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Exploring the difference in levels of social media use between extraverts and introverts

Abstract

Personality is a highly researched topic. This report looks to explain the difference in levels of social media use between extraverts and introverts. The literature research has found that extraverts tend to use social media more than introverts (Marengo et al., 2020). This is because they enjoy interacting with others more and often tend to post a lot of content (Bowden-Green et al., 2020). In this study there were 34 participants that took part (13 male, 19 female and 2 non-binary). The participants age ranged between 18 and 69 ($M=29.26$, $SD= 11.34$). It was a between-subject design. The participants were recruited via EMS. The results found that there was no significant difference in the levels of social media use between participants who were categorised as introverts and those who were extroverts: $t(32) = 1.02$, $p = .16$. This could have been caused by only using students as they have high levels of social media use (Saha & Guha, 2019).

Introduction

Throughout the decades personality has been highly researched, and this has helped us to explore how personality begins to explain individual differences and people's behaviour (Maltby et al., 2017). Personality is described as having traits and other characteristics that makes an individual unique (Bergner, 2020). The big five personality trait theory has been used to measure levels of traits in an individual. It aims to explain levels of each trait in someone. For example, the level of which a person is an extrovert (Widiger, 2016). Individuals with higher levels of extraversion are more likely to be sociable and outgoing. These individuals tend to like being in social settings and enjoy interacting with others (Widiger, 2016). Social media is highly used by many all over the world, it has become a huge daily part of many lives (Correa et al., 2010). The most popular social media sight being Facebook, where it is estimated around 2.9 billion people use it (Smith, 2023).

Social media is suggested to appeal highly towards extroverts due to being able to expand their social networking (Bowden-Green et al., 2020). Marengo et al. (2020) suggests that higher levels of extraversion lead to more engagement of social media, often posting more and interacting in comments and liking other posts compared to introverts. This also states that extroverts have the need to have a positive reaction to what they post. It is that need for validation and interaction, leading to them using social media more (Marengo et al., 2020). Dowling et al. (2024) also believed that could be the case as extroverts tend to like being centre of attention. A study conducted by Marengo et al. (2020) found that extraversion personality trait was a contributing factor to using and updating social media more often than those with low levels.

The big five trait theory has been used in many studies to see if there is a link between high levels of extraversion and social media use (Smith, 2023). Smith (2023) also agrees with Marengo et al. (2020) as he states that there is a link between social media posting and the trait of extraversion.

Finally, to contradict what others found in their research and studies. Ozguven and Mucan. (2013) found that there was no relation to having high levels of

extraversion and using social media. Though they found other traits from the big five trait theory could be linked to it.

The aim of this study is to conclude whether extroverts or introverts have higher levels of social media use. This report will discuss the method of how the study was carried out and will talk about the results of this study. From the research of the literature, it is hypothesised that there will be a higher use in social media from extroverts.

Methods

Participants

In this study there were 34 participants that took part (13 male, 19 female and 2 non-binary). The participants age ranged between 18 and 69 ($M=29.26$, $SD=11.34$).

Design

The design study used in the study was between-subject. The independent variable throughout this study was extraversion. The dependent variable was social media use. Each participant was put into two groups of introverts and extroverts based off the mean of extraversion being 24.38. Above this being high levels of extraversion and below being low levels.

Materials

The Big Five Inventory (BFI; John & Srivastava, 1999) was used to assess levels of extraversion in participants (see appendix A). The full BFI includes 44 items, however only items related to the trait of extraversion were used in this study. A total of eight items, therefore, were used to measure extraversion levels. Participants were instructed to respond to each of the eight statements based on how they generally see themselves, and the anchor 'I see myself as someone who...' was provided at the beginning of the questionnaire. Responses to each statement, including "... generates a lot of enthusiasm", were given on a 5-point

Likert scales anchored from 1 = strongly disagree to 5 = strongly agree, with total scores on the scale subsequently ranging from eight to 40. Three items were negatively worded and required reverse scoring prior to analysis. Higher scores for this personality trait indicate a more outgoing and sociable person. Internal reliability for the extraversion scale in this study was initiated to be .56 which is lower than that reported by John, Donahue and Kentle (1991) (Cronbach's alpha = .83).

To measure level of social media use, the Social Media Use Questionnaire (SMUQ; Xanidis & Brignell., 2016) was used. This questionnaire contained nine items that aimed to assess levels of dependence to social networking sites (SNS). Participants were asked to provide a response to statements, such as "I spend a large proportion of my day using social network sites", on a five-point scale anchored between zero (never) to five (always). Final scores ranged between zero and 36, with higher scores indicative of higher levels of dependence on SNS. Internal reliability for this scale was .90, which corresponds with previous research using this scale (e.g., Xanidis & Brignell, 2016)

Procedure

The procedure for taking part in this study was, firstly, participants were recruited via EMS. They would have the option to sign up. If they then signed up, they would be able to click on the link taking them to an information sheet (A) in appendices. The information provided on the sheet told them what the study was about and what they would be asked to do throughout the study. This is where they could state whether they wanted to take part in the study. Then it took the participants to a consent form (B) in the appendices, where they answered the questions provided to make sure, they fully understood what they had to do. After that, it was asked to provide their gender and age. Next, they were asked to answer questions on your level of extraversion (D) can be found in the appendices. They were then be asked to complete questions on their social media use (E), this can be found in the appendices. Finally, the participants were sent to a debrief sheet (C), to find this look at the appendices. This explained exactly what happened and what the study wished to find out.

Results

For this study an independent samples t-test was conducted to explore the differences in social media use between introverts and extroverts. The descriptive statistics are Low levels of extraversion are ($M=12.62$, $SD= 6.28$, $N= 13$) and High levels of extraversion are ($M= 15.14$, $SD= 7.45$, $N= 21$).

The t-test showed that there was no significant difference in the levels of social media use between participants who were categorised as introverts and those who were extroverts: $t(32) = 1.02$, $p = .16$. The hypothesis was that there would be a higher use in social media from extroverts. This was not the case; therefore, the hypothesis has been rejected.

Discussion

As shown in the results section of this report. The hypothesis was expected to find that there would be a higher level of use in social media use from extroverts. It was however found that this was not the case. Therefore, the hypothesis was rejected as mentioned in the results. There was no difference in the use between extroverts and introverts. This therefore contradicts the literature. Majority of the literature found supported the hypothesis. The literature concluded that extroverts tend to use social media more due to liking the extra interaction and attention online (Maregno et al., 2020). Bowden-Green et al. (2020) and Dowling et al. (2024) research is also contradicted as they also found that social media use was higher in extroverts than in introverts.

One reason for this could be because the study was conducted on only university students. Research has shown that students are one of the highest groups using social media (Saha & Guha, 2019). As students tend to enjoy interreacting with friends and new people. They enjoy posting about their lives (Saha & Guha, 2019). Therefore, giving an inaccurate result of whether introverts or extroverts use social media more. It could help to have a wider range of participants.

Finally, another reason for why there was no difference in social media use between introverts and extroverts is because there could be other traits that factor having high levels of social media use. Such as, one study found that having high levels of neuroticism impacted higher levels of social media use, where users are found scrolling for longer (Satici et al., 2023). Neuroticism is used to describe an

individual's emotions. Low levels being emotionally stable and high levels being the opposite (Huang et al., 2023). Another study found that neuroticism also impacted higher levels of social media use. It explained this by saying as people with higher levels of neuroticism tend to have anxiety. Social media could be a way to keep in touch with others without socialising in person (Blackwell et al., 2017). Also, a different study found that higher levels of neuroticism lead to an increased use in social media (Huang et al., 2023). So, this could also explain the lack of difference between social media use in introverts and extroverts as other personality traits need to be taken in to account.

To conclude, the findings of this research study do not correlate to the wider literature research. This could be because of many factors such as students have high levels of social media use in general (Saha & Guha, 2019). Other factors being different personality traits like neuroticism (Blackwell et al., 2017).

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Appendix

A- Information sheet



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Seicoleg a Cwnsela
Psychology and Counselling

Study Information Sheet

This document provides key information regarding the study and provides details about what will be expected of you as a participant. Therefore, please read this information carefully before providing consent to take part.

The purpose of this study is to explore the effect of the personality trait of extraversion on social media use.

During this study you will be required to do the following:

- Fill in your demographic information of age and gender.
- Complete the Extraversion sub-scale of the Big Five Inventory (John et al., 1991).
 - This is an eight-item questionnaire designed to assess the personality trait of extraversion.
 - Each item has a five-point response option ranging from Disagree strongly to Agree strongly.
 - You should choose which response option best describes your thoughts/feelings in relation to each of the statements presented.
 - Further instructions on how to complete this questionnaire will be presented at the top of the page.
- You will also be required to complete a questionnaire that aims to assess your level of social media use.
 - This is a nine-item questionnaire and each item has a five-point response option ranging from Never to Always.
- At the end of the study, you will be provided with the study debrief.

If you have any questions or concerns about this study, please contact the research supervisor Stacey Coleman on stacey.coleman@uwtsd.ac.uk

You can download a copy of this information sheet for your records here: [Information Sheet](#)

If you feel you want to withdraw your participation from the study, you can do so at any time by closing the browser on your device. If you withdraw, your data will be deleted and not used as partial data will not be analysed.

As this study involves the completion of an extraversion questionnaire, if you feel you would not be comfortable answering questions about your extraversion levels, then you are advised not to take part in this study.

If you are happy to take part in this study, please select below to continue to the consent form.

B- Consent form



Seicoleg a Cwnsela Psychology and Counselling

Study Consent Form

I understand that this research study is being carried to collect data for a group of 1st year Psychology students for a research report. I understand that taking part in this study will involve providing details about my age and gender, completing a short personality questionnaire, and a questionnaire assessing my social media usage.

This study will take approximately 10 minutes to complete.

I understand that participation in this study is voluntary and I am free to withdraw my participation at any time during or before the end of the study without giving a reason and without penalty by closing the computer browser.

I understand that once I complete the study, I will not be able to withdraw my data, as it will be anonymised and the researcher will be unable to trace my data back to me.

I am aware that if I have any questions or concerns about the study, I can contact the researcher supervisor, Stacey Coleman at any time before, during, or after the study on stacey.coleman@uwtsd.ac.uk

I understand that the information provided by me will be held confidentially, with a code assigned in place of my name. These data will be stored indefinitely in accordance with the Data Protection Act.

I also understand that at the end of the study I will be provided with a debrief form.

You can download a copy of this consent form by clicking here: [Consent Form](#)

Please tick all boxes below to confirm your consent into participating in this study:

☐ I am 18 years of age or over

☐ I understand I can withdraw at any time without penalty by closing the browser

☐ I understand my data will be held confidentially and my identity will remain anonymous

☐ I understand all the above information on this consent form

☐ I consent to taking part in this study

C- Debrief



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Seicoleg a Cwnsela
Psychology and Counselling

Study Debrief Sheet

Exploring the effect of extraversion on social media use.

Thank you for taking part in this study.

The purpose of this study is to explore the effect of the personality trait of extraversion on their social media use. Specifically, the aim of the study is to examine whether individuals who report high levels of extraversion are significantly more likely to engage in higher levels of social media use.

If you wish to withdraw your data from the study you must close your computer browser now. After this point, your data will become anonymous and it will not be possible to trace it back to you. The data you submit will remain confidential.

If taking part in this study has raised any concerns or if you have any questions about the study, please contact the academic supervisor Stacey Coleman:
stacey.coleman@uwtsd.ac.uk

You can download a copy of this debrief sheet for your records by clicking here:
[Debrief](#)

If you are happy for your data to be included in this study, please click the arrow below to confirm.

Thank you once again for taking time to participate in this study.

BSc Psychology

BSc Psychology and Counselling

BSc Psychology and Criminology

University of Wales Trinity Saint David, Swansea

D- Extraversion questionnaire

The Big Five Inventory (BFI; John & Srivastava, 1999)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
1	2	3	4	5

I see Myself as Someone Who...

_____ 1. Is talkative

_____ 2. Is reserved

_____ 3. Is full of energy

_____ 4. Generates a lot of enthusiasm

_____ 5. Tends to be quiet

_____ 6. Has an assertive personality

_____ 7. Is sometimes shy, inhibited

_____ 8. Is outgoing, sociable

Scoring information:

R denotes reverse scored items

$1 + 2R + 3 + 4 + 5R + 6 + 7R + 8$

E- Social media use questionnaire

**Social Media Use Questionnaire (SMUQ; Xanidis & Brignell, 2015) final items after
Principal Component Analysis**

	Never	Rarely	Sometimes	Often	Always
1. I struggle to stay in places, where I won't be able to access social network sites.	0	1	2	3	4
2. I feel angry, when I am not able to access my social network account	0	1	2	3	4
3. My relatives and friends complain that I spend too much time using social network sites.	0	1	2	3	4

4. I lose track of time, when using social network sites	0	1	2	3	4
5. I use social network sites, when I am in the company of friends	0	1	2	3	4
6. I feel anxious, when I am not able to check my social network account	0	1	2	3	4
7. I stay online longer than initially intended.	0	1	2	3	4
8. I spend a large proportion of my day using social network sites.	0	1	2	3	4
9. I feel guilty about the time that I spend on social network sites	0	1	2	3	4

X- Full SPSS output

