Logged Off: Exploring Motivational Processes Underlying Deliberate Non-Use of Social Media

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Abstract

With a specific focus on social reward seeking tendencies and social needs fulfilment, this research report draws comparisons between social motivational processes in regular social media users and deliberate non-users. 166 participants were recruited and split into the two groups based on their social media use patterns. Participants were administered two questionnaire measures: a social needs satisfaction rating on belongingness, esteem and self-actualization (Taormina & Gao, 2013), and a social reward seeking behaviour questionnaire (Foulkes et al, 2014), as well as an 80 trial social incentive delay task (Spreckelmeyer et al, 2009) measuring social reward sensitivity by cueing different social reward levels and providing social rewards by means of facial stimuli with increasing degrees of happiness in correspondence with the social reward level and measuring reaction times for each cue type. Results showed no significant differences between users and non-users for needs satisfaction scores however significant differences between the two groups were apparent in social reward seeking behavioural tendencies whereby users had a higher tendency to seek social reward. However, there was no significant difference in sensitivity to social reward between users and non-users. Based on prior research and these findings, it seems likely that the motivation for social media use is driven by the pursuit for social rewards which may temporarily satisfy certain social needs such as the need to belong but do not have any actual effect on social need fulfilment on a deeper psychological level, implied by the lack of differences in social need fulfilment scores.

Introduction

A market of human interaction, governed by a currency of 'likes', social media (SM) platforms star at the forefront of modern communication, shaping how individuals today connect, relate and satisfy social needs. With ever increasing prevalence, at last estimate active users make up nearly 64% of the global population (Meltwater; We Are Social, 2025) and a growing body of criticism regarding its impact, social media usage is a popular subject of debate. With many studies investigating the consequences of its usage, too few attempt to understand what drives us to seek out social media engagement. Identifying the motivations and psychological drivers underlying social media usage can help understand why certain users are more vulnerable to its negative effects, inform interventions aimed at decreasing excessive/problematic usage and provide insight into human behaviours in the digital age.

Social media platforms encompass a wide range of digital services through which users share personal information, content, messages and communicate with friends and audience. Applications such as Instagram, TikTok and Facebook include metrics of recognition such as 'likes' and prioritise content creation whereas others such as Snapchat and X focus on communication and sharing of messages and ideas. Grossly revolutionizing human communication social media facilitates interaction and self-expression, helping people feel connected with some research finding reductions in perceived levels of loneliness dependent on FB use intensity in students (Lou, 2010). Despite its many advantages there is increasing expressions of concern regarding excessive or problematic usage of social media platforms with evidence suggesting connections between social media usage and loss of creativity, motivation, social skills as well as feelings of loneliness and anxiety (Rao et al, 2022. Singh et al, 2017). Social media use has been found to be associated with concerning negative effects on mental wellbeing (Keles et al, 2019), including the apparition of depressive symptoms (Twenge et al, 2018). It comes as no surprise therefore that of active internet users 5.8% do not have a social media identity (Meltwater; We Are Social, 2025). So what drives some people to use social media platforms, sometimes excessively, whilst others deliberately avoid the same platforms? There is some indication that social motivational factors such as social needs satisfaction and social rewards can be predictors of frequency of social media usage (Wadsley, Covey & Ihssen, 2021). Evidence which fits within the framework of social reward and needs theories surrounding social media usage. Although studies exploring deliberate non-use of social media are limited, those investigating users' behavioural patterns provide an initial insight upon which various theories and models pertaining to the role of social reward seeking and social need fulfilment in driving social media engagement, can be posited.

Social Needs Social needs have long been recognised as central driving forces in human behaviour and encompass desires for human connection including belongingness and esteem needs, both of which are placed within Maslow's hierarchy of social needs (1943) along with self-actualisation. Maslow (1943) posited that fulfilment of higher tiered needs (belongingness, esteem and self-actualisation) demanded satisfaction of the more basic needs (physiological, safety-security). Considering the higher tiered needs require human connection and interaction in order to be achieved it is evident that social media can be a useful tool in fulfilling these needs. Nadkarni & Hofmann (2013) argued that motivations behind use of social media platforms (Facebook specifically) are largely driven by a dual process model whereby the need to belong and the need for self-presentation are expressed and fulfilled through social media usage. Zhou et al (2023) similarly establish the need to

belong as a significant predictor for social media engagement, reinforcing the position of social needs as a driver for social media use. Esteem needs can also be satisfied by social media usage, Rahma & Setiasih (2021) demonstrated higher intensity of Instagram use can improve a user's self-worth and esteem. Despite limited literature there is sufficient evidence to warrant deeper exploration of the motivational potential of needs fulfilment processes for social media engagement.

Social Rewards Social rewards seem to play a key role in the maintenance of social media usage (Lindstrom et al, 2021), and indeed a more comprehensive and detailed body of research investigates social rewards and social media usage. Social media platforms are often likened to 'skinner boxes' in which social rewards gained from these platforms have behavioural consequences similar to those of species experiencing reward learning, a type of reinforcement learning. When user's actions are validated by their peers through the attribution of a social reward e.g. a 'like' users experience a boost in self-esteem which they will then be inclined to recreate by increased social media engagement (Burrow & Rainone, 2017). Wadsley et al (2021) found that the most important factor among a variety of reward based motives in predicting excessive and problematic social networking sites usage was a high motivation too obtain social rewards, highlighting the importance of social reward processes in social media usage. A finding that is consistent with neuroimaging approaches to social media and rewards research. Sherman et al (2016) found that increased activity in reward processing regions of the brain were observable when viewing photos with many likes vs posts with few likes. Corroborating the notion that social media may resemble substance abuse in some ways these findings demonstrate similar brain activity and behavioural patterns. Given that social rewards are embedded within the very foundations of social media platforms, clarifying their role in motivating engagement has a vital role in understanding what encourages problematic and excessive usage and can provide a focus for interventions.

The present study aims to compare motivational processes involving social needs fulfilment and social rewards in regular social media users and deliberate nonusers. Adopting a deliberate focus on non-users provides a valuable comparative lens through which the psychological drivers of social media engagement in users can be more clearly identified. Social rewards and social needs fulfilment experience some overlap in which positive feedback provides social rewards which signal that one's social needs (belongingness, esteem etc) are being met, with social rewards offering more of an immediate reinforcement and temporary relief which users will then continue to chase but does not translate into sustained satisfaction of social needs. Social rewards appear to be a powerful motivator for social media engagement in part because of the way in which they appeal to social needs such as the need to belong by validating the individuals interaction with others. In any case social rewards and needs provide a credible avenue for exploration. We predict that compared to deliberate nonusers, regular users will show lower levels of needs satisfaction, higher tendency to exhibit reward seeking behaviours and higher anticipation of social reward/feedback.

Methods

The study consisted of an online experiment presented using PsyToolkit (Stoet, 2010, 2017) and distributed via the Prolific platform. Two groups of participants took part – regular users of social media and participants who indicated non usage of any social media platforms.

Participants completed a social incentive delay task (Spreckelmeyer et al., 2009) and two questionnaires assessing social reward seeking (Foulkes et al, 2014) and need satisfaction (Taormina & Gao, 2013). All methods and hypotheses for the study were pre-registered on LINK (Appendix 1)

Participants

A sample of 132 participants (N= male, female, other) was recruited via the Prolific platform. Participants were aged between 18-84 and came from a variety of backgrounds. Initial group allocation will be based on a Prolific pre-screening filter: Participants in the non-user group need to have responded with "N/A, Rather not say, none" to the question "Which of the following social media sites do you use on a regular basis (at least once a month)?" in the Technology and online behaviour/Social Media sub-section. Participants in the user group need to have checked at least one social media platform in response to this question. Assessment of social media use duration and frequency during the actual study led to the exclusion of 11 non-users who indicated to use social media more than 1 h per day. Participants were compensated for their time with £12.10/hour. The study was approved by the Ethics Sub-Committee in the Department of Psychology at Durham University. Participants provided informed consent and were supplied with debriefing explanations upon completion. (Appendix 7)

Materials

The study included three main measures : (1) A questionnaire assessing satisfaction with different human needs (belongingness, esteem and self-actualisation) (Taormina & Gao, 2013)(Appendix 3); (2) a questionnaire assessing individual differences in social reward (Foulkes et al., 2014)(Appendix 4); (3) an experimental measure of sensitivity to social reward derived from reaction-times in a social incentive delay task (SID; Spreckelmeyer et al., 2009). The SID measures social reward sensitivity as the difference in RTs to a target stimulus (in our case a white square) between trials in which a cue (triangle or circles with lines, for details see below) presented before the target signalled the subsequent receipt of either social or neutral feedback, consisting of photos of faces with different emotional expressions (neutral or happy)(e.g. Appendix 5). 20 sets of facial stimuli were selected from the RADIATE facial stimuli database (Conley et al, 2018) based on the validity of their emotional presentation for ‘happy closed [mouth]’, ’happy open [mouth]’ and ‘happy exuberant’. This was done by averaging both the kappa scores and proportion correct for each individual set of stimuli and emotion. The highest combined averages were selected and used for the study. A neutral facial stimulus was created from a composite of selected faces using Picsart and Microsoft Word tools (Appendix 6).

Procedure

The study was set up using PsyToolKit (Stoet, 2010, 2017), upon completion of which, a pre-registration was submitted on AsPredicted.org. Participants were asked to complete four parts, which took on average 23 min to complete: (1) A brief demographic questionnaire assessing gender, age, nationality, highest level of education and information relating to social media usage (daily time spent on social media, frequency of checking social media)(Appendix 2); (2) the need satisfaction questionnaire (see above) (3) the SRQ (see above)l (4) the SID task (see above). The SID task comprised of a total of 80 experimental trials, split into four conditions (20 trials per condition) which were defined by different cues presented at a random interval before the target stimulus and in random order: (a) A blue circle with one horizontal line signalled that target responses below an individual RT limit (= correct responses, see below) were followed by social feedback consisting of a photo of a

happy facial expression with closed mouth, (b) blue circle with two horizontal lines: Correct responses were followed by a happy facial expression with open mouth, (c) blue circle with three horizontal lines: Correct responses were followed by an exuberant happy facial expression, (d) yellow triangle: Correct responses below the RT limit will be followed by a blurred face (= neutral feedback).. Responses above the individual RT limit always led to the presentation of the blurred face (neutral feedback). Cues were presented for 1000 ms, followed by a fixation cross presented for a random interval of 2000-3000 ms. Targets (white squares) were presented until a response (SPACEBAR press) occured and directly followed by the feedback stimulus which was presented for 2000 ms. RT limits were defined based on a preceding block of 10 simple RTs to the target (white square) without any cues/feedback. RT limits were calculated as the mean simple RT for RTs > 175 ms and < 350 ms with an extra 15 ms added to achieve a projected correct rate of ca. 66% in the SID trials.

Data Collection and Analysis

To assess differences in social reward processing and social need satisfaction between users and non-users, five dependent variables were extracted: (1) Satisfaction with belongingness needs: average across 15 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale. (2) Satisfaction with esteem needs: average across 15 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale (3) Satisfaction with self-actualisation needs: average across 12 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale (4) Social reward seeking scores derived from SRQ (Foulkes et al., 2014): Total score (across all 23 items, scored on 1-7 Likert scale) and 6 sub-scale scores (Admiration, Negative Social Potency, Passivity, Prosocial Interactions, Sexual Relationships, Sociability) (5) Anticipation of Social Reward/Feedback derived from the SID (Spreckelmeyer et al., 2009).

Average scores from all four questionnaire measures were analysed using the Mann Whitney U test due to violations to the assumptions of normality for independent samples t-test. Comparisons were drawn between users and non-users, assessing differences in needs satisfaction and prevalence of social reward seeking behaviours. Analysis of the SID task reaction times was done via a 2 (group: users vs non-users; between subjects) x 4 (social reward level: 0, 1, 2, 3) mixed design ANOVA for which an average was extracted for each participant and cue type. Reaction times over 1000ms were excluded.

Results

Descriptive Statistics

Social media users had a mean use duration of 4.96 hurs per day (SD = 3.41) and a median checking frequency of once every hour (SD = 1.91). Non-users had a mean use duration of less than 0.246 hours per day and a median reply of ‘I do not use social media’ for checking frequency. Descriptive statistics for questionnaire measures (DVs 1-4) can be found in Table 1 below. Minimal noticeable differences were observed in needs satisfactions scores between users and non-users for belongingness, esteem and self-actualization needs from the descriptive data which was confirmed by the inferential analyses.

Questionnaire Measure	Group	N	Mean	S.D	Mean Rank
Belongingness Needs	Non-Users	61	4.056	0.839	65.844
	Users	66	4.018	0.755	62.295
Esteem Needs	Non-Users	61	3.884	0.873	63.139
	Users	66	3.886	0.942	64.795
Self-Actualisation Needs	Non-Users	61	3.436	0.931	62.631
	Users	66	3.481	0.986	65.265
Social Reward Seeking	Non-Users	61	3.696	0.552	43.680
	Users	66	4.391	0.584	82.780

TABLE 1: Descriptive Statistics for DVs 1-4, needs satisfaction and social reward questionnaires

Analysis

Mann Whitney U tests conducted on the average scores from the need's satisfaction questionnaires revealed no significant differences between users and non-users for belongingness ($U = 2125.500$, $p = 0.589$, $r_b = 0.056$), esteem ($U = 1960.500$, $p = 0.802$, $r_b = -0.026$) and self-actualisation ($U = 1929.500$, $p = 0.689$, $r_b = -0.041$). However, significant differences with a large effect size between users and non-users were observed in the social reward seeking scores from the SRQ whereby users demonstrated greater social reward seeking behaviours than non-users ($U = 773.500$, $p = <.001$, $r_b = -0.616$).

Reaction times from the SID task were analysed using the mixed between-within subjects design ANOVA with each social reward level (cue type) and group. Figure 1 suggested a consistently higher reaction time average for users and non-users. Despite this and some noticeable group differences for social reward level 3 the results showed the SRL x Group main effect was not significant ($F (3\varepsilon, 76\varepsilon) = 0.907$, $p = 0.438$) with Greenhouse-Geisser corrections applied on account of a violation of sphericity ($p < .05$), indicating there are no differences between users and non-users in reaction times cued by social reward levels. However, further analyses using more robust methods, different reaction time/participant exclusion approaches and non-parametric alternatives may reveal hidden effects.

FIGURE 1: line plot graph comparing reaction times for users and non-users over social reward levels

Discussion

The present study aimed to compare social-motivational processes, namely social needs fulfilment and social reward seeking behaviours, in regular social media users and deliberate non-users by means of both questionnaire measures and an experimental task. Satisfaction with belongingness, esteem and self-actualisation needs was measured alongside demonstration of social reward seeking behaviours via questionnaire and Likert scale ratings. A social incentive delay reaction time task involving social rewards in form of facial stimuli presenting increasing expressions of happiness in accordance with an attributed social reward level was also administered. The following data analysis yielded both unexpected and predicted results.

Social Needs No significant differences were observed between users and non-users on any of the three given need scales (belongingness, esteem and self-actualization) which deviates from the expected outcome. The hypothesis having been that deliberate non-users would show higher levels of social needs satisfaction due to avoiding the surface level interactions often explored on social media platforms and prioritising quality of human connection. The lack of differences between users and non-users suggests that either the quality of human interactions are the same whether social media is used as a tool or not. Social media may not be essential for fulfilling social needs, indicating that needs fulfilment may not be such an essential driving force for social media engagement. If both users and non-users can achieve similar needs fulfilment levels through different means it might mean that individual differences and preferences for fulfilment of social needs are to blame for social media engagement, or lack thereof. Certainly, more research is required to understand to what extent social need fulfilment is associated with social media or simply with interactions of any type, online or offline.

Social Rewards As predicted users demonstrated a higher tendency to seek social rewards than non-users, in accordance with the vast majority of literature which associates reward

learning and reinforcement with social media usage and engagement. Whether people that use social media have a stronger baseline vulnerability to seek social reward or begin demonstrating social reward seeking behaviours due to positive feedback and reinforcement learning from social media engagement cannot be concluded from these results however provides an avenue for future research. This result is also important to consider from an addictive potential perspective as stronger reward seeking tendencies are often linked to vulnerability to problematic usage as users become more compulsively online 'chasing the like'. Reward seeking tendencies as demonstrated by the users in this study have biological correlates in the ventromedial prefrontal cortex and ventral striatum (Doheny & Lighthall, 2023) which confirms and improves the validity of these results. This significant difference between users and nonusers aligns with prior research findings concerning reward systems and social media social reward reinforcers.

Social Incentive Delay Despite the elevated social reward seeking tendencies of users extracted from the SRQ, the SID task did not reveal any significant results in sensitivity to social rewards between users and non-users. Any differences between users and non -users reactions times facing different social rewards levels were non-significant. Further analyses with more detailed approaches may yet lend some new perspectives however with the current test type and approach we cannot conclude any significant effects. An interesting output from this data however was the graph in which we can see that users have overall slower reaction times than nonusers. Albeit non-significant in initial tests, perhaps what is shown is the long-term effects of social media usage in terms of cognitive processing speed. Again, further research is required to uncover causality of this observable difference.

Conclusion

The study suffers from limitations in establishing the direction of the effects which makes conclusive proposals for social motivational processes and models difficult to achieve. What is evident is social reward seeking tendencies are more apparent in users than non-users whether as a cause or consequence. The lack of a difference in social needs fulfilment lends room for exploration. Whether social media does manage to satisfy social needs such as the need to belong, esteem needs or self-actualization needs but non-users have alternative means of achieving the same standard of fulfilment or whether social media has no effect on social neds satisfaction is unclear. A likely suggestion informed by prior research is that positive feedback and reinforcement from social rewards e.g. 'likes', on social media platforms stimulate and temporarily satisfy some social needs which drives individuals to continue 'chasing the like' in order to feel fulfilled as the feeling wears off. So social needs may be a deeper psychological factor that cannot be fully satisfied by social media alone despite the social rewards. As such social rewards could be a primary motivating factor in social media use driven by a need to fulfil social needs even temporarily. Future research may wish to establish causal effects between social media engagement and social rewards driven by social needs. Another interesting avenue would be further exploration of sensitivity to social reward using additional measures and analyses.

References

Burrow, A. L., & Rainone, N. (2017). How many likes did I get?: Purpose moderates links between positive social media feedback and self-esteem. *Journal of Experimental Social Psychology*, *69*, 232–236. https://doi.org/10.1016/j.jesp.2016.09.005

Conley, M. I., Dellarco, D. v., Rubien-Thomas, E., Cohen, A. O., Cervera, A., Tottenham, N., & Casey, B. J. (2018). The racially diverse affective expression (RADIATE) face stimulus set. *Psychiatry Research*, *270*, 1059–1067. https://doi.org/10.1016/j.psychres.2018.04.066

Doheny, M. M., & Lighthall, N. R. (2023). Social cognitive neuroscience in the digital age. In *Frontiers in Human Neuroscience* (Vol. 17). Frontiers Media S.A. https://doi.org/10.3389/fnhum.2023.1168788

Foulkes, L., Viding, E., McCrory, E., & Neumann, C. S. (2014). Social Reward Questionnaire (SRQ): Development and validation. *Frontiers in Psychology*, *5*(MAR). https://doi.org/10.3389/fpsyg.2014.00201

Keles, B., McCrae, N., & Grealish, A. (2020). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. In *International Journal of Adolescence and Youth* (Vol. 25, Issue 1, pp. 79–93). Routledge. https://doi.org/10.1080/02673843.2019.1590851

Lindström, B., Bellander, M., Schultner, D. T., Chang, A., Tobler, P. N., & Amodio, D. M. (2021). A computational reward learning account of social media engagement. *Nature Communications*, *12*(1). https://doi.org/10.1038/s41467-020-19607-x

Lou, L. L., Yan, Z., Nickerson, A., & McMorris, R. (2012). An examination of the reciprocal relationship of loneliness and facebook use among first-year college students. *Journal of Educational Computing Research*, *46*(1), 105–117. https://doi.org/10.2190/EC.46.1.e

Mira, L., & Rahma, J. (2021). *The impact of social media usage intensity on self-esteem: survey on emerging adulthood of instagram user*. https://ejournal.radenintan.ac.id/index.php/konseli

Nadkarni, A., & Hofmann, S. G. (2012). Why do people use facebook? In *Personality and Individual Differences* (Vol. 52, Issue 3, pp. 243–249). https://doi.org/10.1016/j.paid.2011.11.007

Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016). The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media. *Psychological Science*, *27*(7), 1027–1035. https://doi.org/10.1177/0956797616645673

Spreckelmeyer, K. N., Krach, S., Kohls, G., Rademacher, L., Irmak, A., Konrad, K., Kircher, T., & Gründer, G. (2009). Anticipation of monetary and social reward differently activates mesolimbic brain structures in men and women. *Social Cognitive and Affective Neuroscience*, *4*(2), 158–165. https://doi.org/10.1093/scan/nsn051

Stoet, G. (2010). PsyToolkit – A software package for programming psychological experiments using Linux. *Behaviour Research Methods, 42 (4)*, 1096-1104

Stoet, G. (2017). PsyToolkit: A novel web-based method for running online questionnaires and reaction-time experiments. *Teaching of Psychology, 44 (1)*, 24-31

Taormina, R. J., & Gao, J. H. (2013). Maslow and the Motivation Hierarchy: Measuring Satisfaction of the Needs. In *American Journal of Psychology Summer* (Vol. 126, Issue 2).

Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports*, *12*, 271–283. https://doi.org/10.1016/j.pmedr.2018.10.003

Wadsley, Covey, & Ihssen, N. (2021). The Predictive Utility of Reward-Based Motives Underlying Excessive and Problematic Social Networking Site Use. *Psych Reports*.
Zhou, Z., Zhang, S., Kim, Y. K., Birditt, K. S., & Fingerman, K. L. (2024). Need to belong, daily social engagement, and transient loneliness in late life. *Journal of Social and Personal Relationships*, *41*(1), 115–136. https://doi.org/10.1177/02654075231211617

Appendices

Appendix 1 – Pre Registration

ASPREDICTED

Wharton CREDIBILITY LAB UNIVERSITY OF PENNSYLVANIA

Logged Off: Motivational Processes Underlying Deliberate Non-Use of Social Media (#241436)

Author(s)
This pre-registration is currently anonymous to enable blind peer-review.
It has 2 authors.

Pre-registered on: 2025/08/05 · 03:59 PM (PT)

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
The aim of this online study is to compare motivational processes in regular social media users and deliberate non-users. Previous research has shown that the frequency of social media use can be predicted by social motivation (Wadsley, Covey & Ihssen, 2022), e.g. how much individuals seek social approval through 'likes'. In this study we will use survey and experimental measures to test whether deliberate non-users show differences in social-motivational processes compared to regular users. The study will include three main measures : (1) A questionnaire assessing satisfaction with belongingness, esteem and self-actualisation needs (Taormina & Gao, 2013); (2) a questionnaire assessing individual differences in social reward (Foulkes et al., 2014); (3) an experimental measure of sensitivity to social reward derived from reaction times in a social incentive delay task (SID; Spreckelmeyer et al., 2009). . We predict that, compared to regular users, deliberate non-users show higher levels of social needs satisfaction (belongingness, esteem), higher levels of satisfaction with self-actualisation needs, lower tendencies to seek social as measured with the SRQ reward and lower anticipation of social reward/feedback, i.e. a smaller RT difference between social vs control cues in the SID task.

3) Describe the key dependent variable(s) specifying how they will be measured.
(1) Satisfaction with belongingness needs: average across 15 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale.
(2) Satisfaction with esteem needs: average across 15 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale.
(3) Satisfaction with self-actualisation needs: average across 12 items from Taormina & Gao (2013) scale, scored on 1-5 Likert scale.
(4) Social reward seeking scores derived from SRQ (Foulkes et al., 2014): Total score (across all 23 items, scored on 1-7 Likert scale) and 6 sub-scale scores (Admiration, Negative Social Potency, Passivity, Prosocial Interactions, Sexual Relationships, Sociability)
(5) Anticipation of Social Reward/Feedback derived from the SID (Spreckelmeyer et al., 2009): Simple reaction times to target stimuli (white squares) following cues that predict social feedback.

4) How many and which conditions will participants be assigned to?
(1) Two separate groups of participants will be tested: (A) Regular users of social media, (B) deliberate non-users of social media. Initial group allocation will be based on a Prolific pre-screening filter: Participants in the non-user group need to have responded with "N/A, Rather not say, none" to the question "Which of the following social media sites do you use on a regular basis (at least once a month)?" in the Technology and online behaviour/Social Media sub-section. Participants in the user group need to have checked at least one social media platform in response to this question.
(2) In the SID, there will be four conditions defined by different cues presented at a random interval 2000-3000 ms before the target (see Spreckelmeyer et al., 2009): (a) Blue circle with one horizontal line: Responses below the individual RT limit will be followed by social feedback consisting of a photo of a happy facial expression with closed mouth, (b) blue circle with two horizontal lines: same as (a) but happy facial expression with open mouth, (c) blue circle with three horizontal lines: same as (a) but exuberant happy facial expression, (d) yellow triangle: responses below the RT limit will be followed by a blurred face (= neutral feedback) created as a composite picture from all other used images. Photos will be taken from the RADIATE face stimulus database (Conley et al., 2018). Responses above the individual RT limit will always lead to the presentation of the blurred face (neutral feedback). Cues will be presented for 1000 ms, followed by a fixation cross presented for a random interval of 2000-3000 ms. Targets (white squares) will be presented until a response (SPACEBAR press) occurs and directly followed by the feedback stimulus which will be presented for 2000 ms. ITIs will vary randomly between 3000 and 4000 ms. RT limits will be defined based on a preceding block of 10 simple RTs to the target (white square) without any cues/feedback. Limits will correspond to the mean RTs for RTs > 175 ms and < 350 ms with an extra 15 ms added to achieve a projected correct rate of ca. 66% in the SID trials.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Confirmatory analyses:
-Questionnaire measures (DVs 1-4; for SRQ: only total score): Independent samples t-tests (or non-parametric alternatives if assumptions are violated), comparing users and non-users.
-SID: Mixed between-within subjects ANOVA with group (2; users vs non-users) and cue type (4; a-d, see above), followed up by simple effect analyses and post-hoc tests.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
All measures: Participants will be removed if their social media use as measured in the survey does not correspond to the Prolific pre-screening/filter information.
Questionnaire measures: Participants will be removed if they respond to <50% of the items on a given scale.
SID: (1) Participants with <25% correct target responses (= RTs below the individual RT limit) will be removed; (2) RTs more than +/- 2.5 SDs from an

Appendix 2 – Demographics Questionnaire

- Please enter your age (years): _____ (or "*prefer not to say*")
- Please select your gender: *Male/female/other/prefer not to say*
- Please enter your nationality: _____ (or "*prefer not to say*")
- Please select the highest level of education that you have completed: *Primary (elementary) school/GCSE or equivalent/A-levels or equivalent/University undergraduate programme/University postgraduate programme/doctoral degree/prefer not to say*

- On a typical day, how many hours do you spend on social media: _____ (or "*I am not using social media/prefer not to say*")
- On a typical day, how often do you check your social media? *Every 15 minutes/every 30m minutes/every hour/every 2 hours/every 3-5 hours/every day/less than once per day/I am not using social media/prefer not to say*

Appendix 3 – Needs Satisfaction Scale Questionnaire

Indicate how much you agree or disagree with the statement "I am completely satisfied with" (the item in the list) on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Please skip any items that you do not feel comfortable answering.

Belongingness Needs

1. The amount of rapport I share with the people I know
2. The quality of the relationships I have with my friends
3. The love I receive from my spouse/partner (skip if you do not have a spouse/partner)
4. The intimacy I share with my immediate family
5. The camaraderie I share with my colleagues
6. How much I am welcomed in my community
7. The warmth I share with my relatives
8. The emotional support I receive from my friends
9. The feeling of togetherness I have with my family
10. How much I am cared for by my spouse/partner (skip if you do not have a spouse/partner)
11. The happiness I share with my companions
12. The sympathy I receive from my confidants
13. The enjoyment I share with associates
14. The affection shown to me by my friends
15. The closeness I feel with my associates

Esteem Needs

1. The admiration given to me by others*
2. The honor that many people give me*
3. How much other people respect me as a person*
4. The prestige I have in the eyes of other people*
5. How highly other people think of me*
6. The high esteem that other people have for me*
7. The recognition I receive from various people*
8. The high regard that other people have for me*
9. How much I like the person that I am**
10. How sure I am of myself **
11. How much respect I have for myself **
12. All the good qualities I have as a person**
13. My sense of self-worth**
14. The amount of esteem I have for myself **
15. How positive I feel about myself as a person**

Indicate how much you agree or disagree with the statement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Please skip any items that you do not feel comfortable answering.

Self-Actualization Needs

1. I am totally comfortable with all facets of my personality.
2. I feel that I am completely self-fulfilled.
3. I am now being the person I always wanted to be.
4. I am finally realizing all of my innermost desires.
5. I indulge myself as much as I want.
6. I am now enjoying everything I ever wanted from my life.

7. I completely accept all aspects of myself.
8. My actions are always according to my own values.
9. I am living my life the way I want.
10. I do the things I like to do whenever I want.
11. I am actually living up to all my capabilities.
12. I am living my life to the fullest.

Appendix 4 – Social Rewards questionnaire

Here is a list of statements about what you enjoy when you interact with other people. The statements refer to all people in your life, e.g. friends, partners, family, colleagues or people you have just met. Consider how well each statement relates to you and indicate your answer with a tick (Strongly Disagree/Disagree/Slightly disagree Neither agree nor disagree/Slightly agree/Agree/Strongly Agree) NOTE: If there is something you have never experienced, imagine how much you would enjoy it. Please skip any items that you do not feel comfortable answering.

1. I enjoy being around people who think I am an important, exciting person
2. I enjoy treating others fairly
3. I enjoy making someone angry
4. I enjoy going to parties
5. I enjoy being nice to someone only if I gain something out of it
6. I enjoy feeling emotionally connected to someone
7. I enjoy it if others look up to me
8. I enjoy tricking someone out of something
9. I enjoy having erotic relationships
10. I enjoy being a member of a group/club
11. I enjoy being around people who are impressed with who I am and what I do
12. I enjoy letting someone else tell me what to do
13. I enjoy having many sexual experiences
14. I enjoy embarrassing others
15. I enjoy many people wanting to invite me to their social events
16. I enjoy keeping promises I make to others
17. I enjoy seeing others get hurt
18. I enjoy achieving recognition from others
19. I enjoy it if someone accepts me as I am, no matter what
20. I enjoy having an active sex life
21. I enjoy someone else making decisions for me
22. I enjoy making someone feel happy
23. I enjoy following someone else's rules

SCORING NSTRUCTIONS: Calculate the mean score for each subscale as follows (with Strongly disagree=1 to Strongly agree=7): Admiration: Q1, Q7, Q11, Q18; Negative Social Potency: Q3, Q5, Q8, Q14, Q17; Passivity: Q12, Q21, Q23; Prosocial Interactions: Q2, Q6, Q16, Q19, Q22; Sexual Relationships: Q9, Q13, Q20; Sociability: Q4, Q10, Q15

Appendix 5 – Example of a set of facial stimuli

Appendix 6 – neutral face stimuli

Appendix 7 – consent and debriefing forms

Participant Information Sheet

Project title: Logged Off – Exploring Motivational Processes Underlying Deliberate Non-Use of Social Media
Researcher(s): Lorelai Lancksweert (lorelai.a.lancksweert@durham.ac.uk)
Supervisor: Niklas Ihssen (niklas.ihssen@durham.ac.uk)

You are invited to take part in a research study we are conducting as part of a project in the Laidlaw Research and Scholarship Programme. This study has received ethical approval from the Psychology Ethics Sub-committee of Durham University. Before you decide whether to agree to take part it is important for you to understand the purpose of the research and what is involved as a participant. Please read the following information carefully and get in contact if there is anything that is not clear or if you would like more information. The rights and responsibilities of anyone taking part in Durham University research are set out in our 'Participants Charter': https://www.dur.ac.uk/research.innovation/governance/ethics/considerations/people/charter/

What is the purpose of the study?

The aim of this online study is to explore whether non-users of social media show differences in social-motivational processes compared to regular users, e.g. whether they respond differently to social stimuli.

Why have I been invited to take part?
You have been invited because you are over 18 years and registered on Prolific. The study advertisement has been made visible to you because in the information that you provided to Prolific you indicated that you regularly use certain social media platforms, such Instagram, Snapchat, Facebook or TikTok. Please only take part if you are a regular user of social media.

Do I have to take part?
Your participation is voluntary, and you do not have to agree to take part. If you do agree to take part, you can withdraw at any time during the completion of the study by closing your browser, without giving a reason and without any negative consequences, such as prejudice or penalty.

What will happen to me if I take part?
For this study you will need a laptop or desktop PC (Mac or Windows) connected to a real keyboard. You will be asked to complete an online study comprised of two sections, a questionnaire section and a reaction-time task section. In total, this should take no more than 30 minutes to complete:
Section 1 will consist of a) a basic demographic questionnaire which will also include questions related to how often you use social media; b) a questionnaire asking about how satisfied you are with regard to different needs, e.g. how safe you feel in your neighbourhood, how happy you are with your social relationships and how much you are generally satisfied with your life; c) a questionnaire asking you about certain social behaviours and how much you value them. Section 2 will consist of a brief computer task in which we will ask you to respond as quickly as possible to a target stimulus (a square shape). If you respond within the reaction-time limit, there will be a photo of a happy face following your response.

Are there any potential risks involved?
We do not expect that this study has any risks. However, please note that the questionnaire section will contain questions of personal nature (e.g. how happy you are in your relationship or with your friends) and some questions will also ask about sexual relationships. Remember that your responses are completely anonymous and you can skip any questions that you do not feel comfortable answering. We will also provide information about support resources at the end of the study, should there be any concerns raised from the topics mentioned in the questionnaire.

Will there be any physical discomfort?
There should not be any physical discomfort.

Will there be any psychological discomfort or embarrassment?
There should not be any psychological discomfort or embarrassment.

Can I withdraw from the experiment?
You are free to withdraw from the study at any time, without having to give a reason for withdrawing, and without any negative consequences, such as prejudice or

penalty. To withdraw from the study, you can close the browser window any time before submitting your responses. Your responses will not be saved and will not be used in this research. Please note that after submitting your responses at the end of the study, withdrawal will not be possible as the data are all completely anonymised and we are unable to identify your data. You are under no obligation to answer all the questions; you can omit any questions that you do not wish to answer.

Will I receive any compensation for taking part?
You will receive £6.05 for completing all sections of the study.

Will my data be kept confidential?
All data will be completely anonymised and we have no way of linking data back to an individual and it is not possible for us to connect data to the IP address from which the study was completed.
Please read the University's Generic Privacy Notice for important information about how your data will be used.

What will happen to the results of the project?
Anonymised (i.e., not identifiable) data may be used in publications, reports, presentations, web pages and other research outputs. At the end of the project, anonymised data may be archived and shared with others for legitimate research purposes. All research data and records needed to validate the research findings will be stored for 10 years after the end of active data collection.

Who do I contact if I have any questions or concerns about this study?
If you have any further questions or concerns about this study, please speak to the researcher whose contact information is provided at the top of this document. Alternatively, you may contact the Department Ethics Chair.

If you remain unhappy or wish to make a formal complaint, please follow the Department's Complaints Procedure (if you are unable to access this document, please email the Ethics Secretary, who will provide you with a copy).

Thank you for reading this information and considering taking part in this study.

Participant Debrief

Project title: Logged Off – Exploring Motivational Processes Underlying Deliberate Non-Use of Social Media
Researcher(s): Lorelai Lancksweert (lorelai.a.lancksweert@durham.ac.uk)
Supervisor: Niklas Ihssen (niklas.ihssen@durham.ac.uk)

Background and purpose
Thank you for taking part in this study. In this project we are hoping to understand why people choose not or do not 'feel the need' to use social media, such as Instagram, Facebook, TikTok and X. Previous research has shown that how often social media is used by an individual can be predicted by how much that individual seeks social approval or social rewards (such as 'likes'). In this study we want to determine whether differences in how important social rewards are for an individual

also influence decisions to *not* engage with social media. Your data will help us to do this. The questionnaires and task we presented to you were intended to measure how important social rewards (e.g. relationships or also simply seeing a happy face) are for individuals. Ultimately, the results will be useful for individuals who want to curb their use. Please note that even if you have scored highly (or very low) in certain parts of the questionnaire (e.g. those assessing satisfaction with relationships or yourself), this does not mean that something is wrong with you. The measures used are not indicative of any mental health or personal issues. However, if you have any concerns regarding your social media use or any of the other subjects mentioned in the questionnaire, below you will find some contact details of support services.

Withdrawing your data
If you want to withdraw your data and not submit your responses, you should close the browser window. Once you have submitted your responses, we are unable to withdraw your data because it is completely anonymous, and it is impossible to identify which data are yours.

How your data will be used
In writing up the study, all data will be anonymised. Anonymised (i.e., not identifiable) data may be used in publications, reports, presentations, web pages and other research outputs. At the end of the project, anonymised data may be archived and shared with others for legitimate research purposes and for verification of the results.

Questions about the ethics process
If you have any further questions or concerns about this study, please speak to the researcher whose contact information is provided at the top of this document. Alternatively, you may contact the Department Ethics Chair.

If you remain unhappy or wish to make a formal complaint, please follow the Department's Complaints Procedure (if you are unable to access this document, please email the Ethics Secretary, who will provide you with a copy).

Further support
If you have experienced any psychological distress as a result of this study, you may consider one of the following services to find suitable support:

- helpguide.org/find-help
- safeinourworld.org/find-help/

Appendix 7 – Instructions given to participants

Reaction Time Task

You will now be asked to carry out a reaction time task: A white square will be shown on the screen repeatedly. Your task is to press the SPACEBAR as quickly as possible when the square appears on the screen. In a first (shorter) round you will just respond to the white square. In a second (longer) round there will be another shape (e.g. a circle) presented before the square and you will get a 'reward' (consisting of a happy face) if you reaction is faster than a specific target time.

Press SPACEBAR to continue.

Round 1

You will be shown a small cross on the screen which is followed by a white square. When the white square appears (and only then), press the SPACEBAR as quickly as possible.

Press SPACEBAR to start.

Round 2

Again your task is to respond to the white square as quickly as possible by pressing the SPACEBAR. This time, however, another shape will be presented before the square. The shape will tell you what 'reward' you will get if your reaction time is faster than a specific limit. The reward will consist of a photo of a happy (smiling) face presented after the square. If your reaction is too slow, you will only see a blurred face.
There are four different shapes indicating four different outcomes (if your reaction is fast enough):

 = Happy face

 = Very happy face

 = Extremely happy face

 = Blurred face

Press SPACEBAR to start.