

Digital Detox
The Effect of a Social Media Intervention on Well-being and Procrastination

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Abstract

In an era where social media's influence is pervasive, achieving a balanced relationship with social media has become crucial for well-being. This study investigates, if a one-week digital detox intervention improves well-being, focusing on a sustained effect, the mediation role of procrastination, and examining if these effects are more pronounced among heavy social media users. A sample of 92 participants, aged 19 to 67, underwent a digital detox, abstaining from selected social media apps. The results demonstrated significant short-term improvements in well-being during the detox, with sustained benefits observed one week after the detox. Mediation analysis revealed that the relationship between social media use and well-being was fully mediated by procrastination before the detox, but this mediation was not sustained after the detox. Additionally, no significant moderation effect of heavy social media use on relationships was found. These findings underscore the complexity of social media's impact on well-being and the critical role of procrastination. Future research should adopt longitudinal designs with more frequent assessment points to explore long-term effects and consider the broader definition of digital detox, emphasizing the importance of reconnecting with meaningful offline activities.

Keywords: Digital Detox, Social media use, Well-being, Procrastination

Introduction

Over the past 20 years, mobile technology has integrated our lives, reshaping our work, leisure, and social environments (Vanden Abeele, 2021). Among the most significant changes has been the rise of social media. Social media platforms allow users to create personal for consuming, creating, and sharing content like text, images, and videos. Additionally, users can interact with each other through comments, likes, follows, shares, and direct messages (Vanden Abeele et al., 2018). These platforms usually offer highly personalized content tailored to users' preferences (e.g., TikTok's 'For you page', YouTube Recommendations, or personalized news feeds), to keep users as engaged as possible (Williams, 2018). As a result, major platforms like TikTok, Instagram, and Facebook have grown into billion-dollar industries, with users worldwide now spending a daily average of 2 hours and 31 minutes engaged with social media platforms (WeAreSocial et al., 2023). Nonetheless, the rise of social media shows no sign of peaking soon, with the amount of time spent per day steadily increasing yearly since 2012 (Anderson & Wood, 2021).

As mobile technology advances, smartphones allow users to access these personalized and on-demand offerings virtually anytime and anywhere (Vanden Abeele et al., 2018). As a consequence, many individuals now find themselves stuck with a habit of being online and connected with others almost permanently (Vorderer et al., 2016). It should, therefore not, come as a surprise that three in four young American adults, half of teenagers, and one-third of parents are concerned with their amount of usage (Paul & Talbott, 2017; Jiang, 2018). Despite awareness of possible negative consequences and the wish to cut down or quit altogether, the allure of social media seems to keep us hooked, highlighting the challenge of achieving a healthy balance (Jiang, 2018; Vanden Abeele, 2021).

As the world evolves, so does the science of well-being, adapting to new opportunities and challenges that impact our mental health. This has led to a new focus in the field of well-being: *Digital Well-being*. Digital well-being is a new concept that refers to the imbalance we may experience due to permanent connectivity (Vanden Abeele et al., 2022). Within this focus, digital detoxing has emerged as a potential intervention to attain digital well-being (Vanden Abeele et al., 2024). Digital detoxing involves a deliberate period of not using digital devices and platforms, to restore or improve various aspects of well-being, either completely or for specific subsets of use, like not using certain types of applications (Meier & Reinecke, 2021). This current study aims to add to the existing literature by conducting a digital detox, addressing the research question: Is a digital detox an effective intervention to improve well-being?

The Well-being Paradox

To address this question, it is essential to first contextualize social media within the broader framework of well-being literature. Well-being is defined as a state of optimal psychological functioning, enabling individuals to realize their abilities, cope with life stresses, work productively, and contribute to their community (Ryan & Deci, 2001; WHO, 2001). When reviewing the impact of social media use on well-being, literature reveals a complex, ambivalent relationship.

On the positive side, the ability to connect anytime and anywhere granted us new ways for social connection. In their model of psychological well-being, Ryff and Keyes (1995) emphasize that positive relationships with others are essential for overall well-being, as they provide emotional support, reduce stress, and contribute to a sense of belonging and security. In our fast-paced lifestyle, finding time to maintain our social relationships can be challenging. However, social media offers a solution by enabling continuous and ongoing contact with family and friends at any time (Van de Abeele et al., 2018). This perpetual contact extends social interaction beyond specific physical locations and thus allows individuals to maintain positive relationships. Even seemingly superficial interactions, like sharing a meme on Instagram can carry profound symbolic meaning by signaling that individuals think about each other during their daily activities, thus fulfilling our need for social connectedness (Ling & Lai, 2016). Another benefit of social media is the potential for hedonic experiences (Huta, 2016), which contribute to well-being (Ryan & Deci, 2001). Hedonic experiences occur when we derive pleasure or comfort from using social media platforms, for instance through enjoying entertaining content. In fact, these hedonic responses are what makes social media so irresistible (Van Koningsbruggen et al., 2017). While the constant availability of entertainment and communication can be inherently pleasurable, it only leads to well-being benefits when these pleasurable experiences are kept under control (Bauer et al., 2017).

Despite its support for well-being, social media also seems to challenge it. The anytime, anywhere access often makes it difficult for people to resist the urge to go on their phones. The constant notifications sent by social media apps foster habits like compulsive checking and doom-scrolling (Anderson & Wood, 2021). Social media's pull seems so strong that people still use their phones, even when it's neither intended nor wanted, or invokes negative feelings (Aalbers et al., 2019). No wonder individuals often report feeling 'out of control' (Syvertsen, 2020). Furthermore, some studies suggest that persistent engagement with social media could distract from 'better' offline activities that are typically more

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

contributing to a meaningful life (Hall & Liu, 2022; Kushlev & Leita0, 2020). Meaning is a key marker of eudaimonic well-being, which includes experiences of meaning, authenticity, and self-actualization (Huta, 2016; Ryan & Deci, 2001). These elements are believed to be essential for enhancing overall well-being, thus replacing meaningful real-life experiences with ‘meaningless’ screen time could have a serious harmful impact (Hiniker et al., 2016). Regardless of whether the loss of meaning is real or theoretical, guilt and shame over screen time, hurriedness, or perceptions of time scarcity, undoubtedly impact well-being negatively (Vanden Abeele et al., 2024). In addition to that, studies have linked the use of social media to more impairments in well-being, like a higher prevalence of stress, anxiety, and depression (Amez & Baert, 2020; Brown & Kuss, 2020; Duke & Montag, 2017; Lepp et al., 2014). In conclusion, the impact of social media on well-being is multifaceted and ambivalent, thus reflecting a well-being paradox.

Digital detox Research

Social media may thus yield a range of costs and benefits for well-being. To this date, research on the effectiveness of digital detox interventions seems to reflect this well-being paradox. Digital detox interventions have shown positive (Anrijs et al., 2018) and negative (Wilcockson et al., 2019) well-being outcomes. Findings in a recent systematic overview of digital detox research by Radtke et al. (2022) also reflect this inconsistency for social media interventions specifically. For instance, Tromholt (2016) conducted a 1-week experiment with 1,095 participants and found that taking a break from Facebook improved well-being. Similarly, Fioravanti et al. (2019) reported that quitting Instagram increased subjective well-being in women. However, other studies have found opposite results; for example, Hanley et al. (2019) and Vally and D’Souza (2019) observed a decrease in well-being following a break from social media.

Overall, studies show promising results suggesting that time restrictions effectively reduce the time spent on phones (Hiniker et al., 2016). For instance, Van Wezel et al. (2021) found promising results indicating that restricting social media use led to a 10–15% decrease in total screen time. To this date, only a few digital detox studies included follow-up measurements. One of them, conducted by Hunt et al. (2018), found a significant reduction in loneliness and depression over three weeks compared to before. Despite promising results, it remains unclear whether the effects on well-being are valid during the digital detox, immediately after the intervention, or if they persist in the short or long term. Because of the unclear temporal effects of a digital detox, this study aims to incorporate a follow-up measure. Based on anecdotal evidence that people perceive the harms of social media as more

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

impactful than its benefits, and promising results suggesting a lasting effect, this study hypothesized that a digital detox improves well-being (H1), and this effect is sustained for one week (H2).

Considering that social media is perceived as both rewarding and harmful, implementing a digital detox may also involve giving up potential benefits for well-being (Hiniker et al., 2016). Additionally, several studies have found that disconnection can simultaneously trigger anxiety and fear of missing out (Fitz et al., 2019; Pielot & Rello, 2015). This ambivalence is important to consider when implementing a digital detox intervention, as a detox could result in a tradeoff of well-being harms and benefits, ultimately leading to a zero-sum effect on well-being (Vanden Abeele et al., 2024). Moreover, several studies imply that the relationship between digital detox and well-being is likely more nuanced (Radtke et al., 2022; Orben & Przybylski, 2019; Vanden Abeele et al., 2024; Whitlock & Masur, 2019). However, a recent systematic review by Radtke et al. (2022) found that only three studies have explored potential mediators of the effects of digital detox interventions (Hinsch & Sheldon, 2013; Skierkowski & Wood, 2012; Turel et al., 2018). To further conclude why a digital detox intervention might be beneficial or harmful to well-being, this study aims to further nuance the first two hypotheses, by exploring the possibility of mediation.

Procrastination

A possible mediation suggested by Radtke et al. (2022) is procrastination. Procrastination occurs when individuals voluntarily delay beginning or completing an intended course of action, despite expecting to be worse off for the delay (Steel, 2007). An extensive body of literature demonstrates the negative impact of procrastination on well-being and has linked procrastination to stress, anxiety, and depression (e.g., Sirois & Pychyl, 2013). In addition, Meier and Reinecke (2021) assert that procrastination triggers negative self-conscious emotions, such as guilt and shame, due to reduced task performance, or violated personal and social norms. Moreover, in a large representative community study in Germany, procrastination was found to correlate negatively with overall life satisfaction, indicating its negative influence on well-being (Beutel et al., 2016).

Procrastination is commonly referred to as a failure of self-regulation, where individuals prioritize short-term rewards, such as the gratifications of social or entertainment needs, over long-term benefits (Sirois & Pychyl, 2013; Steel, 2007). Within the context of social media, this could manifest itself in spending excessive time on Facebook, at the expense of finishing an important paper. Several recent studies suggest that social media is

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

frequently used as a ‘tool for procrastination’ (Reinecke & Hofmann, 2016; Schnauber-Stockmann et al., 2018). Finding in other studies further emphasized this relationship, as excessive smartphone use is found to be related to higher rates of procrastination (Im & Jang, 2017; Rozgonjuk et al., 2018; Yang et al., 2019). Concerning the why, research suggests that procrastination might be triggered by social media notifications, as they tempt users with short-term rewards in the form of a like, message, or update (Aalbers et al., 2022; Meier, 2022). Procrastination through social media specifically, has been shown to impair well-being as well, as it can lead to feelings of stress and a sense of wasted time (Meier et al., 2016). Beyond increasing negative affect, studies have identified a ‘spoiled pleasure effect’, meaning that the negative consequences of procrastination diminish the positive affect that may otherwise be gained from hedonically pleasant procrastinatory activities (Meier, 2022).

Research on the impact of a digital detox on these relationships has not been extensively conducted. The literature review by Radtke et al. (2022) only mentions one study by Hinsch and Sheldon (2013). They found that reducing Facebook use decreased procrastination immediately after the detox and at a 48-hour follow-up, indicating that a digital detox could effectively reduce procrastination. This current study aims to add to the existing digital detox literature by exploring the possibility of procrastination as a mediator in the relationship between social media use and well-being. In line with the expectation that more social media use is linked to more procrastination, and procrastination impacts well-being negatively, it's expected that the effect of a digital detox on well-being is mediated by a reduction in procrastination (H3).

Heavy Use

Another important question for understanding and developing targeted digital detox interventions is for whom this would be most beneficial. To understand who would be more at risk of suffering the consequences, it could be relevant to identify between-person differences in social media use. One notable variation is the amount of time individuals spend on social media. Given that heavier users spend more time on social media, it could be expected that the effects described in the hypotheses above will be more pronounced for this group. Finally, this study hypothesized that these effects are stronger for heavy social media users (H4).

Current Study

This study aims to research if a digital detox intervention, specifically a one-week abstinence from social media, improves well-being and if this improvement is sustained for a week. Additionally, it will examine whether procrastination mediates the effect of digital detox on well-being, and if these effects are moderated by heavy use.

Method

Participants

The population of interest for this study included individuals aged 18 years and older who were social media users. Participation inclusion criteria required participants to actively use one or more of the selected social media apps (Instagram, Threads, Snapchat, TikTok, Twitter/X, Facebook, YouTube, BeReal, LinkedIn, Reddit, Pinterest, Tumblr, and all dating apps), and to be willing to participate voluntarily. Exclusion criteria for this study were not using the selected social media apps or not completing the digital detox intervention, where non-use of social media was defined as having a social media screen time of 0 minutes before the detox, and completion of the intervention was defined as the abstinence of social media use during the intervention week. However, acknowledging that complete abstinence may be impractical for some participants due to unavoidable, essential (work-related) usage, a minimal allowance was permitted. This minimal allowance was defined as less than 5% of the participant's baseline usage, with a maximum limit of 10 minutes for the entire week. This small amount ensures the integrity of the digital detox while recognizing participants' needs, thereby maintaining ethical standards.

Recruitment was carried out through a convenience sampling method, using personal networks, including family, friends, and peers of the research team. Participants were briefed on the study's purpose and procedures through an information letter (see Appendix A) and received instructions during the study via emails (see Appendix B). Informed consent was obtained from all participants through an online form before the first questionnaire (see Appendix C). Upon examining the responses, unique login IDs revealed a total of 190 different participants. Among these, 98 participants were excluded based on the exclusion criteria or due to missing data. As a result, the final sample included 92 participants: 74 women, 15 men, and 3 non-binary individuals (see Table 1). Ages ranged from 19 to 67 years ($M = 28.80$, $SD = 11.02$), with a median age of 25.

Table 1*Gender Distribution*

Gender	Frequency	Percent
Male	15	16.30
Female	74	80.44
Non-binary	3	3.26
Missing	0	0.00
Total	92	100.00

Note. Frequencies for Gender.

Power Analysis

A priori power analysis was conducted using G*Power 3.1.9.7 (Faul et al., 2007) to determine the required sample size for testing all hypotheses. For the first two hypotheses, a one-tailed t-test to compare differences between two dependent means (test family: T-tests) was selected. Based on a medium effect size ($d_z = 0.5$) derived from the literature, an alpha level of .05, and a desired power of .80, the analysis indicated a minimum sample size of 27 participants. Secondly, for hypothesis 3, which involves assessing the mediation using multiple linear regression analysis, a power analysis was conducted using Linear multiple regression: Fixed model, R^2 deviation from zero (test family: F tests). This analysis was based on a medium effect size ($f^2 = .15$), an alpha level of .05, a desired power of .80, and 2 predictors. The results indicated a minimum sample size of 68 participants. Finally, to estimate hypothesis 4, which involves a moderated mediation model, the same settings were applied except this time for 4 predictors. This analysis indicated a minimum sample size of 85 participants. To ensure that all hypotheses could be tested with sufficient power, the highest minimum sample size of 85 participants was used.

Design and Procedure

The research has an experimental design, with social media use as the independent variable that will be manipulated, forming the intervention referred to as the digital detox.

Data Collection

The Data collection involved online questionnaires to measure participants' social media use, well-being, and procrastination. Data was collected at three moments: before, during, and after the digital detox intervention, with a one-week interval between each assessment point.

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Each participant was asked to complete the same questionnaire three times. This approach allowed evaluation of changes in social media use, well-being, and procrastination over time, and for comparisons within and between participants. The questionnaires were digitally administered using Qualtrics (see Appendix D), and sent to participants through emails. Emails were sent every Sunday evening, requesting participants to provide answers based on their experiences during the previous week.

The first questionnaire was sent the Sunday evening before the start of the detox and collected baseline data on social media use, well-being, and procrastination for the week before the digital detox intervention. In addition to the first questionnaire participants all received the instruction email for the detox. The next day, the digital detox intervention started. During this intervention week, participants were instructed to delete all specified social media apps from their mobile devices. The social media apps selected for the detox were Instagram, Threads, Snapchat, TikTok, Twitter/X, Facebook, YouTube, BeReal, LinkedIn, Reddit, Pinterest, Tumblr and all dating apps. This selection was based on specific criteria, including the potential for limitless content consumption, and the presence of social interaction features. WhatsApp was deliberately excluded due to its essential role in work and school communications, as including it could potentially hinder participation. Furthermore, participants were asked to refrain from browser-based access to these platforms during the detox period. The second questionnaire was sent on the Sunday evening of the intervention week and measures social media use (to verify participation in the detox), well-being, and procrastination during the detox. After the intervention week, participants were allowed, but not requested, to reinstall their social media apps. The third and final questionnaire was administered on Sunday a week after the detox ended, measuring any short-term (one-week) effects. The total study thus reviewed three weeks of data, with all questionnaires spanning over two weeks, resulting in a total participation period of two weeks.

Anonymity

Anonymity was ensured by assigning the participants randomized login IDs generated by a random generator in Qualtrics in the first questionnaire. These login IDs were exclusively accessible to the participants, ensuring that researchers could not link IDs to individual participants. Participants were instructed to write down or screenshot their assigned login ID, and provide them at the beginning of each questionnaire. This facilitated the linking of responses using the login ID while preserving complete anonymity.

Ethical approval

Utrecht University conducts research according to the Code of Ethics for Psychologists (NIP, 2024). This research project was registered with the Utrecht University Student Ethics Review & Registration Site (UU-SER). Approval was granted by the Faculty Ethics Review Board and filed under number 24-0625 (see Appendix E).

Measures***Demographics***

Participants were asked about their age and gender, with options including Male, Female, Non-binary, and Prefer not to say. Additionally, participants were asked if they had ever done a digital detox before, defined as deleting all social media apps for at least one week.

Social media use

Social media use will be objectively measured through passive logging of screen time, using the monitoring tools Screen Time for iOS devices and Digital Wellbeing for Android devices.

Well-being

The dependent variable well-being was measured using a 14-item Warwick–Edinburgh Mental Well-Being Scale (Tennant, et al., 2007). The WEMWBS is developed to measure subjective mental well-being across various psychological domains. Participants rate statements such as “I’ve been feeling optimistic about the future” and “I’ve been feeling close to other people” on a five-point Likert scale. Response options ranged from 1 (None of the time) to 5 (All of the time), where a higher score indicates greater perceived mental well-being. All 14 items of the WEMWBS, along with instructions, can be found in Appendix F. Tennant et al. (2007) established the scale's reliability and validity in general populations. They reported a high internal consistency (Cronbach's $\alpha = .89$), indicating strong reliability in measuring mental well-being. Test-retest reliability was confirmed with a coefficient $r = .83$ ($p < .001$) over a one-week interval.

Procrastination

Procrastination was measured with the Irrational Procrastination Scale, which includes 9 items from the 12-item Pure Procrastination Scale (Steel, 2010). The PPS is developed to measure the prevalence of procrastination. Participants rate statements such as “I delay tasks beyond what is reasonable” and “I spend my time wisely” on a five-point Likert scale. Response options ranged from 1 (None of the time) to 5 (All of the time), where a higher score indicates more procrastination. Items 2, 5, and 8 were scored oppositely (See Appendix G for all 9 items). Good internal consistency and test-retest reliability were found in general populations. Rozental et al. (2014) reported a high internal consistency (Cronbach's $\alpha = .92$),

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

indicating strong reliability in measuring procrastination. Test-retest reliability was confirmed by Rebetez et al. (2014), reporting correlations of $r = .87$ ($p < .001$) over a one-week interval, indicating strong test-retest reliability.

Experience

In the second questionnaire, participants were presented with an open question: “*What was your experience during the digital detox?*”. The responses were given in text format, allowing participants to express their experiences in their own words. Additionally, participants had the option to leave the question unanswered.

Data Processing

The raw data of all three questionnaires were first combined by linking the login ID codes. This was executed in IBM SPSS Statistics v27 (IBM Corp, 2020). All statistical analyses were conducted using JASP Version 0.18.3 (JASP Team, 2023).

Data removal

The only participants removed in the process of reviewing the data were individuals that were not part of the population of interest, or that did not complete the study. Upon examining the responses, unique login IDs revealed a total of 190 different participants. Of these, 98 participants were excluded, due to incomplete data in one or more of the questionnaires ($n = 85$, 44.47%), exceeding the 10-minute limit during the detox ($n = 11$, 5.79%), or not using the selected apps in week 1 (baseline of 0 minutes in social media screen time) ($n = 2$, 1.05%). Therefore, no missing data imputation methods were used.

Assumptions

First, the assumptions were checked to review if analyses could be conducted. The Shapiro-Wilk test indicated deviations from normality (Shapiro & Wilk, 1965). Upon examining the Q-Q plots, the well-being and procrastination data appeared approximately normal despite minor deviations (see Appendix H). Considering the sufficiently large sample size and the robustness of the t-test to such deviations, the t-tests were conducted (Field, 2018). Deviations from normality were observed in social media use across all weeks. To adjust these distributions, a log transformation was applied in week 1, and a log-plus-one transformation was used in week 3 to account for participants with zero social media minutes. Next, independence was assumed as all questionnaires were completed individually, without potential influence from other participants. The regression analyses conducted for mediation and moderation were assessed for linearity, homoscedasticity, and multicollinearity assumptions, all were met without violation.

Data analysis

Hypotheses 1 and 2

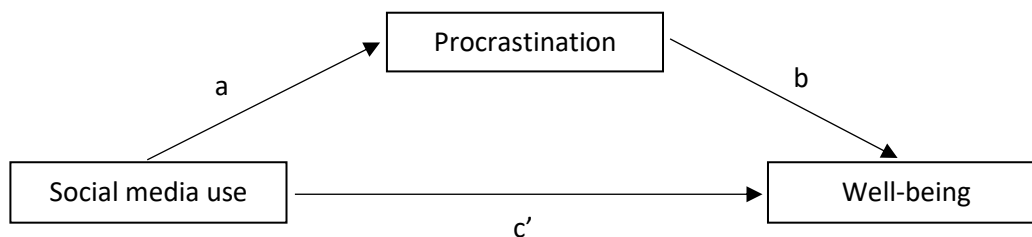
For the first hypothesis, *Digital Detox improves well-being* a paired t-test was used to compare well-being scores between week 1 (before detox) and week 2 (during detox). For the second hypothesis: *The effect of a digital detox on well-being is sustained for one week.* a paired t-test was used to compare mental well-being between week 1 (before detox) and week 3 (after detox). Paired t-tests were selected for within-participant comparisons across time. One-sided t-tests align with the directional hypotheses, enhancing the precision of the statistical analyses. This method was preferred over alternatives such as repeated measures ANOVA, as ANOVA does not assume specific directional effects between time points.

Hypothesis 3

To test hypothesis 3, *The effect of a digital detox on well-being is mediated by procrastination*, the relationship between social media use (independent variable), well-being (dependent variable), and procrastination (mediator) is assessed. Due to the nature of the intervention, social media use was zero during week 2. This lack of variability violates key assumptions necessary for conducting a valid mediation analysis for week 2. For this reason, hypothesis 3 was evaluated by analyzing data from week 1 (baseline before the detox), and week 3 (after the detox) in separate mediations. This approach allowed for the assessment of changes in the mediation effects due to the intervention.

Both mediation analyses involved three separate multiple linear regressions to analyze each path individually, aligning with the approach of Baron & Kenny (1986). This method was chosen for its ability to provide standardized coefficients, facilitating more effective interpretation and comparison of results on a consistent scale. While JASP offers the less time-consuming option of running a SEM mediation model, it has the downside of only providing unstandardized values. Additionally, T-tests were preferred over Z-tests, as they deal better with slight violations of normality.

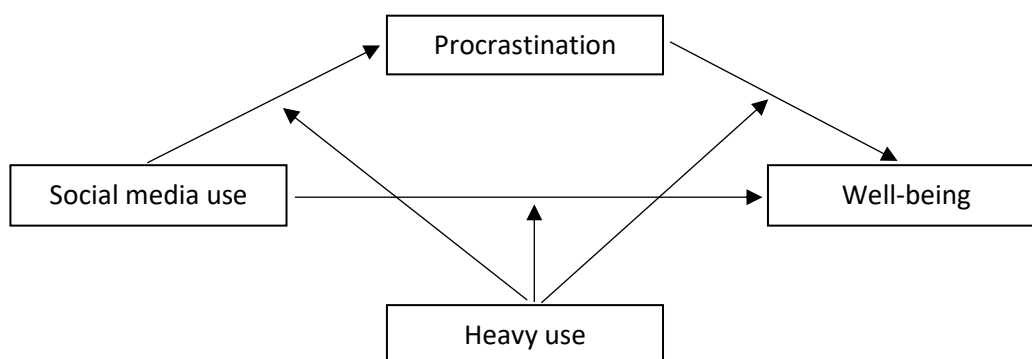
The first linear regression analyzed the total effect (c), with well-being as the dependent variable and social media use as the independent variable. The second linear regression assessed path A, including procrastination as the dependent variable and social media use as the independent variable. The third linear regression included well-being as the dependent variable, and procrastination and social media use as independent variables to analyze path B and the direct effect (c') simultaneously. To calculate the indirect effects, path A was multiplied by path B, and a Sobel test was conducted to assess its significance (Sobel, 1982). The pathways are visualized in Figure 1.

Figure 1*Mediation Model*

Note. This model illustrates the direct effect (c') of social media use on well-being, mediated by procrastination (paths a and b). The total effect of social media use on well-being (c) is not visualized.

Hypothesis 4

Finally, to analyze hypothesis 4, *These effects are stronger for heavy users* a heavy-use variable was created, to serve as a moderator in both mediation analyses. This was done by splitting the data of social media use in week 1 based on the median, separating heavy users (above median) from non-heavy users (below median). The analysis examined whether heavy use of social media moderated the relationships between social media use, procrastination, and well-being. Given that moderation was hypothesized in all relationships, Model 59 (see Figure 2) was chosen to ensure no significant interactions are overlooked (Hayes, 2013). The analysis was performed using the PROCESS tool within JASP.

Figure 2*Moderated-mediation Model 59*

Note. Visualization of moderation Model 59, with heavy use as moderator for each path of the mediation model.

Bonferroni correction

To control the family-wise error rate and the risk of Type 1 errors due to multiple testing, a Bonferroni correction was applied (Field, 2018). Given the six statistical tests performed, the significance threshold of $\alpha = .05$ was divided by six, and so adjusted to $\alpha = .00833$. Results were considered statistically significant at this adjusted threshold.

Results**Descriptives**

Descriptive statistics, including means and standard deviations, are presented in Table 2 for variables measured in the study. Additionally, Figures 3, 4, and 5 provide visual representations of the distribution of these variables across the different time points.

Table 2

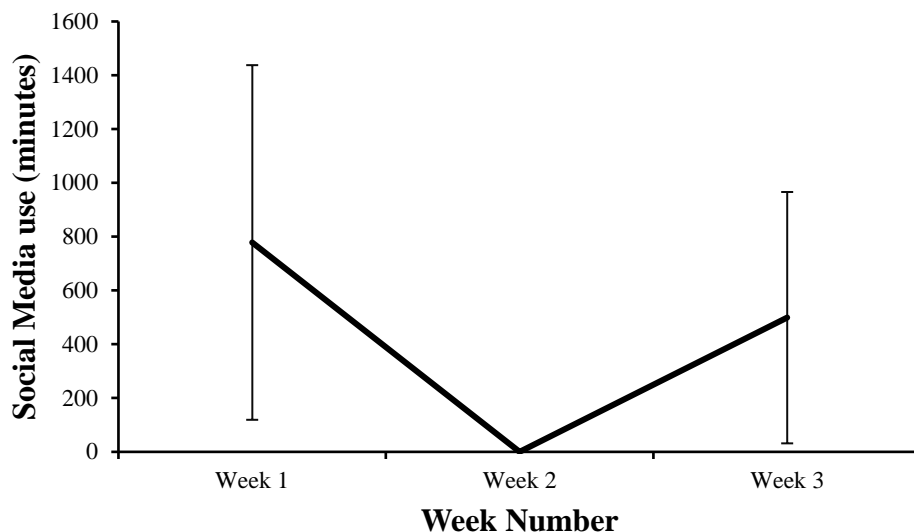
Descriptive Statistics for Social Media Use, Well-being, and Procrastination Before, During, and After de Digital Detox Intervention

	SMU 1	SMU 2	SMU 3	WB 1	WB 2	WB 3	PC 1	PC 2	PC 3
Mean	778.42	0.17	498.82	3.28	3.56	3.48	3.16	2.78	2.85
Std. Deviation	659.16	1.11	467.19	0.53	0.56	0.62	0.61	0.56	0.58
Minimum	27.00	0.00	0.00	1.86	1.44	2.07	1.67	1.56	1.44
Maximum	3008.00	10.00	2635.00	4.29	4.78	5.00	4.67	4.33	4.44

Note. SMU = Social media use, WB = Well-being, PC = Procrastination. The numbers 1, 2, and 3 refer to week 1 (before detox), week 2 (during detox), and week 3 (after detox). Social media use is measured in minutes per week. Means for well-being and procrastination are based on a 1 to 5 Likert scale from their respective questionnaires.

Figure 3

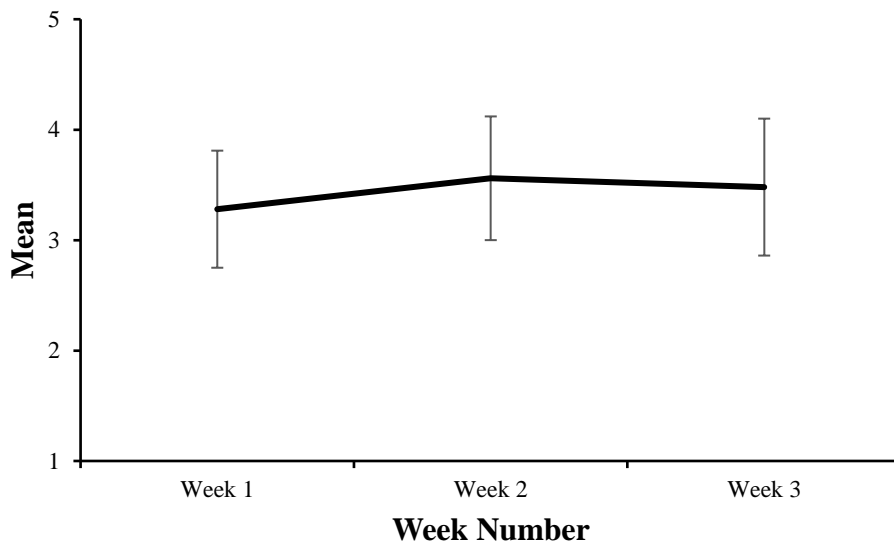
Means of Social Media Use, Before, During, and After de Digital Detox Intervention



Note. The figure displays means for social media use across week 1 (before detox), week 2 (during detox), and week 3 (after detox). Error bars represent one standard deviation above and below the mean. Social media use is measured in minutes per week.

Figure 4

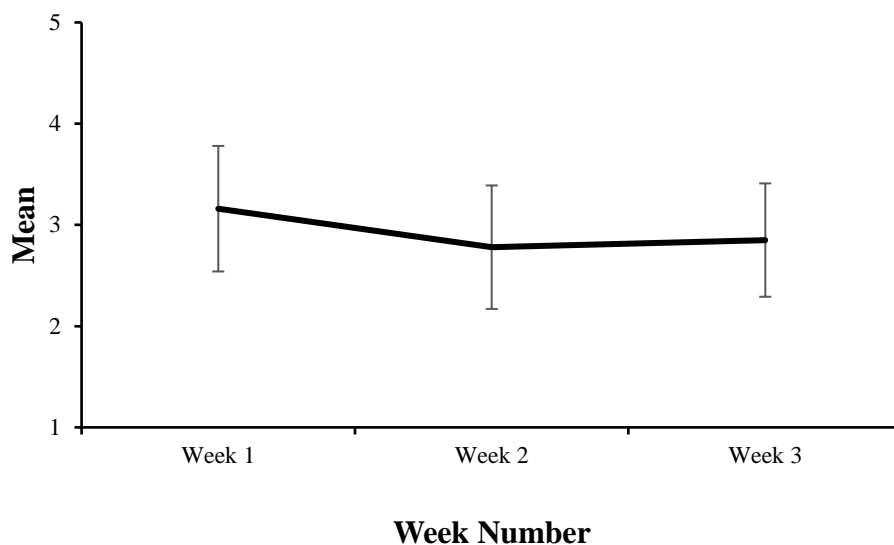
Means for Well-being Before, During, and After de Digital Detox Intervention



Note. The figure displays means for well-being across week 1 (before detox), week 2 (during detox), and week 3 (after detox). Error bars represent one standard deviation above and below the mean. Means for well-being are based on a 1 to 5 Likert scale from the WEMWBS.

Figure 5

Means for Procrastination Before, During, and After de Digital Detox Intervention



Note. The figure displays means for procrastination across week 1 (before detox), week 2 (during detox), and week 3 (after detox). Error bars represent one standard deviation above and below the mean. Means for procrastination are based on a 1 to 5 Likert scale from the Irrational Procrastination Scale

Hypotheses 1 and 2

The paired samples t-test testing hypothesis 1 revealed a significant increase in well-being during the digital detox (week 2) compared to before the detox (week 1), $t(80) = 4.89$, $p < .001$, $d = 0.51$, and a medium effect size (Cohen, 1988). Similarly, for hypothesis 2, a paired samples t-test revealed that well-being was still significantly higher a week after the detox (week 3) compared to before the detox (week 1), $t(91) = 3.40$, $p < .001$, $d = 0.36$, but here with a small effect size (Cohen, 1988). Both paired sample t-tests are significant, leading to the conclusion that well-being is higher during the detox, and this effect is sustained for at least one week.

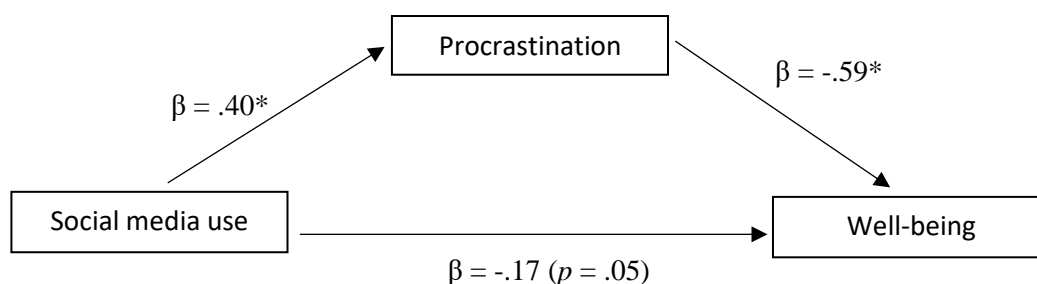
Hypothesis 3

Week 1

The results show a significant negative total effect between social media use and well-being ($B = -0.24$, $\beta = -.41$, $t = -4.21$, $p < .001$). In addition, path A shows a significant positive effect ($B = 0.27$, $\beta = .40$, $t = 4.20$, $p < .001$) and path B a significant negative effect ($B = -0.51$, $\beta = -.59$, $t = -6.92$, $p < .001$). The indirect effect resulting from multiplying paths A and

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

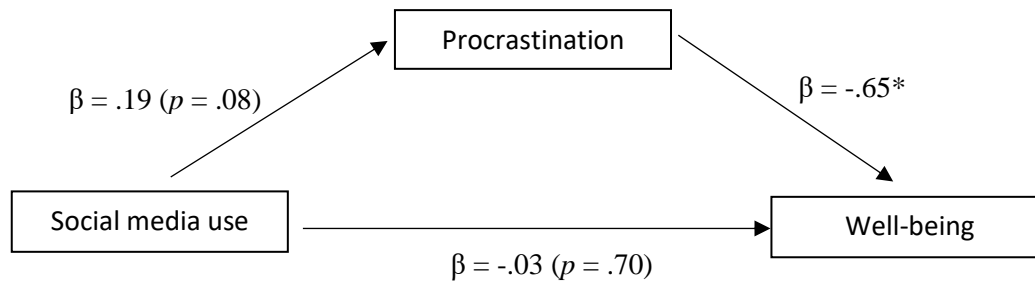
B is significant and negative ($B = -0.14$, $z = -3.89$, $p < .001$). When procrastination entered the relationship mediating social media use and well-being, the direct effect became non-significant ($B = -0.098$, $\beta = -.17$, $t = -1.95$, $p = .05$). The results are illustrated in Figure 6. Therefore, it was concluded that a complete mediation of procrastination occurred between social media use and well-being in week 1. Meaning that this model thus suggests that reducing social media use could improve well-being via procrastination reduction.

Figure 6*Mediation Model for Week 1*

Note. Mediation model illustrating the relationship between Social media use and Well-being as mediated by Procrastination in week 1 (before detox). Standardized regression coefficients are shown for paths a, b, and c'. $*p < .001$

Week 3

Results for week 3 show a non-significant total effect between social media use and well-being ($B = -0.05$, $\beta = -.15$, $t = -1.47$, $p = .15$), a non-significant path A ($B = 0.06$, $\beta = .19$, $t = 1.79$, $p = .08$), a non-significant indirect effect ($B = -0.04$, $z = -1.76$, $p = .08$) and a non-significant direct effect ($B = -0.01$, $\beta = -.03$, $t = 0.39$, $p = .70$). On the other hand, path B (i.e. procrastination on well-being) still shows a significant negative effect ($B = -0.70$, $\beta = -.65$, $t = -8.08$, $p < .001$). Therefore, it was concluded that by week 3 there was no significant sustained relationship between social media use and well-being, nor between social media use and procrastination. Yet, the negative relationship between procrastination and well-being remained significant (see Figure 7).

Figure 7*Mediation Model for Week 3*

Note. Mediation model illustrating the relationship between Social media use and Well-being as mediated by Procrastination in week 3 (after detox). Standardized regression coefficients are shown for paths a, b, and c'. * $p < .001$

Hypothesis 4

Heavy use of social media was found not to moderate the relationships between social media use, procrastination, and well-being in all mediations. All analyses showed that the confidence intervals of the moderating effects included zero, signifying a non-significant moderating effect of heavy use. The results for week 1 are presented in Table 3, and the results for week 3 are presented in Table 4. Consequently, the moderated mediation model is not supported, leading to the rejection of hypothesis 4.

Table 3*Path coefficients of Moderation of Heavy Use On all Relations in Week 1*

Moderation	Estimate	Std. Error	z	p	95% Confidence Interval	
					Lower	Upper
Path a	0.15	0.33	0.45	0.65	-0.493	0.786
Path b	0.02	0.11	0.19	0.86	-0.202	0.244
Path c'	-0.19	0.26	-0.74	0.46	-0.703	0.316

Note. Path A represents the relationship between Social media Use and Procrastination, Path b the relation between procrastination and well-being, and Path C' (direct effect) between Social media use and Well-being.

Table 4*Path coefficients of Moderation of Heavy Use On all Relations in Week 3*

Moderation	Estimate	Std. Error	<i>z</i>	<i>p</i>	95% Confidence Interval	
					Lower	Upper
Path a	0.38	0.29	1.34	0.18	-0.179	0.948
Path b	0.02	0.12	0.168	0.87	-0.206	0.245
Path c'	-0.16	0.23	-0.72	0.48	-0.603	0.280

Note. Path A represents the relationship between Social media Use and Procrastination, Path b the relation between procrastination and well-being, and Path C' (direct effect) between Social media use and Well-being.

Discussion

In today's world, where social media's allure is stronger than ever, helping individuals achieve a balanced relationship with their social media use has become increasingly relevant. Contributing to this mission, the current study conducted a digital detox experiment to investigate if a digital detox is an effective intervention to improve well-being. To answer this research question, hypotheses were formulated and tested to examine if well-being improved during and after the detox, whether this improvement could be explained by the mediation of procrastination, and whether these effects are stronger for heavy social media users.

Conforming to the expectations, the results showed that participants had significantly higher well-being during the detox and that this improvement persisted for at least one week afterward, supporting Hypotheses 1 and 2. In line with this, the mediation for week 1 showed a significant negative relationship between social media and well-being before the intervention. These findings are consistent with previous literature that has linked the use of social media to impairments in well-being and proposed a digital detox as an intervention to enhance well-being (e.g., Radtke et al., 2022). Yet, the results of the second mediation indicated that by week 3 the relationship between social media use and well-being could no longer be established. In theory, the only difference between week 1 and week 3 was the digital detox, meaning that the difference in the findings between these weeks could be attributed to the intervention. When interpreting, one can conclude that something happened in this period that led to the participants reporting greater well-being, but that this impact

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

cannot be attributed to a direct relationship between social media use and well-being. Therefore, other factors may have contributed to this improvement.

One alternative explanation could be that participants experienced more meaningful, real-life social interaction during the detox that contributed to well-being. As humans, we have a strong need to maintain close social relationships, which involves the desire for frequent, positive interactions with friends or family (Baumeister & Leary, 1995). Without access to social media, we lost some of the ways to maintain these important relationships, but since the need for social contact is so fundamental, it could be that participants sought out more real-life interactions to still fulfill this need. Evidence reported by Brown & Kuss (2020) confirms the possibility of this explanation, as it illustrates how a social media break increased social connectedness. Simply replacing online interactions with real-life ones does not yet fully explain the increase in well-being; however, the difference in the meaningfulness of these social interactions could. As stated before, meaning is essential to eudaimonic well-being (Ryan & Deci, 2001). Individuals view real-life interactions as more meaningful than online activities (Hall & Liu, 2022; Kushlev & Leita0, 2020), and could have thus had greater eudaimonic experiences during the detox, leading to an improvement in overall well-being.

Next, Hypothesis 3 tested the possibility that procrastination mediates this relationship. The results of the mediation of week 1 demonstrated complete mediation, meaning that before the detox, the relationship between social media use and well-being could be fully explained through procrastination, supporting Hypothesis 3. This finding aligned with previous research indicating a positive relationship between social media use and procrastination (e.g., Im & Jang, 2017; Rozgonjuk et al., 2018; Yang et al., 2019), and a negative one between procrastination and well-being (e.g., Sirois & Pychyl, 2013). On the other hand, results from week 3 do not support Hypothesis 3. These findings indicated that only the relationship between procrastination and well-being remained significant after the detox. This means that the relationship between social media use and procrastination could not be established after the detox, nor could the mediation. Regarding the impact of the detox, one can conclude that the detox was effective in breaking the relationship between procrastination and social media use, but not effective in breaking the one between procrastination and well-being.

An explanation for these findings could be that social media abstinence did effectively reduce momentary procrastination, but this brief period was not sufficient enough to break the prolonged or chronic procrastination habits. Momentary procrastination refers to the act of delaying or postponing a task for a very brief moment, before starting or continuing the task

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

(Gort et al., 2021). Momentary procrastination can occur when an individual feels temporarily distracted, often triggered by cues such as social media notifications (Wood & R nger, 2016). As the detox eliminates these social media notifications by default, it limits distractions and therefore reduces momentary procrastination through social media use (Aalbers et al., 2022). This could explain why the relationship between social media and procrastination diminished. Nevertheless, procrastination had still a significant influence on well-being, making it plausible that people still found other ways to procrastinate, indicating that the intervention was not effective in resolving ongoing, more general procrastination.

Finally, results for Hypothesis 4 showed no significant moderation effect of heavy use on any of the relationships, suggesting a homogeneous impact of the detox intervention on well-being and procrastination for heavy and non-heavy users. These findings do not align with initial expectations, and therefore led to a rejection of Hypothesis 4. While the in-person differences in the amount of social media use do not seem to play a significant role, it is too soon to conclude that digital detox interventions have the same benefits for all users. Although the amount of use seems very telling, it does not necessarily reflect how individuals engage with their social media apps. For instance, using social media for social support or information seeking might have different effects compared to passive scrolling (Meier & Reinecke, 2020). Investigating how usage patterns differ between individuals might give better insight into for whom a digital detox would be most effective.

This current research has some limitations that should be noted by other researchers. First, it is important to address that self-reported data is found to be susceptible to several biases (Podsakoff et al., 2003). Even though participants were made aware that the data was completely anonymous, there still might be a degree of under- or over-reporting due to the social desirability bias. In addition to socially desirable answers, self-reported data is also susceptible to reliability issues due to inaccurate self-assessment. Finally, it is important to note that the questionnaires were sent weekly and asked participants to recall their experiences over the entire week. The inability to accurately recall experiences over an entire week may have caused measurement errors (Paulhus & Vazire, 2007). A second limitation of the study is the short-term nature of the digital detox intervention. Due to the limited duration of this study, conclusions might only reflect the short-term effect of a digital detox intervention, while long-term effects could be significantly different (Twenge & Campbell, 2018).

The current research established the effectiveness of a digital detox intervention on well-being, highlighting significant short-term improvements and the role of reduced

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

procrastination. However, several key questions remain unanswered regarding the possible mediation and moderation effects. Nonetheless, results do outline a particularly stable relationship between procrastination and well-being. For this reason, a recommendation for future research would be to further investigate this recurring pattern in a longitudinal design, to determine if the observed short-term effects could be sustainable over longer periods. To minimize recall bias and draw more reliable conclusions, more assessment points are needed (Voelkle et al, 2012). In the current study, a digital detox was referred to as merely an absence from social media. However, given that one cannot simply stop engaging in one activity, without inherently engaging in another, a digital detox should be considered as more than just a *disconnection* from social media but also as an opportunity for *reconnection* with more meaningful offline activities. By broadening the definition, and including more possibilities for compensatory behaviors during a digital detox, one could come to a more comprehensive understanding of its impacts on well-being and procrastination.

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Appendix A. Information Letter



Digital Detox – Unplug from Social media

Join us in exploring the transformative power of disconnecting from social media. Take part in our study to uncover the potential benefits of a digital detox and gain valuable insights into your well-being, body image, and productivity!

Introduction

In an era dominated by technology and social media, our research aims to explore the effects of taking a break from specific social media platforms. The primary goal of this study is to investigate whether a digital detox can serve as an effective intervention for **well-being, body image, and procrastination**. Your participation will provide valuable insights into the potential benefits and challenges associated with disconnecting from specific social media platforms. The research has been pre-approved by the UU Student Ethics Review (UU-SER) Board of the Faculty of Social Sciences at Utrecht University.

How is the research conducted?

Participants undergo a **one-week digital detox** and **complete three brief (<10 minute) weekly questionnaires**. During the detox period, participants are requested to delete social media applications from their devices. The total study duration is two weeks. Participation takes place completely online. Only the researchers will have access to this data, and it will always remain anonymous.

What is expected from you?

During the detox period, participants must delete social media applications (except for **WhatsApp**) for one week. Including **Instagram, Threads, Snapchat, TikTok, Twitter/X, Facebook, YouTube, BeReal, LinkedIn, Reddit, Pinterest, Tumblr and all dating apps**. Browser-based access to these platforms is also discouraged. Participants will be required to complete 3 short questionnaires sent via email. The first questionnaire will be conducted the day before the detox, the second the day after the detox and the third and final questionnaire will be conducted one week post detox.

When is the detox?

The detox will take place from **Monday the 8th of April at 00.00 am, till Sunday the 14th of April at 11.59 pm**. Before starting the detox week, we kindly request you to continue using your social media apps as you typically would. In the first questionnaire, we will ask about your regular screen time. This will establish a baseline for comparison, covering the week from Monday, April 1st, to Sunday, April 7th.

When are the questionnaires?

The questionnaires will be sent to you through email, every Sunday, on the following dates:

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

- **Sunday, April 7th**
- **Sunday, April 14th**
- **Sunday, April 21st**

We kindly request that you complete the questionnaire on the respective Sunday. Each questionnaire will take no longer than 10 minutes.

If you were anticipating an email but haven't received it yet, please take a moment to check your **spam folder**.

Advantages and Disadvantages

Participating in this study could have potential advantages and disadvantages. Advantages include contributing to our understanding of the effectiveness of a digital detox and gaining valuable personal insights into your experience with social media. However, disconnecting from social media may also cause slight inconvenience.

Voluntary participation

Participation is voluntary. You can change your mind and withdraw at any time, even during the study. You are not obligated to provide a reason for choosing not to participate. Additionally, after participating, you have the option to withdraw your consent. If you choose to do so, your research data will not be included in the analyses.

What happens to the collected data?

Data will be collected during your participation in the study. Once we remove your contact information after data collection, your responses can never be traced back to you or your organization. The survey data are anonymized. The data will be deleted after 1 year. Your data will be stored and kept on a server secured by Utrecht University.

Questions about this research?

If you have any questions regarding this study or would like to obtain more information, please contact us (Guusje Gerritse, Marthe Buskens, Luuk Nobbe) at **DigitalDetoxUU@gmail.com**.

Appendix B. Emails

Digital Detox: Questionnaire 1

Dear Participant,

Today you will complete your first questionnaire! Please follow the link below to the questionnaire. It is important that you complete this questionnaire **at the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study.

If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Your Digital Detox will start tomorrow! We kindly ask you to delete **Instagram, Threads, Snapchat, TikTok, Twitter/X, Facebook, YouTube, BeReal, LinkedIn, Reddit, Pinterest, Tumblr and all dating apps**, from **Monday the 8th of April 00.00 am**, till **Sunday the 14th of April 23.59 pm**. Browser-based access to these platforms is also discouraged.

The 3 questionnaires will be send to you through email, every Sunday, on the following dates:

- **Sunday April 7th**
- **Sunday April 14th**
- **Sunday April 21st**

Kind regards,

Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Questionnaire 1 - Reminder

Dear Participant,

Did you already complete your first questionnaire? If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,

Guusje Gerritse, Marthe Buskens & Luuk Nobbe

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Digital Detox: Questionnaire 1 - Last Chance!

Dear Participant,

This is your last chance to fill in the first questionnaire and stay in the study! If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **at the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study.
If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Gusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Start Detox!

Dear Participant,

Wishing you a successful detox journey!

We kindly ask you to complete the entire detox, and not use the apps. Your data is unusable for our research purposes if you don't complete the detox as instructed.

Kind regards,
Gusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: End Detox! + Questionnaire 2

Dear Participant,

Thank you so much for completing your digital detox! You are now free to use your social media apps as you please. Today you will complete your second questionnaire. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **at the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study.
If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Note: This is not the end of the study! To complete this research we remind you of the third and final questionnaire next week.

Kind regards,
Gusje Gerritse, Marthe Buskens & Luuk Nobbe

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Digital Detox: Questionnaire 2 - Reminder

Dear Participant,

Did you already complete your second questionnaire? If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Questionnaire 2 - Last Chance!

Dear Participant,

This is your last chance to fill in the second questionnaire and stay in the study! If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **at the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Questionnaire 3

Dear Participant,

Today you will complete your third and final questionnaire. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **before the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Questionnaire 3 - Reminder

Dear Participant,

Did you already complete your third and final questionnaire? If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Questionnaire 3- Last Chance!

Dear Participant,

This is your last chance to fill in the third and final questionnaire and stay in the study! If you have already completed the questionnaire, please consider this email unsent. Please follow the link below to the questionnaire. It is important that you complete this questionnaire **at the end of the day**.

Click this link to start:

Failure to complete the questionnaire today could result in exclusion from the study. If you are having trouble accessing the questionnaire please contact us at digitaldetoxuu@gmail.com

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

Digital Detox: Thank you for your participation!

Dear Participant,

Thank you so much for your participation! If you are interested in receiving our results, please fill in your email address in this Google form.

Click this link to go to the form:

Kind regards,
Guusje Gerritse, Marthe Buskens & Luuk Nobbe

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Appendix C. Informed consent form

Dear participant,

You are invited to take part in a research study investigating the effects of a digital detox on social media use, mental well-being, body image, and procrastination. Before you decide whether to participate, it is important for you to understand the study and what it will involve.

Aim of the study: The aim of this study is to explore whether a digital detox intervention, which involves deleting social media apps (excluding WhatsApp), can have an impact on social media use, mental well-being, body image, and procrastination.

Nature of participation: If you agree to participate, you will be asked to complete 3 questionnaires assessing your mental well-being, body image, and procrastination before, right after and a week after the digital detox. The detox will involve deleting social media apps from your phone (excluding WhatsApp) for one week. A Digital Detox means complete abstinence from social media, including not using apps through a web browser.

Duration and load: The questionnaires in this study will require approximately 3 x 10 minutes of your time. The digital detox itself will last one week.

Data: All data collected during this study will be kept confidential and stored securely. Your responses will be anonymized, and no personally identifiable information will be shared in any publications or reports resulting from this research.

Right to removal of data: You have the right to request the removal of your data from the study at any time.

Voluntary participation: Your participation in this study is voluntary, and you may withdraw at any time without consequences.

Contact person for questions: If you have any questions or concerns about the study, you may contact the researchers Guusje Gerritse, Luuk Nobbe and Marthe Buskens at DigitalDetoxUU@gmail.com.

Thank you for participation in this study!

Sincerely,

Guusje, Luuk and Marthe

As a participant you confirm that:

I am 18 years of age or older.

I reserve the right to revoke this consent without giving a reason.

I reserve the right to discontinue the research at any time I choose.

I have read and understood the information provided in this consent form and agree to participate voluntarily in the study

I consent

Appendix D. Full Qualtrics questionnaires

Start of Block: LoginIDCheck

Q58 IMPORTANT!

You will be provided with a randomized login ID that will be exclusively accessible to you. As researchers, we cannot trace which specific login ID was assigned to each participant. You will be asked to provide this login ID in each questionnaire. This is crucial for linking your responses while ensuring your anonymity. **Please write this number down, take a picture or screenshot.**

Q56 Your LoginID is:

Q57 Have you written down or taken a picture from your loginID?

Yes (1)

End of Block: LoginIDCheck

Start of Block: Block 1: age

Age How old are you?

End of Block: Block 1: age

Start of Block: Block 2: Gender/PriorDetox

Gender What is your gender?

Male (1)

Female (2)

Non-binary (3)

Prefer not to say (4)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

PriorDetox Have you ever done a digital detox before? (Deleting all social media apps for at least one week)

Yes (1)

No (2)

End of Block: Block 2: Gender/PriorDetox

Start of Block: Block 3:TotalScreentime/SocialMediaScreentime

TotalScreentime What is your **total** screen time from this past week (Monday 1 - Sunday 7 April)? Give your answer in **minutes**.

iPhone: Settings > Screentime > See all activity > Check total screen time of this week

Example: if your total screen time of last week was 14 hours and 12 minutes, your answer is 852.

Android: Settings > Digital wellbeing and parental controls > Click on dashboard > Add up the screentime of **every day** of this past week to get your total screen time

SocialMediaTime What is your screen time from the past week for the following social media apps: Instagram, Facebook, Snapchat, TikTok, Twitter/X, Youtube, BeReal, LinkedIn, Reddit, Pinterest, Tumblr, Threads and all dating apps? Please add up the time spend on all selected apps, and provide your answer in **minutes**.

iPhone: Click on "show more" to see all applications.

Android: Note that this is the time per day, so add up the minutes of 7 days.

End of Block: Block 3:TotalScreentime/SocialMediaScreentime

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Start of Block: Block 4:BodyImage

BodyImageInfo Below are some statements about body-image.

Please check select the answer that best describes how you **feel right now, at this very moment.**

BodyImageQ1 Right now I feel...

- Extremely dissatisfied with my physical appearance (1)
- Mostly dissatisfied with my physical appearance (2)
- Moderately dissatisfied with my physical appearance (3)
- Slightly dissatisfied with my physical appearance (4)
- Neither dissatisfied nor satisfied with my physical appearance (5)
- Slightly satisfied with my physical appearance (6)
- Moderately satisfied with my physical appearance (7)
- Mostly satisfied with my physical appearance (8)
- Extremely satisfied with my physical appearance (9)
-

BodyImageQ2 Right now I feel...

- Extremely satisfied with my body size and shape (1)
- Mostly satisfied with my body size and shape (2)
- Moderately satisfied with my body size and shape (3)
- Slightly satisfied with my body size and shape (4)
- Neither dissatisfied nor satisfied with my body size and shape (5)
- Slightly dissatisfied with my body size and shape (6)
- Moderately dissatisfied with my body size and shape (7)
- Mostly dissatisfied with my body size and shape (8)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

- Extremely dissatisfied with my body size and shape (9)

BodyImageQ3 Right now i feel...

- Extremely dissatisfied with my weight (1)
- Mostly dissatisfied with my weight (2)
- Moderately dissatisfied with my weight (3)
- Slightly dissatisfied with my weight (4)
- Neither dissatisfied nor satisfied with my weight (5)
- Slightly satisfied with my weight (6)
- Mostly satisfied with my weight (7)
- Extremely satisfied with my weight (8)

BodyImageQ4 Right now I feel..

- Extremely physically attractive (1)
- Very physically attractive (2)
- Moderately physically attractive (3)
- Slightly physically attractive (4)
- Neither attractive nor unattractive (5)
- Slightly physically unattractive (6)
- Moderately physically unattractive (7)
- Very physically unattractive (8)
- Extremely physically unattractive (9)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

BodyImageQ5 Right now I feel...

- A great deal worse about my looks than I usually feel (1)
- Much worse about my looks than I usually feel (2)
- Somewhat worse about my looks than I usually feel (3)
- Just slightly worse about my looks than I usually feel (4)
- About the same about my looks as usual (5)
- Just slightly better about my looks than I usually feel (6)
- Somewhat better about my looks than I usually feel (7)
- Much better about my looks than I usually feel (8)
- A great deal better about my looks than I usually feel (9)

BodyImageQ6 Right now I feel that I look...

- A great deal better than the average person looks (1)
- Much better than the average person looks (2)
- Somewhat better than the average person looks (3)
- Just slightly better than the average person looks (4)
- About the same as the average person looks (5)
- Just slightly worse than the average person looks (6)
- Somewhat worse than the average person looks (7)
- Much worse than the average person looks (8)
- A great deal worse than the average person looks (9)

End of Block: Block 4:BodyImage

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Start of Block: Block 5:Procrastination

Q60 Below are some statements about productivity.

Please check select the answer that best describes how you **feel right now, at this very moment.**

ProcrastinationQ1 I delay tasks beyond what is reasonable

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)
- Very Often True, or True of Me (5)

ProcrastinationQ2 I do everything when I believe it needs to be done

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)
- Very Often True, or True of Me (5)

ProcrastinationQ3 I often regret not getting to tasks sooner

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Very Often True, or True of Me (5)

ProcrastinationQ4 There are aspects of my life that I put off, though I know I shouldn't

Very Seldom or Not True of Me (1)

Seldom True of Me (2)

Sometimes True of Me (3)

Often True of Me (4)

Very Often True, or True of Me (5)

ProcrastinationQ5 If there is something I should do, I get to it before attending to lesser tasks.

Very Seldom or Not True of Me (1)

Seldom True of Me (2)

Sometimes True of Me (3)

Often True of Me (4)

Very Often True, or True of Me (5)

ProcrastinationQ6 I put things off so long that my well-being or efficiency unnecessarily suffers.

Very Seldom or Not True of Me (1)

Seldom True of Me (2)

Sometimes True of Me (3)

Often True of Me (4)

Very Often True, or True of Me (5)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

ProcrastinationQ7 At the end of the day, I know I could have spent the time better

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)
- Very Often True, or True of Me (5)

ProcrastinationQ8 I spend my time wisely

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)
- Very Often True, or True of Me (5)

ProcrastinationQ9 When I should be doing one thing, I will do another

- Very Seldom or Not True of Me (1)
- Seldom True of Me (2)
- Sometimes True of Me (3)
- Often True of Me (4)
- Very Often True, or True of Me (5)

End of Block: Block 5:Procrastination

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Start of Block: Block 6:Well-Being

Well-BeingInfo Below are some statements about feelings and thoughts.

Please select the answer that best describes your experience of each statement **over the last week**.

Well-beingQ1 I've been feeling optimistic about the future

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ2 I've been feeling useful

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ3 I've been feeling relaxed

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Well-BeingQ4 I've been feeling interested in other people

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ5 I've had energy to spare

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ6 I've been dealing with problems well

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ7 I've been thinking clearly

- None of the time (1)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ8 I've been feeling good about myself

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ9 I've been feeling close to other people

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ10 I've been feeling confident

- None of the time (1)
- Rarely (2)
- Some of the time (3)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

- Often (4)
- All of the time (5)

Well-BeingQ11 I've been able to make up my own mind about things

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ12 I've been feeling loved

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

Well-BeingQ13 I've been interested in new things

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Well-BeingQ14 I've been feeling cheerful

- None of the time (1)
- Rarely (2)
- Some of the time (3)
- Often (4)
- All of the time (5)

End of Block: Block 6:Well-Being

Start of Block: Block 7:AppearanceComparison

AppearanceCompInfo Below are some statements about comparing. Please tick the box that fits best for you.

AppearanceCompQ1 When I'm out in public, I compare my physical appearance to the appearance of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ2 When I meet a new person (same sex), I compare my body size to his/her body size.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

Always (5)

AppearanceCompQ3 When I'm at work or school, I compare my body shape to the body shape of others.

Never (1)

Seldom (2)

Sometimes (3)

Often (4)

Always (5)

AppearanceCompQ4 When I'm out in public, I compare my body fat to the body fat of others.

Never (1)

Seldom (2)

Sometimes (3)

Often (4)

Always (5)

AppearanceCompQ5 When I'm shopping for clothes, I compare my weight to the weight of others.

Never (1)

Seldom (2)

Sometimes (3)

Often (4)

Always (5)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

AppearanceCompQ6 When I'm at a party, I compare my body shape to the body shape of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ7 When I'm with a group of friends, I compare my weight to the weight of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ8 When I'm out in public, I compare my body size to the body size of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ9 When I'm with a group of friends, I compare my body size to the body size of others.

- Never (1)

DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ10 When I'm eating in a restaurant, I compare my body fat to the body fat of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

AppearanceCompQ11 When I'm at the gym, I compare my physical appearance to the appearance of others.

- Never (1)
- Seldom (2)
- Sometimes (3)
- Often (4)
- Always (5)

End of Block: Block 7:AppearanceComparison

Appendix E. Ethical approval form

P.O. Box 80140, 3508 TC Utrecht The Board of the Faculty of Social and Behavioural Sciences Utrecht University P.O. Box 80.140 3508 TC Utrecht		Faculty of Social and Behavioural Sciences Faculty Support Office Ethics Committee Visiting Address Padualaan 14 3584 CH Utrecht
Our Description Telephone E-mail Date Subject	24-0625 030 253 46 33 FETC-fsw@uu.nl 27 March 2024 Ethical approval	

ETHICAL APPROVAL

Study: Digital Detox - Unplug from Social Media

Principal investigator: L. Nobbe

Investigators:

- Luuk Nobbe
- Marthe Buskens
- Guusje Gerritse

Supervisor: Tim van Timmeren

The study is approved by the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University. The approval is based on the documents sent by the researchers as requested in the form of the Ethics committee and filed under number 24-0625. The approval is valid through 24 June 2024. The approval of the Ethical Review Board concerns ethical aspects, as well as data management and privacy issues (including the GDPR). It should be noticed that any changes in the research design oblige a renewed review by the Ethical Review Board.

Yours sincerely,

Peter van der Heijden, Ph.D.
 Chair

This is an automatically generated document, therefore it is not signed

Appendix F. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)**The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)**

Below are some statements about feelings and thoughts.

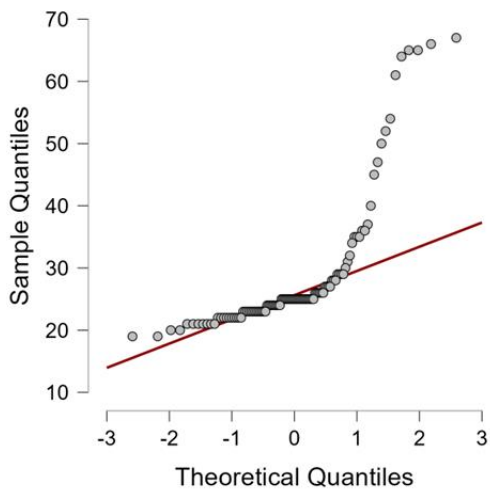
Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

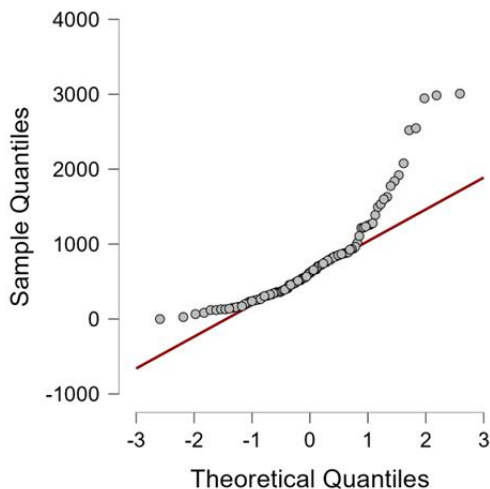
Warwick-Edinburgh Mental Well-being Scale (WEMWBS)
 © NHS Health Scotland, University of Warwick and University of Edinburgh,
 2006, all rights reserved.

Appendix H. Q-Q Plots Age, Social Media Use, Well-being and Procrastination.

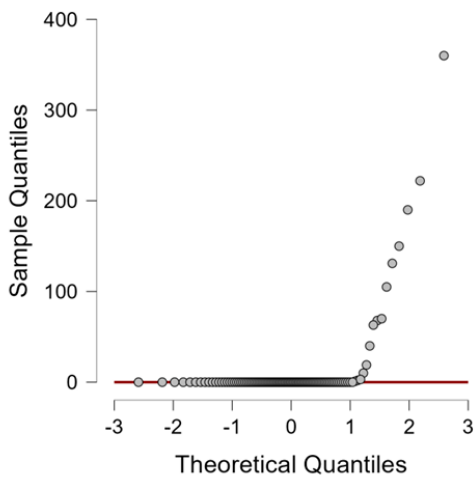
Age



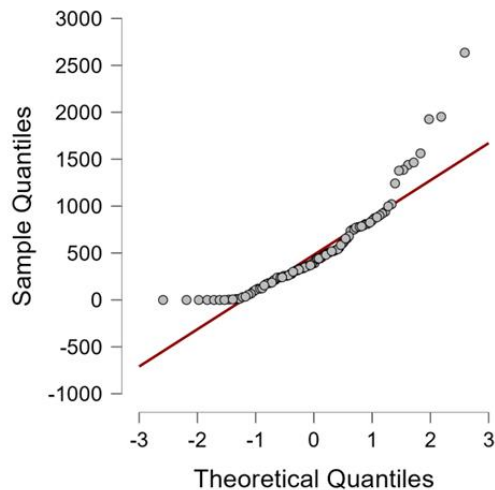
SocialMediaTimeWeek1



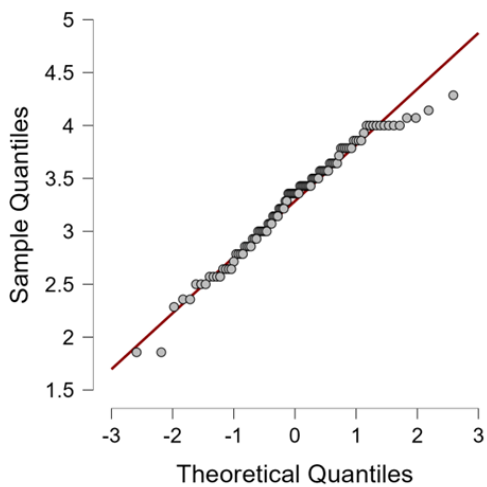
SocialMediaTimeWeek2



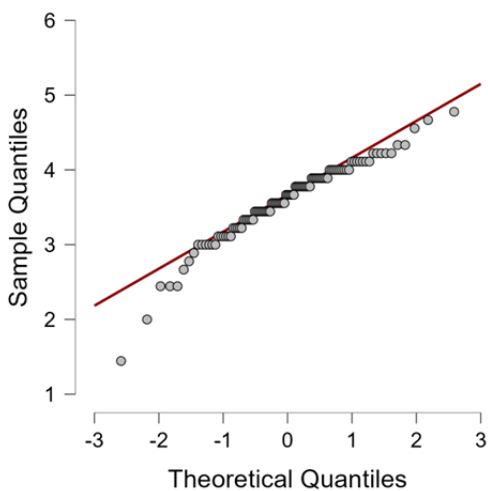
SocialMediaTimeWeek3



WellBeingWeek1

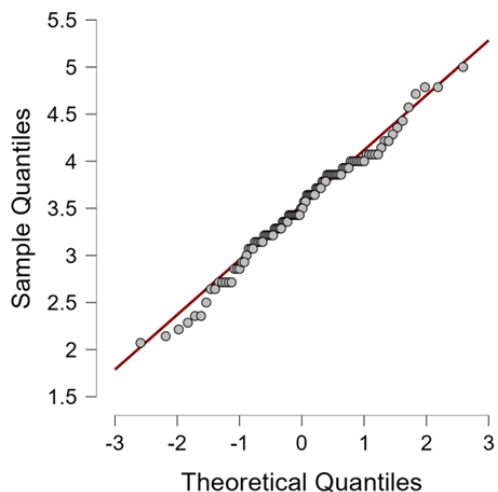


WellBeingWeek2

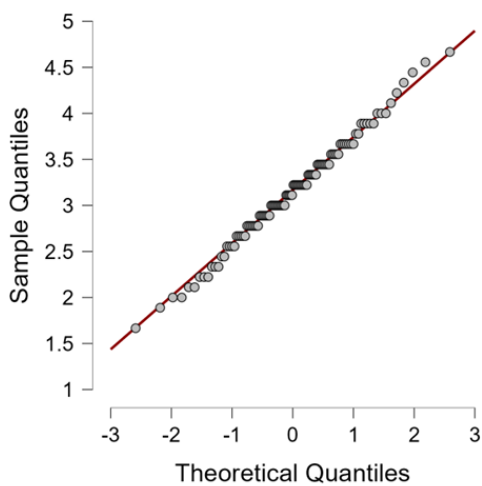


DIGITAL DETOX, WELL-BEING AND PROCRASTINATION

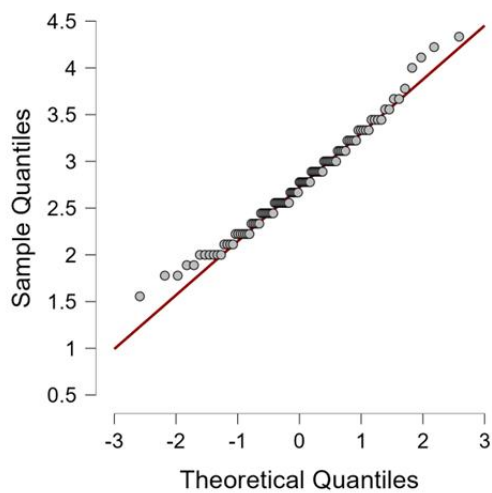
WellBeingWeek3



ProcrastinationWeek1



ProcrastinationWeek2



ProcrastinationWeek3

