequences.

Future research could explore how phubbing impacts workplace dynamics and family relationships among middle-aged adults. For instance, how does phubbing affect collaboration, productivity, or communication in professional environments where attentiveness and teamwork are crucial? Additionally, phubbing during family time—such as at meals or during conversations—may undermine the quality of relationships between parents and their children or spouses, leading to feelings of neglect or disconnection within the family unit.

In terms of psychological impacts, phubbing in middle-aged adults might be linked to stress or burnout, as individuals attempt to balance competing demands from work, family, and digital engagement. Future studies could examine whether phubbing contributes to increased stress or anxiety in this age group, as well as how it influences work-life balance and overall life satisfaction.

### 8.11.3. Phubbing in Older Adults

While older adults have traditionally been less engaged with digital technology, smartphone use is rapidly increasing among this demographic. However, research on phubbing in older adults is still sparse, and future studies should explore how phubbing manifests in this age group and whether its social and psychological impacts differ from those seen in younger populations.

For older adults, phubbing may have unique consequences due to the generational differences in communication preferences. Older individuals often place a higher value on face-to-face interactions and direct communication. As a result, phubbing may be perceived as more disrespectful or harmful in their social circles. Additionally, older adults may experience greater social isolation, and phubbing could exacerbate feelings of loneliness if it interrupts important in-person interactions with friends, family members, or caregivers.

Future research could investigate whether older adults are more vulnerable to the negative emotional and psychological effects of phubbing, particularly in terms of social isolation, loneliness, and diminished interpersonal connection. Moreover, studies could explore whether older adults use smartphones differently from younger generations perhaps more for practical purposes (e.g., communication with family or healthcare services) than for social media or entertainment and how these usage patterns influence the likelihood and impact of phubbing.

Additionally, cognitive factors may play a role in how phubbing affects older adults. As cognitive abilities, such as attention and memory, decline with age, older adults may struggle more with multitasking or shifting attention between digital devices and real-life interactions. Future research could examine whether phubbing in older adults leads to greater cognitive overload or impairs their ability to engage fully in social interactions, potentially affecting their cognitive health over time.

#### 8.11.4. Comparative Studies Across Age Groups

To develop a comprehensive understanding of phubbing, comparative studies across different age groups will be essential. These studies could examine the frequency, context, and social consequences of phubbing in adolescents, young adults, middle-aged adults, and older adults, highlighting the similarities and differences in how phubbing behaviours manifest across the lifespan. For example, are younger individuals more likely to phub during social gatherings, while older adults are more prone to phub during family interactions? Do younger people experience different psychological effects such as heightened anxiety or social dissatisfaction compared to older adults, who may feel more isolated or neglected when subjected to phubbing? Additionally, comparative studies could assess whether age-related differences in emotional intelligence, cognitive flexibility, or social expectations shape how individuals perceive and engage in phubbing behaviours.

By conducting such comparative analyses, future research could identify which age groups are most vulnerable to the negative effects of phubbing and develop age-appropriate interventions to reduce its impact. For example, digital literacy programs for older adults could teach strategies for maintaining social connections without over-relying on smartphones, while younger individuals might benefit from educational campaigns that emphasize the importance of mindfulness and presence during in-person interactions.

In nutshell, future research on phubbing should expand beyond the current focus on young adults to explore how this behaviour manifests across different age groups. Phubbing likely affects adolescents, young adults, middle-aged adults, and older adults in distinct ways, depending on their social contexts, communication preferences, and psychological needs. By investigating these age-related differences, researchers can gain a deeper understanding of the broader social and psychological consequences of phubbing and develop targeted interventions to promote healthier, more mindful smartphone use across the lifespan.

### 8.12. Gamification and Phubbing: Future Research Directions

As the use of gamification in digital platforms continues to rise, understanding its relationship with phubbing is becoming increasingly important. Gamification involves incorporating game-like elements such as points, rewards, badges, and challenges into non-game contexts to encourage user engagement and sustained interaction. While gamification has been successfully applied in areas like education, fitness, and business to motivate users, it also has the potential to intensify phubbing behaviours by encouraging prolonged screen time and fostering digital addiction. Future research should explore how these reward systems contribute to phubbing and consider the ethical implications for app developers.

### 8.12.1. The Role of Gamified Reward Systems in Phubbing

Gamified apps are designed to increase user engagement by tapping into the brain's reward system, which is driven by dopamine, a neurotransmitter that reinforces pleasurable behaviours (McMahan, 2024). Apps that reward users for consistent interaction, completing tasks, or reaching new levels can create a cycle of compulsion, where users are motivated to keep checking their phones to achieve rewards (Li et al., 2024). Whether it's through fitness trackers that award badges for daily step counts, language learning apps that track streaks, or social media platforms that offer "likes" and notifications as social validation, these systems create a loop that encourages users to stay engaged with their devices for extended periods.

Future research could investigate the specific mechanisms through which gamified apps contribute to phubbing. For instance, users may feel a compulsive need to check their apps during social interactions to maintain streaks, collect rewards, or participate in time-limited challenges, leading them to disengage from in-person conversations. Studies could examine how different types of gamified rewards (e.g., points, badges, levels, social rewards) affect the likelihood of phubbing and whether users of certain types of gamified apps (e.g., fitness, shopping, education, or social media) are more prone to phubbing than others.

Additionally, the psychology behind habit formation in gamified apps is crucial to understanding phubbing. Many apps use reward systems that are designed to create habits, encouraging users to check their phones multiple times a day to avoid missing out on rewards or breaking streaks. This habit formation process, driven by gamification, may inadvertently increase the likelihood of phubbing, as users feel compelled to prioritize digital engagement over face-to-face communication. Future research could explore how gamification-driven habit formation leads to compulsive smartphone checking and the broader implications for social behaviours like phubbing.

### 8.12.2. The Ethical Implications of Gamification and Phubbing

The widespread use of gamification raises important ethical questions for app developers, particularly when it comes to the potential for encouraging addictive behaviours that contribute to phubbing. Many gamified apps are designed to maximize user engagement, often with the primary goal of increasing screen time and user retention (Yassin, 2024). While these strategies are effective from a business perspective, they can have unintended social consequences, such as encouraging users to disconnect from their physical surroundings and the people they interact with in person.

Future research should critically assess the ethical responsibility of app developers in this context. Should developers be held accountable for designing apps that encourage excessive screen time and contribute to phubbing? Are there ethical guidelines that could be established to ensure that gamified apps promote healthy digital habits without fostering addiction? For instance, developers could implement features that encourage users to take breaks, limit non-essential notifications during social interactions, or pro-

mote mindfulness by rewarding users for staying off their devices during certain times of the day. Research could explore the potential for these types of pro-social gamification strategies to reduce phubbing and encourage more balanced smartphone use.

Furthermore, the ethical implications extend to the design and marketing of gamified apps for vulnerable populations, such as children or individuals prone to addictive behaviours. Gamified apps targeting young users often rely heavily on reward systems that can lead to excessive screen time, which in turn may disrupt the development of social skills or foster phubbing behaviours in educational or family settings. Future studies could investigate the impact of gamified apps on younger users and assess whether certain age groups or demographic profiles are more susceptible to phubbing due to gamified engagement strategies.

### 8.12.3. Gamification as a Tool for Reducing Phubbing

While gamification is often criticized for promoting excessive smartphone use, it also holds the potential to reduce phubbing by encouraging mindful technology use. Future research could explore how gamification might be harnessed to promote behaviours that counteract phubbing. For instance, apps could introduce rewards for users who meet social interaction goals without checking their phones, or they could offer incentives for users to engage in "digital detox" activities that encourage face-to-face communication.

Mindful app design could include gamified features that reward users for putting their phones away during meals, social gatherings, or meetings. These features could track and celebrate streaks of device-free social interactions, fostering a sense of accomplishment for engaging more fully in real-world communication. Future studies could investigate the effectiveness of these interventions in reducing phubbing behaviours across different settings, such as at home, in classrooms, or in the workplace.

Additionally, social gamification strategies could be explored, where users are rewarded for collective participation in digital-free activities. For example, group challenges where participants are encouraged to minimize phone use during social outings or family events could foster more meaningful in-person engagement. Research could examine whether these group-based rewards systems create positive social pressure to reduce phubbing and promote healthier interaction patterns.

In nutshell, the growing use of gamified apps and reward systems presents both challenges and opportunities in the context of phubbing. While gamification has the potential to increase phubbing by promoting compulsive smartphone use, it also offers avenues for designing interventions that encourage more mindful and socially engaged behaviour. Future research should focus on understanding the psychological mechanisms behind gamification and phubbing, the ethical responsibilities of app developers, and how gamification can be leveraged to reduce phubbing across various social settings. By exploring these areas, scholars can provide valuable insights for creating a more balanced relationship between digital engagement and face-to-face communication in an increasingly gamified world.

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