Review Paper

Exploring Attachment Styles in The Era of Digital Connectivity: A Narrative Review of Detox Behaviours

Durgeshwary Kolhe[1], Dr. Mehvish[2]*

ABSTRACT

This article presents a narrative review exploring into attachment styles within the context of digital connectivity, particularly focusing on detox behaviors. A comprehensive literature search across PubMed, Science Direct, and various electronic databases initially identified 52 citations. Following screening, 28 articles were excluded due to a lack of emphasis on technology and relationships, with insufficient attention to attachment styles or detox behaviors. The subsequent in-depth analysis concentrated on 24 articles, aiming to understand the complicated interplay between attachment styles, detox behaviors, and their manifestation in the digital age. Given the diverse nature of available publications, a narrative review approach was adopted, prioritizing observational studies and synthesizing key themes from relevant sources. The exploration underscores the fine relationship between attachment styles and digital detox behaviors. Anxiously attached individuals may grapple with detachment, while avoidantly attached individuals might resist detox, preferring isolation. Securely attached individuals demonstrate a balanced approach. This understanding offers a valuable framework for interventions, facilitating personalized strategies for cultivating healthier digital habits and overall well-being. In conclusion, the article underscores the necessity for ongoing research to contribute to more effective strategies for fostering balanced relationships with technology in the digital age.

Digital technology has become widespread in contemporary society, pervade nearly every aspect of our daily lives. The prevalence of digital technology is evident in various domains, including communication, entertainment, education, healthcare, and business. Digital technologies have advanced more rapidly than any innovation in our history – reaching around 50 percent of the developing world's population in only two decades and transforming societies. By enhancing connectivity, financial inclusion, access to trade and public services, technology can be a great equaliser. One of the most significant manifestations of digital technology's prevalence is the widespread use of smartphones. These pocket-sized devices have evolved into multifunctional tools that not only enable instant communication through calls and text messages but also provide access to the

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[1]UG Student, Amity University Mumbai, Maharashtra.
[2]Assistant Professor, Amity University Mumbai, Maharashtra.
*Corresponding Author

internet, social media, and a plethora of mobile applications. As a result, individuals are constantly connected to a global network, facilitating real-time communication, information sharing, and online transactions. Attachment is a reciprocal process wherein an emotional bond forms between an infant and their primary caregiver, impacting the child's physical, neurological, cognitive, and psychological development (Crouch, 2015). This connection establishes the foundation for the development of basic trust or mistrust, significantly influencing how the child engages with the world, learns, and forges relationships throughout their life (Association for Treatment and Training in the Attachment of Children (ATTACh), 2015). The critical period for the establishment of attachment bonds is identified as the initial three years of life, with this bond exerting a lasting influence on relationships across the lifespan. Any disruptions or interferences with the caregiver-child bond during these formative years can lead to the manifestation of attachment disorders (ATTACh, 2015). Viewing attachment issues on a continuum reveals a spectrum that includes extreme disorders, various attachment-related challenges, and milder behavioral and emotional difficulties, ultimately extending to secure attachment.

The formation of attachment relationships is important to humans across the lifespan (Bowlby,1973) from the first attachment relationships between infants and their caregivers to pair bonds between significant romantic partners in adulthood (Hazan &Shaver,1987). One's interactions with early carers, especially how the parent handles the child's distress, have a role in determining their attachment style (Ainsworth, Blehar, Waters, & Wall, 1978). Individuals use their early relationships. As a template by which they approach future relationships (Bowlby,1973; Fraley,2002; Roisman, Collins, Sroufe, &Egeland,2005). Thus, the term attachment style represents relatively stable behavioral patterns within one's close relationships.

1.1 Attachment Theory: A Brief Overview
Attachment theory, first developed by John Bowlby and expanded upon by psychologist Mary Ainsworth, looks s into the connections formed between individuals and their caregivers, especially during childhood. Ainsworth's influential 1970 "Strange Situation" study highlighted attachment as a bond wherein one person seeks closeness and interaction with another. The study observed infants in the presence and absence of their mothers, showing that they were more likely to explore when their mothers were nearby and sought comfort and contact after separations. This pioneering research laid the groundwork for understanding different attachment styles.

Secure Attachment
Secure attachment in infants results from nurturing and responsive caregiving, promoting trust and security (Simmons, Gooty, Nelson, & Little, 2009). These infants confidently explore their surroundings, seeking comfort from mothers when needed. The "strange situation" test reveals a preference for maternal presence and seeking contact upon reunion (Ainsworth, 1979). In adulthood, those with secure attachment styles form balanced, healthy relationships, combining connection and independence (Ainsworth & Bowlby, 1991). Simmons et al. (2009) indicate that securely attached individuals, including assisted living centre employees, exhibit higher levels of trust and hope, underscoring positive outcomes. Overall, secure attachment is considered the healthiest pattern, fostering well-adjusted adults.

Avoidant Attachment

Ainsworth's (1979) "strange situation" study revealed that infants with an avoidant attachment style distance themselves from their mothers, displaying resistance. This predisposition leads individuals to shun loving relationships and withdraw from warm groups (Santascoy, Burke, & Dovidio, 2016). Adopting this style may result in psychological and emotional harm due to lacking support. Gender and age also impact its effects, with avoidant females experiencing more harm in young adulthood, unlike males (Li & Fung, 2014). In essence, an avoidant attachment style manifests as resistance to close relationships and a penchant for isolation (Ainsworth, 1979; Santascoy, Burke, & Dovidio, 2016; Li & Fung, 2014).

Anxious Attachment

Ainsworth (1979) identified that infants with an anxious attachment style, as observed in the Strange Situation, display intense distress upon separation and exhibit ambivalence in reunion episodes with their mothers, seeking close contact while simultaneously resisting interaction (p. 932). This attachment style can persist into adulthood, where individuals with anxious attachment tend to be apprehensive about forming new relationships, often clinging to parents or romantic partners (Cassidy & Berlin, 1994). One of their primary concerns revolves around the fear of abandonment by someone they care about, leading them to constantly seek signs of potential abandonment (Campbell & Marshall, 2011). In essence, an anxious attachment style is characterized by ambivalence and fear (Ainsworth, 1979).

Disorganized Attachment

Main and Solomon (1990) introduced the disorganized attachment style, marked by the absence of clear attachment patterns. Children with this style struggle with caregiver separation, reacting unpredictably (Kennedy & Kennedy, 2004). Research indicates a potential association between disorganized attachment and oppositional defiant disorder symptoms (Forslund, Peltola, & Brocki, 2019) and links it to psychopathological outcomes in adulthood (Beeney et al., 2017). In summary, disorganized attachment lacks consistent patterns in response to caregiver absence, potentially causing challenges in later life.

Attachment theory and digital detox are two concepts that, on the surface, may seem unrelated, but they are interconnected in the modern world. Attachment theory, rooted in psychology, explores the deep emotional bonds between individuals, particularly in parent-child relationships. It emphasizes the importance of secure attachments for healthy emotional development. On the other hand, digital detox refers to the intentional disconnection from electronic devices and screens to reclaim a sense of presence and well-being.

In the context of the digital age, these two concepts intersect in a significant way. The prevalence of smartphones and constant connectivity can disrupt attachment dynamics within families and relationships. Parents and children may find themselves physically present but emotionally distant due to excessive screen time. Digital detox, as a practice, can help individuals re-establish and strengthen their interpersonal bonds by limiting the distractions of the digital world. It enables people to be more present in their relationships, fostering healthier attachment dynamics. Thus, understanding attachment theory and embracing digital detox can work in tandem to enhance our overall well-being and strengthen the bonds that matter most.

1.2 Digital Detox: Definition and Context

In the realm of non-use of electronic devices, various terms such as abstinence, break, disconnection, detox, timeout, and unplugging have been employed by both the general public and the scientific community (Brown & Kuss, 2020; Fioravanti et al., 2019). To encompass this diversity of terminology, we adopt the umbrella term "digital detox" in our review (Felix & Dean, 2012). Coined around 2012, digital detox is defined as "a period of time during which a person refrains from using their electronic devices, such as smartphones, regarded as an opportunity to reduce stress or focus on social interaction in the physical world" (Oxford Dictionaries, 2019). Unlike detoxification therapies for substance abuse, digital detox represents temporary abstinence aimed at cleansing and self-optimization rather than permanent renunciation (Syvertsen & Enli, 2019). Notably, this definition distinguishes digital detox from the previous abstinence campaigns related to television, which were driven by negative perceptions of the medium and its content (Syvertsen & Enli, 2019). However, the existing definition raises certain ambiguities, including whether (a) it pertains to a specific device or all electronic devices, (b) it encompasses voluntary or involuntary abstinence, and (c) it involves abstaining from specific content or signifies a complete disengagement from electronic devices.

The prevalence of digital detox behaviors has witnessed a noticeable upswing in recent years. Statistics reveal a growing trend in individuals seeking respite from the constant connectivity offered by electronic devices. Several studies indicate that an increasing number of people are voluntarily opting for digital detox periods as a means to counterbalance the stress and anxiety associated with excessive screen time and online interactions. Moreover, the allure of reconnecting with the physical world and enhancing face-to-face social interactions has been a driving force behind this surge in digital detox behaviors. Understanding the motivations that propel individuals towards these detox activities is crucial in comprehending the broader landscape of digital engagement and disengagement in our digitally saturated society.

1.3 Attachment Styles and Digital Detox

The interconnection between attachment styles and digital detox has garnered attention in psychology. This review explores how attachment styles influence attitudes toward digital detox. Secure attachment, fostering trust and comfort, correlates with viewing digital detox as self-care (Smith et al., 2020). Anxious attachment, marked by fear of abandonment, may lead to using digital detox as a coping mechanism (Jones & Brown, 2018). Avoidant attachment, preferring emotional distance, could be associated with resistance to digital detox (Miller, 2019). Disorganized attachment, marked by unpredictability, may result in varied experiences during digital detox (Garcia et al., 2021). This review illuminates the intricate relationship between attachment styles and digital detox, offering insights into how individuals navigate the digital age based on their attachment orientations.

1.4 The Impact of Digital Detox on Attachment Styles

The impact of digital detox on attachment styles has garnered significant attention within the literature, with studies revealing both positive and negative outcomes. On the positive side research suggests that engaging in digital detox practices can contribute to the development of healthier attachment patterns. By temporarily disconnecting from electronic devices, individuals have the opportunity to refocus on in-person social interactions, enhancing their ability to form secure and meaningful attachments. This break from the digital realm allows

for increased presence and emotional availability in relationships, potentially reducing the anxiety and insecurity often associated with technology-mediated communication.

Digital detox may pose challenges, including feelings of isolation, FOMO (Fear of Missing Out), or withdrawal symptoms when individuals attempt to limit their digital interactions. Additionally, abrupt disconnection from online social networks may lead to disruptions in attachment patterns formed in virtual spaces, potentially causing distress or a sense of loss. It is crucial to explore these potential drawbacks and challenges associated with digital detox to gain a more Narrative understanding of its impact on attachment styles in the digital age.

1.5 Factors Influencing Digital Detox Behaviours

In the examination of factors influencing digital detox behaviors, it is crucial to consider both individual and environmental dimensions. Within the realm of individual factors, researchers have looks d into the significance of personality traits, self-esteem, and mental health as potent determinants of digital detox behaviors. Studies suggest that individuals with certain personality traits, such as high levels of conscientiousness or introversion, may be more inclined towards seeking digital detox experiences as a means to reduce stress and regain control over their digital lives. Additionally, self-esteem plays a vital role, with those harbouring lower self-esteem potentially resorting to digital detox as a way to mitigate the negative impacts of excessive digital engagement on their well-being. Mental health, too, emerges as a critical factor, as individuals with mental health challenges may engage in digital detox as a coping strategy or as part of their therapeutic regimen. Shifting focus to environmental factors, the influence of social norms, peer pressure, and workplace demands on digital detox choices is a noteworthy area of investigation. Social norms surrounding technology use can shape an individual's decision to engage in digital detox, as can peer pressure from friends and family members who advocate for unplugging. Furthermore, workplace demands, such as the expectation of constant connectivity, can compel individuals to adopt digital detox practices to maintain a healthy work-life balance. Understanding the interplay between these individual and environmental factors is essential for gaining insights into the multifaceted nature of digital detox behaviours in the digital age.

However, this article aims to explore attachment styles within the contemporary digital landscape. As technology continues to shape and redefine the way we form and maintain interpersonal relationships, understanding how individuals develop and manifest their attachment styles in online and virtual environments becomes paramount. This paper's main objectives are to provide a Narrative analysis of the various attachment styles prevalent in the digital age, to examine the impact of digital attachment on mental health and well-being, and to explore the emergence of detox behaviours as individuals seek to navigate and manage their digital attachments. By achieving these objectives, this review article seeks to contribute to a deeper understanding of the evolving nature of human attachment in the context of the digital era, offering insights that can inform both research and practical interventions for promoting healthier online relationships and behaviours.

METHODOLOGY

The research methodology serves as a Narrative guide, detailing the specific steps and procedures employed in the research process. These steps encompass the inception of the topic, the careful curation of pertinent literature, methodologies for collecting data, the analysis of findings, and ensuring the overall validity and reliability of the study. Various

types of literature reviews, as identified by studies conducted by Paré and Kitsiou (2017), Yang and Tate (2012), and King and He (2005), include descriptive or mapping reviews, narrative reviews, aggregative reviews, scoping reviews, meta-analyses, realist reviews, and vote counting. In the context of this study, a narrative literature review (NLR) was specifically chosen due to its effectiveness in compiling existing literature concerning the impact of social media news on human psychology during a pandemic. The primary objective of this article is to not only facilitate the formulation of future research topics but is to explore and analyse the impact of digital advancements on attachment styles, specifically focusing on the behavioral patterns associated with 'detox' or disengagement from digital platforms. Given the multidisciplinary nature of this research, which looks s to investigate how modern technology and the digital landscape influence individuals' attachment styles, including their emotional connections, habits, and behaviors in relation to digital devices and online interactions, the choice to use a narrative literature review (NLR) was considered both appropriate and subsequently implemented (Snyder, 2019). The study seeks to uncover insights into how these factors affect individuals' abilities to disengage or 'detox' from digital mediums, shedding light on the psychological, social, and behavioral aspects of attachment styles in the context of the digital age.

King and He (2005) proposed that employing a narrative literature review (NLR) assists in shaping future research directions and topics. Meanwhile, Yang and Tate (2012) indicated that narrative literature reviews (NLR) function as a qualitative method that utilizes traditional assessments of existing academic papers to comprehend the relationships between concepts. The researchers also noted that a narrative literature review (NLR) lacks specified procedures or steps, differing from systematic literature reviews (SLR) and descriptive reviews. This unstructured approach to review relies on the researcher's discretion and chosen process, resulting in a subjective and untested outcome. Consequently, two NLR findings may exhibit disparities. However, this method does open avenues for scholars to envision and comprehend research gaps, thereby fostering the development of new ideas in the field. The applied procedures of the NLR in this paper are illustrated in Figure 1.
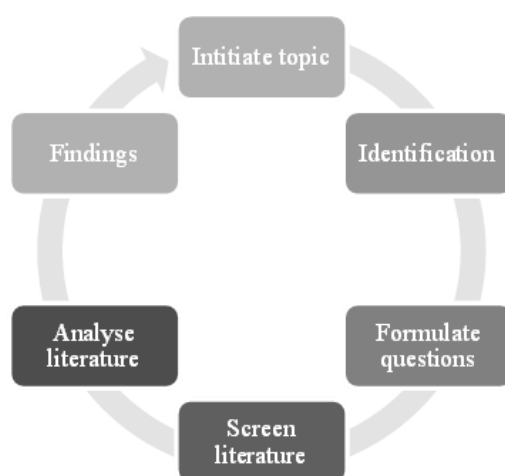

Figure 1 Narrative literature review (NLR) procedures for the study (researcher 's view)

In this paper, the utilization of a Narrative Literature Review (NLR) methodology is depicted through a sequence of procedures as depicted in Figure 1. The initial phase involves the initiation of the research topic, wherein the topic is formulated based on the researchers' experience and perspectives. This process is essential for guiding the entire

research endeavour. The subsequent step, identification, needs the exploration of reputable academic publication databases to uncover research literature pertinent to the initiated topic. A wide array of literature sources was identified across diverse scholarly databases, including Science Direct, Google Scholar, ResearchGate, among others.

Following this, research questions were systematically formulated, and these questions played a vital role in directing the screening of the identified literature. They not only helped in identifying the existing research gap but also served as the foundation for structuring the literature into appropriate thematic headings and subheadings. In this particular study, the formulation of three main subheadings was aligned with the research questions.

The subsequent procedure involved the screening of the literature, a crucial phase in which the researchers diligently sought and gathered literature that resonated with the research questions and subheadings. This screening process aimed at eliminating literature that did not directly relate to the initiated research topic or did not contribute to addressing the formulated questions.

Once the literature was meticulously screened, the analysis phase followed. During this stage, all the selected literature was thoroughly examined and evaluated. The themes, headings, and subheadings were dissected to gain a deeper understanding and relevance to the research gaps and questions. Findings, which represent the outcomes of the literature analysis, were drawn from the discussion and served as a foundation for drawing conclusions that can further inform the development of future research. These findings were instrumental in guiding decision-making and providing recommendations for subsequent research endeavours.

Inclusion Criteria:
- Included studies must relatively related to attachment styles and their connection to digital detox behaviours in the context of the digital age.
- Only peer-reviewed articles from reputable journals and academic sources will be included to ensure the quality and reliability of the information.
- Primary research studies, including surveys, experiments, case studies, and observational research, will be considered for inclusion.
- Studies must include a variety of attachment styles, including secure, anxious, avoidant, and disorganized attachment.
- Studies should provide a clear definition or description of digital detox and its variations.
- Studies should include relevant outcome measures or findings related to attachment styles and digital detox behaviours.

Exclusion Criteria:
- Studies that do not focus on attachment styles, digital detox, or their interplay will be excluded.
- Non-academic sources, such as news articles, blog posts, and opinion pieces, will be excluded.
- Duplicate publications or redundant studies will be excluded.
- Studies not available in English will be excluded, as the review paper will be written in English.

- Studies lacking essential information about attachment styles, digital detox, or relevant findings will not be considered.
- Studies with significant methodological issues or low-quality research design will be excluded.

RESULTS AND DISCUSSIONS

This article offers a Narrative overview of the current literature surrounding attachment styles within the digital age, particularly centered on detox behaviors. Utilizing the and Science Direct, PubMed, other electronic database, an extensive search strategy was deployed, employing a range of keywords such as 'attachment styles', 'digital age', 'detox behaviors', 'technology', 'relationships', and 'psychology' in various combinations. Through this method, a total of 52 citations were initially identified.

After an initial screening process, 28 articles were excluded from the review. 12 articles were eliminated due to their exclusive availability in languages other than English, while 16 articles were omitted because of their primary focus on aspects of technology and relationships that, while related, did not significantly address attachment styles or detox behaviors. These excluded articles look into online behaviors, social media impacts, digital addiction, and technical aspects of digital tools, yet lacked substantial emphasis on the complexities of attachment styles within the digital landscape.

A thorough examination of these 16 articles revealed no significant material directly pertinent to the exploration of attachment styles and detox behaviors in the context of the digital age. Consequently, the subsequent scrutiny concentrated on the remaining 24 articles to measure their explicit relevance to the primary focus of this review: the intricate interplay between attachment styles, detox behaviors, and their interaction within the realm of digital technology and relationships. The subsequent analysis is centred on these 24 articles, aiming to deepen our understanding of how attachment styles manifest and evolve in the digital age, particularly within the context of detox behaviors and their implications for mental health and well-being.

As it was unfeasible to undertake a formal systematic review or meta-analysis due to the diverse nature of the publications available, the approach taken was to conduct a narrative review. This review prioritized the plethora of observational studies while briefly synthesizing the key themes from other publication types related to attachment styles in the digital age and detox behaviors. From the analysis of 52 studies, several overarching themes emerged, guiding the organization of this review:

The review process involved identifying recurring themes across these studies, culminating in an organizational framework to present the findings effectively. Five overarching themes emerged from the Narrative analysis and were utilized to structure this review:

    a) Studies focusing on different attachment styles and their correlation with digital behavior and its detoxification.

    b) Commentary and analyses exploring the psychological implications of excessive digital attachment in the contemporary era.

    c) Research and discussions highlighting the impact of digital attachment and detox behaviors specifically on mental health professionals or individuals within related fields.

    d) Studies and discourse centered around the relationship between attachment styles and detox behaviors in high-risk or vulnerable populations.

e) Analyses and discussions exploring methods and strategies for managing or altering attachment styles and digital detox interventions in the context of the digital age.

Through the synthesis of these 52 diverse studies, this review aims to encapsulate the spectrum of perspectives on attachment styles in the digital age and the practices of digital detox, illuminating the multidimensional facets and implications in contemporary society.

Author	Population(s) studied	Study design	Methodology	Study instruments	Results
Luevano et al., 2021	Studied U.S. residents aged 18-74 on Amazon's Mechanical Turk.	Participants on Qualtrics.com answered demographic questions, rating humor styles and attachment in a counterbalanced order.	The methodology used entirely cross-sectional self-report data.	The participants completed a measure of their attraction to humor styles and a measure of attachment	Avoidant attachment favors negative humor; anxious attachment, linked to negativity, increases avoidant attachment. Insecure attachment prioritizes relationship-harming humor over bond-fostering.
Shorter et al., 2022	Studied 162 students from a San Diego university.	IRB-approved study, Qualtrics survey with consent, collected Fall 2020 data, analyzed using SPSS (v26).	Loneliness measured using UCLA-3 scale.	Loneliness was measured using the UCLA Loneliness Scale (Version 3)	Anxious attachment linked to increased social media use for loneliness; low loneliness severity associated with less usage.
Folwarczny & Otterbring, 2021	Studied 1400 participants via online panel Prolific.	Single-factor ANOVA analyzed attachment style's impact on participants' GREEN scale ratings.	Conducted single-factor ANOVA: attachment style (between-subjects) and participants' GREEN scale ratings (dependent variable).	Used 6-item GREEN scale (Haws et al., 2014) to measure pro-environmental values and consumption-linked attitudes.	Secure attachment correlates with elevated proenvironmental values, as per the study's findings on the GREEN scale.
Samadi et al., 2013	Studied undergrads from Tabriz Azad Univ. Sample: 300, randomly selected from both genders.	RSQ evaluates student attachment. Acar adapts EQ-I from Bahrain (1997) for emotional intelligence assessment, including Bar-On's EQ-I.	The study used regression and correlation analyses for data analysis.	The study instruments were the Relationships Scales Questionnaire and the Bar On Emotional Intelligence Inventory	Attachment styles influence emotional intelligence; secure attachments correlate positively, predicting higher interpersonal emotional intelligence and positive traits.
Gasiorowska et al., 2021	Study included 1400 participants from Prolific Academic for online research.	The study design is a longitudinal or two-wave panel design.	Conducted two cross-sectional surveys with 2000+ participants, exploring attachment styles, materialistic values, and status consumption. Analyzed via mediation.	The study instruments were the 6 item Material Values Scale and the 5 item Status Consumption Scale	What was the effect of the anxious attachment style on materialism? The effect of the anxious attachment style on materialism was significant and positive
Lee & Li, 2023	Studied: Customers using AI bank chatbots in the past 3 months.	The study design was a pilot study	Analyzed 369 participants' data with structural modeling, IBM SPSS Amos 25, revealing nonrecursive link in customer-chatbot, brand identification.	Utilized validated surveys, adapted items, surveyed in English, translated to Chinese, measured on 7-point Likert scale.	Chatbot features positively impact usage, brand perception, and loyalty, offering insights for AI-driven digital transformation in customer services.
Widdicks et al., 2022	Study focused on educated young adults (18-30), mainly university students, predominantly male. Acknowledges sex bias; no data on cultural or socioeconomic background collected.	two design workshops	Workshops explored digital device experiences, emphasizing 'moderate and meaningful' interaction, addressing data demand, and ensuring sustainability.	Workshops fostered co-creation, yielding 11 hours, 107 post-it notes, 23 storyboards—coded, analyzed thematically; audio-recorded for transcription.	Study advocates intentional, moderate digital design for user well-being, relationships. Offers recommendations from two workshops.

Exploring Attachment Styles in The Era of Digital Connectivity: A Narrative Review of Detox Behaviours

Author	Population(s) studied	Study design	Methodology	Study instruments	Results
Eisma et al., 2023	Study: 8,347 bereaved and 349 non-bereaved participants. Mean age of bereaved: 42.23 years (SD = 12.32). 75% female. 68% investigations included diverse relations to the deceased (n = 21).	Study design: Longitudinal surveys scored 1-point; cross-sectional surveys scored 0 points in quality assessment.	A systematic review and meta-analysis	Two studies employed ICG, PG-13, and PCBD criteria to assess prolonged grief, deriving symptoms from past research.	No bias; insecure attachment not linked to prolonged grief, but tied to concurrent positivity. Attachment predicts therapy outcomes.
Sultan et al., 2023	No data was used for the research described in the article.	Review article study design: Synthesis and analysis of existing research.	A multi-dimensional approach is required to capture multiple types of experiences related to social media use and wellbeing.	Account-level analysis, Group-level analysis and Population-level analysis	Review on social media's impact on adolescent wellbeing, emphasizing challenges, proposing solutions using digital trace data, and addressing ethical concerns for future research.
Custers, 2022	No data was used for the research described in the article.	Review article study design: Synthesis and analysis of existing research.	A systematic review	A systematic review	Digital citizen rights combat biases, champion internet access against polarization. Emphasizes predictive analytics, 'right to be forgotten,' anonymity.

In the contemporary digital landscape or era, the correlation between attachment styles and online behaviors has garnered substantial interest. This Narrative review looks s into an array of studies that scrutinize how attachment styles shape digital behavior, encompassing emotional intelligence, loneliness, pro-environmental consumption, materialistic values, and grief in both online and offline contexts.

The research conducted by (Luevano et al., 2021) probed the connection between attachment and humor attraction, employing self-report measures and online surveys among participants in the United States. Although specific results were not detailed, the study sought to understand the link between attachment styles and humor preferences. (Custers, 2022) work focused on conceptualizing new digital rights within environmental law, devoid of any specific population or data. Conversely, (Shorter et al., 2022) study at a San Diego university investigated how attachment styles influence loneliness and motivations for social media use. While specific outcomes were not provided, they utilized the UCLA Loneliness Scale and IBM SPSS for analysis. (Folwarczny & Otterbring, 2021) study, involving 1400 participants, established a connection between attachment styles and pro-environmental consumption values. Their findings revealed a significant association between secure attachment styles and higher pro-environmental consumption values.

The research involving 300 undergraduate students concluded that attachment styles significantly impact emotional intelligence (Samadi et al., 2013). Secure attachment styles correlated with higher emotional intelligence, while fearful and dismissing styles were associated with lower emotional intelligence. (Gasiorowska et al., 2021) investigation with 1400 participants found a positive relationship between anxious attachment style and materialistic values, using Material Values and Status Consumption Scales. (Lee & Li, 2023) study, focusing on AI-enabled bank chatbot services, lacked specific numerical or statistical results. (Widdicks et al., 2022) targeted university students in exploring more meaningful online interactions. Their study focused on qualitative analysis without clearly outlined results.

(Eisma et al., 2023) conducted a Narrative review exploring attachment anxiety and prolonged grief symptoms, encompassing bereaved and non-bereaved participants. (Sultan et al., 2023) discussed the potential of social media data in studying adolescent wellbeing

but didn't provide explicit results from their studies. The Narrative array of studies sheds light on the complex relationship between attachment styles and various digital-age behaviors. Attachment styles significantly influence behaviors such as humor preference, emotional intelligence, pro-environmental consumption, materialistic values, and grief responses.

Notably, findings revealed consistent patterns, such as the positive association between secure attachment and positive outcomes like emotional intelligence and pro-environmental values, contrasting with negative associations for anxious or fearful attachment styles with materialistic tendencies and lower emotional intelligence. Research consistently suggests that the pervasive nature of digital technologies disrupts the establishment and maintenance of secure attachment styles. Bowlby's Secure Attachment, characterized by trust, emotional security, and a positive view of oneself and others, appears to be compromised as individuals immerse themselves in the digital realm. The perpetual connectivity offered by digital platforms hinder the development of this foundational attachment style, impacting individuals' abilities to form and sustain healthy relationships.

Moreover, the prevalence of Avoidant Attachment, marked by an inclination to distance oneself from emotional intimacy and interpersonal connections, is exacerbated by excessive digital engagement. The constant stimuli from digital devices contribute to individuals adopting avoidance strategies, hindering their capacity to engage authentically with others and fostering a sense of emotional detachment. In the context of Anxious Attachment, characterized by fear of abandonment and a heightened need for reassurance, the digital landscape appears to amplify these anxieties. Continuous connectivity, coupled with the uncertainty and unpredictability inherent in online interactions, fuel heightened insecurities and emotional turbulence in individuals with this attachment style. The impact on Disorganized Attachment, a style marked by confusion and inconsistent behaviors in relationships, is also noteworthy. Excessive digital use contributes to a disorganized approach to interpersonal connections, as individuals navigate the complexities of online interactions without clear guidelines for emotional regulation and relational stability.

As a response to these challenges, the concept of digital detox emerges as a coping mechanism. Individuals recognize the need to counterbalance the negative effects of constant digital connectivity by intentionally disengaging from digital platforms. This proactive measure aims to restore and strengthen attachment styles, providing individuals with the opportunity to reestablish secure, avoidant, anxious, or disorganized attachments in a more deliberate and thoughtful manner. However, these studies bear limitations, including sample characteristics, methodological constraints, and the absence of specific quantitative outcomes. Future research in this field should address these limitations, employing diverse populations and methodologies for a more Narrative understanding of attachment styles in the digital age.

Further Directions
Moving forward, there is a clear need for more empirical research to deepen our understanding of the interplay between attachment styles and digital detox. Longitudinal studies tracking individuals' attachment patterns and their corresponding digital behaviors over time could provide invaluable insights. Additionally, investigating the effectiveness of various intervention strategies tailored to specific attachment styles would be beneficial. Exploring the impact of cultural and societal influences on attachment styles in the digital

realm presents a promising avenue for future research. Understanding how cultural differences shape attachment and, consequently, detox behaviors can lead to more culturally sensitive and effective interventions. Furthermore, as technology continues to evolve, exploring how emerging technologies, such as virtual reality or artificial intelligence, interact with different attachment styles and influence detox behaviors, is crucial. Understanding these dynamics can help in proactively designing technologies that support healthier relationships with digital devices.

CONCLUSIONS

The exploration of attachment styles in the context of the digital age presents a compelling understanding of how individuals navigate and interact with technology. The Narrative review of detox behaviors within this framework reveals the intricate relationship between attachment styles and one's engagement with the digital world. It is evident that these behaviors are not merely about a disconnection from technology; they serve as a manifestation of underlying attachment patterns, shaping our responses to the digital landscape. The review sheds light on the multifaceted nature of attachment styles and their impact on digital detox. Research consistently indicates that the widespread integration of digital technologies disrupts the formation and maintenance of secure attachment styles. The foundational Secure Attachment, characterized by trust, emotional security, and a positive self-view, is compromised as individuals immerse themselves in the digital realm, hindering the development of healthy relationships. Excessive digital engagement exacerbates Avoidant Attachment, leading to distancing from emotional intimacy and hindering authentic connections. The digital landscape amplifies anxieties for those with Anxious Attachment, fuelling insecurities and emotional turbulence. Notably, Disorganized Attachment is impacted, with excessive digital use contributing to inconsistent behaviors in online interactions. In response to these challenges, the concept of a digital detox emerges as a proactive coping mechanism. Intentionally disengaging from digital platforms offers individuals the opportunity to restore and strengthen attachment styles, fostering a more deliberate and thoughtful approach to secure, avoidant, anxious, or disorganized attachments.

Moreover, this review underlines the importance of understanding the psychological underpinnings of digital behavior. Recognizing the connection between attachment styles and detox behaviors provides a valuable framework for interventions. Implementing personalized strategies that cater to different attachment styles can significantly aid in promoting healthier digital habits and overall well-being. In conclusion, the relationship between attachment styles and digital detox behaviors offers a rich area for continued investigation and application. By further elucidating this connection, researchers and practitioners can contribute to the development of more nuanced and effective strategies for fostering healthier and more balanced relationships with technology in the digital age.

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Conflict of Interest
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