The big five personality traits influencing habitual Facebook usage, life satisfaction and psychological well-being of Generation Y students

This research determined five big personality traits that influenced South African Generation Y students’ habitual use of Facebook, life satisfaction and psychological well-being. The research embraced a quantitative approach, and a structured questionnaire was used to obtain information from Generation Y students. The data were analysed using Smart PLS software version 3.2.7 for partial least square structural equation modelling (PLS-SEM). Neuroticism, extraversion, openness and agreeableness had positive and significant influences on habitual Facebook usage (HFU). However, conscientiousness seemed to have a positive yet insignificant relationship with HFU. Habitual use of Facebook has been found to have a positive and significant impact on life satisfaction and psychological well-being. It was also determined that life satisfaction positively and significantly influences psychological well-being. The exogenous-to-endogenous outcomes from the structural model coincided with most of prior study’s findings. Therefore, in the light of the associated literature, the findings were discussed. This study is intended to add a fresh understanding to the current body of Africa’s personality, psychology and social media literature – a context that has received little research attention in developing nations.

**Keywords:** neuroticism; extraversion; openness; agreeableness; conscientiousness; habitual Facebook usage; life satisfaction; psychological well-being.

**Introduction**

Individuals can be categorised based on various parameters, such as their height, weight, gender, age, generation and level of education, as well as their character (Naude et al. 2016). Furthermore, Bergh (2009) confirmed that personality is probably one of the most significant fields to be regarded in the research on human nature and differences, as well as similarities between individuals. The best personality domain can be best defined by the Five Factor Model (FFM) using the Big Five Personality Dimensions (Acopio & Bance 2016). This model conceptualises the hierarchy of personality traits in a series of five simple dimensions, namely, neuroticism, extraversion, openness to experience, agreeableness and conscientiousness (Ali 2019; Mhlanga 2019; Szczesniak, Sopińska & Kropielewski 2019). As this model has identified its utility for both clinical methods and empirical research projects (Costa & McCrae 1992), this study aims to use it as a theoretical basis for generating projections among the above-mentioned variables. Precisely, this research explains how the ownership of certain personality traits by Generation Y Facebook users will affect their usual use of Facebook as well as the extent to which its use affects the fulfilment of their lives and their psychological well-being as students. Johnson (2015) argued that it is worth exploring how the characteristics of an individual can contribute to Facebook habits because of the interactivity available in today’s media.

In spite of the ability to provide important insights into personality traits, it is essential to note that there is still a shortage of empirical evidence of relationships between neuroticism, extraversion, openness, agreeableness, conscientiousness, habitual Facebook usage (HFU), life satisfaction and psychological well-being. Consequently, further scholarly introspections are considered necessary. Much of what is written on the subject is based on samples from developed countries such as India, Malaysia, Turkey, Norway, Finland and Canada, among others. For example, among students enrolled for the Bachelor of Technology (B.Tech) degree in India, Murugesan and Jayavelu (2017) examined the influence of big five personality traits and self-efficacy on entrepreneurial intention (Murugesan & Jayavelu 2017). Furthermore, Lotfi et al. (2016) explored the impact of personality traits (extraversion, openness, awareness, agreeability and
neuroticism) on knowledge-sharing conduct among students at a Malaysian public university. Furthermore, in 10 small- and medium-sized hotels located in Turkey, Yesil and Sozbilir (2013) determined the impact of personality features on the individual innovation conduct of 215 staff. In addition, Vaag, Sund and Bjørkeset (2018) determined five-factor personality profiles among Norwegian musicians, compared with the general workforce. Furthermore, Heinström (2003) also performed a survey focused on the connection between five dimensions of personality and their impact on Finnish students’ data behaviour. In addition, Oyibo, Orji and Vassileva (2017) examined the impact of personality traits among a sample of 216 Canadians on Cialdini’s persuasive approaches.

In spite of the increasing body of personality trait research, there is still a lack of comprehension of the effect of neuroticism, extraversion, openness, agreeableness and conscientiousness on HFU, life satisfaction, as well as psychological well-being of South African Generation Y Students. Previous academics have performed their research in different environments within the South African context, by concentrating on the role of the five major variables in predicting job creation propensities among administrative staff in a South African tertiary institution (Bell & Njoli 2016); the connection between personality dimensions and work performance of staff of a corporate pharmacy group in the North West Province, the Free State, Mpumalanga and Gauteng (Rothmann & Coetzer 2003); the connection between the five major personality characteristics and burnout in South African college learners (Morgan & De Bruin 2010); assessment of personality characteristics connected with work satisfaction among South African anaesthetists using the Big Five Inventory (Kisten & Kluys 2018); exploration of personality characteristics, carefulness and feeling of consistency among females in Greater Schooling South Africa (Mayer, Surtee & Visser 2016); and personality characteristics and resilience as predictors of work pressure and burnout among call centre workers (Lamb 2009).

While these studies are informative, they did not examine how neuroticism, extraversion, openness, agreeableness and conscientiousness influence HFU, life satisfaction and psychological well-being of Generation Y Students in South Africa. This article therefore helps to tackle the gap by using a sample of Generation Y students from a context in a developing country. Very few (if any) researchers have used structural equation modelling (SEM) to test the relationships of neuroticism, extraversion, openness, agreeableness, conscientiousness, HFU, life satisfaction and psychological well-being of South African Generation Y students. With regard to the conceptual model proposed in this study, it can be noted that it is one of a kind, as no previous study has tested the variables in the proposed model in relation to the South African context to the best knowledge of the researcher.

This article is organised as follows: firstly, a study context is given, followed by a theoretical model and a creation of the hypothesis. The research design and methodology are then presented, followed by a presentation of the results and the discussion. The final sections of the article discuss the implications, limitations and future research directions.

Contextualisation of the study

Facebook

Facebook exists as a virtual community that enables users to belong to different communities created on the network to enable social requirements to be met (Viljoen, Dube & Murisi 2016). According to Bevan-Dye and Akpojivi (2016), Facebook has experienced phenomenal development, and in South Africa, the site is particularly popular among young people between the ages of 18 and 24 who are part of the Generation Y cohort (persons born between 1986 and 2005). In 2019, Facebook reported almost 1.58 billion daily active users, and there were more than 2 billion monthly active users in July 2019 (Statista 2019). Hence, there has been a rapid expansion in the use of Facebook, and it has become an international phenomenon (Foroughi et al. 2019). Facebook is of great importance in young consumers’ decision-making (Chininga et al. 2019). In addition, Chakraborty (2016) confirmed the positive influences of using Facebook on individuals’ social lives, such as forming new relationships, bonding, social capital, and improving and maintaining real friendship networks. Moreover, Houghton, Pressey and Istanbulbuoglu (2019) found Facebook use drives satisfaction with life based on connections with other users – akin to the need of belonging – again suggesting that satisfaction is achieved on the fulfillment of needs.

The motivation and significance of choosing generation Y students

Jariangprasert et al. (2019) stated that Generation Y is technology savvy and a visually advanced generation, making it easy for them to adapt to the advent of new technology and use it from a very young age. As this generation grew up in the digital era, technology has always played a key role in their lives (Van Deventer & Lues 2019). Therefore, it is not surprising that Generation Y spends a significant amount of time shopping on the Internet, interacting with social networking sites (SNSs), staying up to date on the latest news and trends, and having fun (Van Deventer & Lues 2019). In addition, participation of Generation Y students is essential for social networking studies, given that Chu and Kim (2011:58) claimed that students constitute the majority of users of SNSs, with Facebook being reported as the most common online SNSs among higher education institution (HEI) students (Cheung, Chiu & Lee 2011). Moreover, Bevan-Dye and Akpojivi (2015) asserted that the Generation Y cohort uses Facebook as a platform to interact with friends and family, to discover and connect with colleagues and to express their views and opinions. The above-mentioned contention offers evidence that it is essential to examine the Generation Y cohort.
Theoretical model and hypotheses formulation

Drawing on the above, the study’s research model was developed (Figure 1). The theoretical model illustrates the suggested interconnection of eight constructs, namely, neuroticism, extraversion, openness, agreeableness, conscientiousness, habitual Facebook use, life satisfaction and psychological well-being. The relationships between the proposed constructs in the theoretical model are as follows: neuroticism, extraversion, openness, agreeableness and conscientiousness provide the starting point of the model and directly affect habitual Facebook use which, in turn, induces life satisfaction and psychological well-being. Finally, the theoretical model proposes that life satisfaction will lead to psychological well-being. The following sections will review the literature on the study’s main variables. Moreover, the hypothesised connections between the study variables are discussed in the subsequent sections based on past studies and logically deriving from prior results.

Neuroticism and habitual Facebook usage

Neuroticism, or low emotional stability, refers to the tendency to experience negative emotions and the behaviours that accompany them (Peral & Geldenhuys 2020). Neurotic people have an anxious general predisposition and a tendency to worry (Mehroof & Griffiths 2010). Previous empirical studies have shown substantial evidence of the positive relationship between neuroticism and electronic word-of-mouth of social media advertisements (Dodoo & Padovano 2020), welfare state attitudes (Tepe & Vanhuyse 2020) and online video ads sharing intention (Choi 2020). However, within the context of this study, it is important to understand how neuroticism influences HFU among Generation Y students. Hence, this study will close this gap by empirically testing the relationship of these two variables. Neuroticism is central to and a predictor of SNSs’ use and are discussed in the subsequent sections based on past studies and logically deriving from prior results.

Indeed, highly neurotic people are more likely to use the web to decrease solitude (Butt & Phillips 2008). Drawing from the preceding theoretical discussion and also in line with the empirical evidence on neuroticism and HFU, this study hypothesises that:

H1: Neuroticism positively and significantly impacts habitual Facebook usage among Generation Y students.

Extraversion and habitual Facebook usage

Extraversion is described as a person’s propensity to seek stimulation and enjoy other people’s connection (Ruzungunde & Mjoli 2020). Extraverts are energised by social interactions and are seen as outgoing, sociable and friendly people (Peral & Geldenhuys 2020). Previous scholars have discovered extraversion as an antecedent or predictor of mutual investment decision (Bindu 2020), self-reported competitiveness (Fong, Zhao & Smillie 2020), customer engagement and relationship duration (Itani, El Haddad & Kalra 2020). Deducing from the aforementioned research studies, it can be noted that there is scant evidence in studies that have examined how extraversion would influence HFU. Hence, this study will close this lacuna by empirically testing the nexus between extraversion and HFU. Extraverts are also discovered using Facebook to interact with friends and contacts as a means of social expansion (Ryan & Xenos 2011). Extraverts are more likely to be frequent users of social media and display higher engagement with Facebook (Dodoo & Padovano 2020). Furthermore, Moore and McElroy (2012) also discovered a favourable connection in their research between the use of one’s Facebook and the extraversion trait. Extraverts are more likely to reach out and communicate on Facebook with individuals; they are more involved in sharing their whereabouts, their emotions with others and letting others react to them (Sharma & Jaswal 2015). Extraverts are more involved in political problems by exchanging pictures with others via Facebook (Quintelier & Theocharis 2013). Consequently, drawing from the above discussion and past empirical evidence, the current study hypothesises that:

H2: Extraversion positively and significantly impacts habitual Facebook usage among Generation Y students.

Openness and habitual Facebook usage

Openness is a trait that describes outgoing, excited and daring individuals who love challenges (Jeronimus et al. 2014). It defines people who are open to changing their own outlook and what they want from others (Mondak 2010). Previous empirical studies of different contexts have shown a positive association between openness and individuals’ willingness to pay for organic food (Gustavsen & Hegnes 2020), visitor’s experience, emotional stimulation and behaviour (Leri & Theodoridis 2020), and attitudes towards homosexuality (Metin-Orta & Metin-Camgöz 2020). Against the aforementioned background, within the context of this study, it is important to understand how openness would influence HFU among Generation Y students. Hence, there is a need to close this gap by assessing the association...
between openness and HFU. Openness to experience has been found to be associated with SNS use (Muscattell & Guadagno 2012), as it entices people who are open to experiences (Correa, Hinsley & Zuñiga 2010). Sharma and Jaswal (2015) discovered a beneficial connection between experience openness and use of Facebook. Highly open-minded individuals prefer Internet interaction, likely because of Facebook’s characteristic of meeting fresh individuals with distinct interests and who are geographically dispersed (Correa et al. 2010). In addition, Quercia et al. (2012) found openness as related to the use of Facebook facilities. As a result, the current study hypotheses that:

**H3:** Openness positively and significantly impacts habitual Facebook usage among Generation Y students.

### Agreeableness and habitual Facebook usage

Agreeableness places people on a continuum regarding their concern for social harmony (Ruzungunde & Mjoli 2020). Previous research, which has been conducted in different contexts, has shown substantial evidence of the positive relationship between agreeableness and students’ preferred learning styles at higher education (Akbar, Khanam & Manzoor 2020); entrepreneurial intention (Kristanto & Pratama 2020); and coachability, athletic ability, game performance, team playerness, work ethic and overall sports performance among university athletes (Habib, Waris & Afzal 2020). However, within the context of this study, it is important to understand how agreeableness influences HFU among Generation Y students. Hence, this study will close this gap by empirically testing the relationship of these two variables. According to Sharma and Jaswal (2015), individuals who are highly agreeable will also be more willing to use Internet, particularly Facebook, through which one can communicate with others. It is discovered that pleasant people are more driven to keep beneficial interactions with others (Campbell & Graziano 2004). Facebook’s SNS is about maintaining healthy relationships with others, interacting with them and maintaining a positive attitude towards them (Sharma & Jaswal 2015). In addition, Amichai-Hamburger and Vinitzky (2010) discovered that agreeableness is positively related to making comments on Facebook. Drawing from the aforementioned elucidations and empirical evidence, it can be hypothesised that:

**H4:** Agreeableness positively and significantly impacts habitual Facebook usage among Generation Y students.

### Conscientiousness and habitual Facebook usage

Conscientiousness is described as an individual’s inclination to demonstrate self-discipline and strive for skill and accomplishment (Greenberg 2011). Conscientiousness categorises people into those who are rational, informed and consider themselves to be competent (Terblanche & Heyns 2020). This personality dimension is clarified by limited characteristics such as being well organised, cautious, self-disciplined, accountable and accurate at the high end and being disorganised, impulsive, careless and unpredictable at the low end (Bell & Njoli 2016). Previous scholars have discovered conscientiousness as an antecedent or predictor of academic performance (McCredie & Kurtz 2020), motivation for academic goals (Werner et al. 2019) and as a symptom of insomnia (Akram et al. 2019). Deducing from the aforementioned research studies, it can be noted that there is scant evidence in studies that have examined how conscientiousness would influence HFU. Hence, this study will close this lacuna empirically testing the nexus between conscientiousness and HFU. Conscientiousness has been discovered to be substantially linked to the quality and amount of interpersonal relationships, indicating that conscientious people may use Facebook to search for and retain social associations (Sediman 2013). Ross et al. (2009), however, failed to provide empirical assistance for such proposals, finding no important correlation between awareness and the use of Facebook. In addition, Wehrli (2008) noted that extremely conscientious individuals are not going to devote intense attention or much time to SNSs like Facebook. The present study therefore hypothesised the following:

**H5:** Conscientiousness negatively and insignificantly impacts habitual Facebook usage among Generation Y students.

### Habitual Facebook usage and life satisfaction

Habitual Facebook use is described as the automatic consumption and use of the said social media platform, which grows as people constantly and routinely access, communicate and use Facebook because of the gratification it provide (Vishwanath 2014). This definition is consistent with the present thinking about habitual media use from the view point of media participation, wherein habits are seen to be acquired by repeating media consumption in stable conditions (LaRose 2010). Previous empirical studies of different contexts have shown positive association between HFU and academic distraction of college students (Feng et al. 2019); knowledge sharing, habit and obligation (Shava & Chinyamurindi 2018); and social support (Pornsakulvanich 2020). Against the aforementioned background, within the context of this study, it is important to understand how HFU would influence life satisfaction usage among Generation Y students. Hence, there is a need to close this gap by assessing the association between HFU and life satisfaction. Ellison, Steinfield and Lampe (2007) found that using Facebook has a positive influence on the overall life satisfaction of college students. Indian and Grieve (2014) reported that social support received from Facebook positively predicted life satisfaction among people with high social anxiety levels. Similarly, the research by Ong and Lin (2015) showed that Facebook use has a valuable connection with life satisfaction. The following hypothesis has therefore been developed:

**H6:** Habitual Facebook usage positively and significantly impacts life satisfaction of Generation Y students.

### Habitual Facebook usage and psychological well-being

Farrington (2017) defined psychological well-being as the ‘perception of addressing the existential problems of life’,
while Winefield et al. (2012) defined it as a mixture of favourable affective states such as happiness and functioning with ideal effectiveness in individual and social life. Levels of psychological well-being are likely to rely on an individual’s internal conditions and the resources and difficulties they face (Farrington 2017). Wright and Cromanzano (2000) pointed out that the advantages of psychological well-being include a rise in the cognitive functioning and health of an individual, and eventually the happy functioning of society. Past empirical studies, which have been conducted in various contexts, provide substantial evidence of positive relationship between psychological well-being and perceived organisational support, career goal development and empowering leadership (Maziriri, Chuchu & Madinga 2019); experiencing love in everyday life (Oravec et al. 2020); and social capital among university students (Abbas et al. 2020). However, within the context of this study, it is important to understand how HFU influences the psychological well-being of Generation Y students. Hence, this study will close this gap by empirically testing the relationship of these two variables. In the context of this research, it may be observed that when satisfied with their lives, Generation Y students show favourable psychological well-being. In their research aimed at determining the connection between Facebook use and psychological well-being for Baccalaureate Nursing Students at Benha University (Zaki, Sayed and Elattar 2018), they discovered an extremely statistically important connection between psychological well-being and Facebook usage. For this reason, it can be posited that:

**H7:** Habitual Facebook usage positively and significantly impacts the psychological well-being of Generation Y students.

**Life satisfaction and psychological well-being**

Life satisfaction is the mental assessment of the distances between what people want to accomplish and the hedonic profits they have (Čikrčki 2016). Life satisfaction has been associated with many beneficial results. More favourable academic expectations enhanced academic self-efficacy, ensured higher perceived progress towards objectives and less academic stress, all of which were associated with life satisfaction (O’Sullivan 2011). In terms of its attributions, Buettell (2006) linked life satisfaction to an array of personality, genetic and social-cognitive influences, such as goal-directed behaviour. However, Lucas-Carrasco and Salvador-Carulla (2012) attributed life satisfaction to self-efficacy, while Bastug and Duman (2010) associated it with outcome expectations and support from the environment; and Kooshr and Bonab (2011) related it to intellectual skills. Life satisfaction can also focus on specific life areas such as physical health, wealth, mental health, social relationships and a general sense of achievement (Ye, Yu & Li 2012). Referring to its effect, life satisfaction has been reported to be linked to a number of personal and organisational factors, such as self-esteem (Rode 2004), personality traits (Zhang & Howell 2011), work and family roles (Zhao, Qu & Ghiselli 2011) and job satisfaction (Mafini & Dlodlo 2014). This study postulates that the life satisfaction is associated with psychological well-being. This view is in line with Rathore, Kumar and Gautam (2015) who determined the effect of life satisfaction on the psychological well-being of physicians working at Sawai Man Singh (SMS) Medical College and Jaipur Dental College in India, and their findings showed that life satisfaction was an important predictor of physicians’ psychological well-being. In addition, the connection between life satisfaction and well-being was examined by Leung, Cheung and Liu (2011), and life satisfaction appears to be linked to well-being. Nonetheless, when drawing from the above-mentioned arguments, which are grounded on empirical evidence, this study hypothesises that:

**H8:** Life satisfaction positively and significantly impacts the psychological well-being of Generation Y students.

**Methodological aspects**

For this study, the research philosophy was positivism. A quantitative research method has therefore been used for this study. The design was appropriate for requesting the necessary data on neuroticism, extraversion, openness, agreeableness, conscientiousness, HFU, life satisfaction and psychological well-being. Furthermore, the strategy allows one to investigate the causal relationships with the constructs used in the research.

**Sample and data collection**

This research was conducted among Generation Y students from the South African Business and Technology Institute in Braamfontein, Johannesburg, which is within the Gauteng province of South Africa. This research used Generation Y students as the sample, as this generation is considered to be the most technically knowledgeable population group, and college students are recognised as the early adopters of any new technology (Hwang 2017). At the time of data collection, the students included in the sample had to be active, registered students. A primary identifier of this criterion was the student card with the name and year of enrolment of each student. A list of the registered students has been used as a sampling frame in the database of the institute. This study therefore used a simple random sampling technique because each element of the population had an equal and known chance of being selected as part of the sample (Weideman 2014); for example, each name in the list of students registered in the database of the institute had an equal chance of being selected. The questionnaires made it clear that the respondents’ anonymity would be assured and that the research was for educational purposes only. The sample size Raosoft calculator was used to calculate the sample size (Raosoft Inc. 2004). The calculation considered the total student population enrolment of approximately 450, a 5% margin of error, 90% interval of confidence and the recommended 50% distribution, and returned a minimum sample size of 208 respondents. Of the 208 questionnaires distributed, 200 questionnaires returned were usable, resulting in a response rate of 96.1%.
Measurement instrument and questionnaire design

The variables under investigation were operationalised from previous studies. Modifications to the scales were made to reflect the study context of Facebook usage. The measurement scales, items used, sources and the Cronbach’s alpha values for the scales are indicated in Table 1. The scale indicators were affixed to a strongly disagree (1) to strongly agree (5) Likert-scale continuum.

Respondent profile

Table 2 shows participant representation. The respondents were asked to report their demographic information, including age, gender and year of study. Most of the respondents were aged between 18 and 22 years (46.5%), followed by those aged between 23 and 27 years (32.5%) and aged between 28 and 33 years (21%), the smallest group. Table 2 also shows respondents’ gender. Most respondents were female, representing 50% of the total population of the study, followed by 37.5% male respondents and 12.5% of the respondents who did not disclose their gender. Table 1 also illustrates respondents’ year of study. Most respondents were second-year students (39%), followed by third-year students (29%), first-year students (22%) and postgraduate students (10%).

Statistical analysis procedure

The investigator used the Statistical Package for Social Science (SPSS) version 25 to evaluate the data pertaining to the geographical profile of the respondents, while, on the contrary, the latest software version of SMART-PLS 3.2.7 was used to analyse the data captured, as PLS-SEM was preferred to covariance-based SEM because of its improved statistical power in parameter estimates and the maximisation of understood variance (Tajvidi et al. 2018); less compatible than competitive relatives are PLS-SEM and CB-SEM (Rigdon, Ringle & Sarstedt 2010; Sarstedt, Ringle & Hair 2014). Nevertheless, PLS-SEM was originally known for its higher prediction over CB-SEM (Hair et al. 2017), although the approximate gaps between the two techniques are quite different. PLS-SEM is analogous to multiple regression analysis and is considered suitable for simultaneous estimation of relationships between one or more independent and dependent variables. This feature makes PLS-SEM especially valuable for research purposes in exploration (Henseler 2017). PLS-SEM incorporates path coefficients, multi-linear regression and confirmatory factor analysis (CFA), which is a multivariate research technique of the second generation. This describes the variability in dependent variables by using structural template analysis (Hair et al. 2010, 2017). Partial Least Squares Structural Equation Modelling works for complex models involving moderation, small samples and are less prone to ordinary multivariate data (Vlajčić et al. 2018). This research study adopted a reflective measurement model in which measurements represent latent variables and the direction of the connection is from the construct or latent variable to the measure.
Reliability analysis

Table 3 specifies the different measures that were used to assess the reliability and validity of the constructs for the study.

Measurement model assessment

The outer model was assessed first by values of composite reliability (CR) (to assess internal consistency), outer loadings (to assess indicator reliability) and average variance extracted (to assess convergent validity). Composite reliability is an appropriate measure of internal consistency reliability because it accounts for the different outer loadings of the indicator variables, whereas Cronbach’s alpha assumes all indicators to be equally reliable (Hair et al. 2016). It is vital to indicate that on extraversion, one item was deleted, which is EX1, and on conscientiousness, one item was also deleted, which is CO1, because of the fact that the outer loadings were less than 0.5 (Anderson & Gerbing 1988). It is imperative to mention that the indicator items from the aforementioned variables that were dropped resulted in improved reliability and validity of those variables. For the other research constructs, the lowest value for each respective item load was 0.698. The recommended value of 0.5 (Anderson & Gerbing 1988) was consequently surpassed by all individual item loadings. This shows that all measuring instruments are satisfactory and reliable, as all items met the convergent validity thresholds and with more than 50% of the variance of each item shared with their respective constructs (Fraering & Minor 2006). As shown in Table 2, the Cronbach’s alpha test results ranged between 0.701 and 0.927, which is above the 0.70 benchmark for acceptable internal consistency reliability (Field 2013).

### TABLE 3: Scale accuracy analysis.

<table>
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<th>Research constructs</th>
<th>PLS code</th>
<th>Mean value</th>
<th>Scale mean</th>
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AG, agreeableness; AVE, average variance extracted; CO, conscientiousness; CR, composite reliability; EX, extraversion; HFU, habitual Facebook usage; LS, life satisfaction; NE, neuroticism; OP, openness; PLS, partial least squares; PWB, psychological well-being; SD, standard deviation.
As revealed in Table 3, the lowest CR value of 0.811 is well above the suggested value of 0.6 (Hulland 1999), while the lowest obtained average variance extracted (AVE) value of 0.670 is also above the recommended value of 0.4 (Anderson & Gerbing 1988). This shows the accomplishment of convergent validity, and this further confirms the excellent internal consistency and reliability of the measuring instruments used. As such, a sufficient level of discriminant validity was revealed by all the variables. These results have generally provided evidence of acceptable levels of reliability of the research scale (Chinomona & Chinomona 2013). According to Field (2013), discriminant validity refers to items measuring different concepts. Table 4 presents the results of the discriminant validity analysis.

In terms of discriminant validity, all the correlation coefficients of this study fell below 0.70, thereby confirming the theoretical uniqueness of each variable in this research (Field 2013). In addition, discriminant validity was evaluated using the Hetero-Trait-Monotrait Ratio (HTMT) criterion (Table 2), in spite of recommendations from previous studies (Henseler, Hubona & Ray 2016; Verkijika & De Wet 2018), indicating that HTMT is more suitable to evaluate discriminant validity than Fornell–Larcker’s commonly used criteria. When taking a more conservative position, discriminant validity is reached when the HTMT value is below 0.9 or 0.85 (Neneh 2019; Verkijika & De Wet 2018). Table 2 reveals that the highest obtained HTMT value is 0.645, which is below the conservative value of 0.85. As such, all the constructs meet the criteria for discriminant validity.

### Structural model assessment

Inner model (structural model) (Figure 2) was assessed to test the relationship between the endogenous and exogenous variables. The path coefficients were obtained by applying a non-parametric, boot-strapping routine (Vinzi et al. 2010), with 261 cases and 5000 samples for the non-return model (two-tailed; 0.05 significance level; no sign changes). The fitness of the model was assessed using the standardised root mean square residual (SRMR) based on the criteria that a good model should have an SRMR value < 0.08 (Henseler et al. 2016). The structural model in Figure 2 had an SRMR of 0.057, thus suggesting an adequate level of model fitness. In the model, the three endogenous variables (Facebook usage, life satisfaction and psychological well-being) had \( R^2 \) values of 0.831, 0.753 and 0.874, respectively, suggesting sufficient predictive accuracy of the structural model (Figure 2).

### Outcome of hypotheses testing

In this study, testing of hypotheses was conducted by path coefficient values, as well as the \( t \)-values for the structural model obtained from the bootstrapping algorithm. According to Beneke and Blampied (2012), \( t \)-values indicate whether a significant relationship exists between variables in the model and path coefficients, demonstrating the strength of the relationships in the model. Figure 2 and Table 4 show the standardised path coefficients and their corresponding \( t \)-values. A statistically significant relationship is expected to have a \( t \)-value that exceeds 1.96 at a 5% level of significance (Chin 1998).

#### Outcome of testing Hypothesis 1: Neuroticism and habitual Facebook usage

The primary hypothesis expresses that neuroticism positively and significantly impacts HFU among Generation Y students; in this examination, this assumption was reinforced. It can be seen in Figure 2 and Table 4 that neuroticism had a positive impact (\( \beta = 0.451 \)) and was statistically significant (\( t = 3.137 \)) in predicting HFU. This outcome proposes that the higher the level of neuroticism, the higher the level of HFU among Generation Y students. Along these lines, this examination fails to dismiss H1.

#### Outcome of testing Hypothesis 2: Extraversion and habitual Facebook usage

The second hypothesis states that extraversion positively and significantly impacts HFU among Generation Y students. In this study, this supposition is upheld. It can be seen in Figure 2 and Table 4 that extraversion exerts a positive influence (\( \beta = 0.129 \)) and was measurably significant (\( t = 1.973 \)) in predicting HFU. This outcome endorses that the higher the level of extraversion, the higher the level of HFU among Generation Y students. Subsequently, this investigation supports H2.

#### Outcome of testing Hypothesis 3: Openness and habitual Facebook usage

The third hypothesis states that openness positively and significantly impacts HFU among Generation Y students. In this examination, this hypothesis is upheld. Figure 2 and Table 4 indicate that openness exerts a positive impact (\( \beta = 0.331 \)) and is significant (\( t = 5.984 \)) in influencing HFU. This outcome acclaims that the higher the level of openness, the higher the level of HFU among Generation Y students. Thus, this examination supports H3.

#### Outcome of testing Hypothesis 4: Agreeableness and habitual Facebook usage

The fourth hypothesis states that agreeableness positively and significantly impacts HFU among Generation Y students. This study supports this hypothesis. It can be observed in Figure 2 and Table 4 that agreeableness exerts a positive influence (\( \beta = 0.156 \)) and is statistically significant (\( t = 1.994 \))
in predicting HFU. This result suggests that the higher the level of agreeableness, the higher the level of HFU among Generation Y students.

**Outcome of testing Hypothesis 5: Conscientiousness and habitual Facebook usage**

The fifth hypothesis states that conscientiousness negatively and insignificantly impacts HFU among Generation Y students. In this study, this hypothesis is supported. It can be observed in Figure 2 and Table 4 that conscientiousness exerts a weak positive influence ($\beta = 0.056$) and was statistically insignificant ($t = 0.803$) in predicting HFU.

**Outcome of testing Hypothesis 6: Habitual Facebook usage and life satisfaction**

The sixth hypothesis states that HFU positively and significantly impacts life satisfaction. In this study, this hypothesis is supported. It can be observed in Figure 2 and Table 4 that HFU exerts a positive influence ($\beta = 0.868$) and was statistically significant ($t = 15.195$) in predicting life satisfaction.

**Outcome of testing Hypothesis 7: Habitual Facebook usage and psychological well-being**

The seventh hypothesis states that HFU positively and significantly impacts psychological well-being. In this study, this hypothesis is supported. It can be observed in Figure 2 and Table 4 that HFU exerts a positive influence ($\beta = 0.423$) and was statistically significant ($t = 4.394$) in predicting psychological well-being. This result suggests that HFU is instrumental in determining the psychological well-being of Generation Y students.

**Outcome of testing Hypothesis 8: Life satisfaction and psychological well-being**

The eighth hypothesis states that life satisfaction positively and significantly impacts psychological well-being. In this study, this hypothesis is supported. It can be observed in Figure 2 and Table 4 that life satisfaction exerts a positive influence ($\beta = 0.544$) and was statistically significant ($t = 6.736$) in predicting psychological well-being. This result suggests that when Generation Y students are satisfied with their university life, it then enhances their psychological well-being.
Ethical consideration

Permission was obtained from the administration of the South African Business and Technology Institute. The researcher acquired the letter of permission, which allowed him to collect information from the Generation Y students. The approval of ethical clearance was sincerely affirmed, and this study was conducted in compliance with the ethical standards of scholastic science, including, in addition to other issues, the protection of participants’ identities and the assurance of the confidentiality of collected data obtained from the participants.

Discussion of results

The statistical analysis exposed that neuroticism positively and significantly impacts HFU among Generation Y students. This finding has ample support from previous empirical research studies, such as that conducted by Hwang (2017), who discovered that college students with high neuroticism scores predicted Facebook activities including sharing photos with others and updating their profiles. The findings of this study also authenticate the existence of a positive connection between extraversion and HFU. The results obtained in the current study are also not without empirical support. For instance, Koseoglu (2015) found that extraversion was associated with the urge to use Facebook to communicate with others. Empirical evidence was also found in this research that confirmed that there is a positive association between openness and HFU. These results are in line with the works of Bachrach et al. (2012) who discovered that openness is positively correlated with number of users’ likes, group associations and status updates on Facebook, which paralleled to the openness characteristics such as seeking new things and ideas and sharing with their friends. It was also discovered that agreeableness positively and significantly impacts HFU among Generation Y students. The results obtained in the current study coincide with the works of Sharma and Jaswal (2015) who asserted that people with the agreeableness personality trait are more inclined towards the usage of the Internet facilities, especially Facebook through which one can interact with others.

In this study, it was also discovered that conscientiousness negatively and insignificantly impacts HFU among Generation Y students. This result suggests that Generation Y students with a conscientiousness personality trait are not interested in using Facebook. A plausible reason might be that conscientious individuals tend to keep away from social network sites (Facebook) because these sites encourage procrastination and are considered a source of distraction from important tasks (Butt & Phillips 2008). The statistical analysis also exposed that HFU positively and significantly impacts life satisfaction. This result suggests that HFU is instrumental in determining the life satisfaction of Generation Y students. These findings mirror the work of Valenzuela, Park and Kee (2009) who found a positive association between intensity of Facebook use and students’ life satisfaction. The results of the analysis suggest that significant relationships can be found between HFU and psychological well-being. These results were like those reported by Jung, Pawlowski and Kim (2017) who explored associations between young adults’ Facebook use and psychological well-being. Their findings explained the significant association of Facebook use with well-being (Jung et al. 2017). Moreover, the results provide evidence that life satisfaction could predict psychological well-being. These results corroborate findings of a study conducted by Guney (2009) that provided evidence that life satisfaction is strongly associated with psychological well-being.

Theoretical contributions

As a result of the beneficial impact of personality traits on the HFU, the findings of this research would further help psychology academics who examine personality and its variations among people. In particular, within the framework of social media sites such as Facebook, their knowledge of Generation Y personalities will be improved. For instance, this research has shown that students of the Generation Y cohort with a personality characteristic of conscientiousness are not interested in using Facebook. Therefore, further scholarly introspection should be performed by academics of personality psychology to find out what other aspects trigger the personality traits of Generation Y students with conscientiousness personality traits. In addition, the findings of the present research revealed that HFU is seen as having the greatest impact on life satisfaction as stated by a path coefficient value of 0.868. Therefore, for academicians in the field of social media usage, this finding enhances their understanding of the relationship between HFU and life satisfaction, and this is a useful contribution to the existing literature on these two variables.

Practical implications

On the practitioners’ side, the findings of this study provided the significant impact of life satisfaction on Generation Y students’ psychological well-being. Therefore, this research argues that campus psychologists as well as campus counselling psychology interns who are accountable for providing psychological assistance to students can benefit from the consequences of these results by comprehensively understanding that Facebook use brings on board satisfaction among students and ultimately enhances their psychological well-being. Furthermore, the findings of the present research revealed that HFU is seen as having the greatest impact on life satisfaction as stated by a path coefficient value of 0.868, suggesting that campus or university leadership should provide Facebook access to encourage socialisation among Generation Y students, as this eventually enhances their life satisfaction.

Limitations and directions for future research

In spite of this study’s interesting results, its constraints are worthy of notice. Firstly, the findings are not generalisable to
non-student samples because students constituted the sample for gathering data. Future study therefore requires considering non-students to generalise the outcomes. In addition, the present research was restricted to the province of Gauteng in South Africa, with the other provinces being excluded. This research should be replicated in other South African provinces and other developing countries for comparative outcomes. As other insightful results can be obtained, it is also vital to test the model with other generational cohorts like the Generation Z, Generation X and Baby Boomers, which are less likely to be as techno-savvy as the Generation Y. In conclusion, the quantitative nature of the examination may have produced more illuminating and extravagant information, if a qualitative methodology was considered in this investigation. Future examinations may, as necessary, explore indistinguishable points from the current examination using a blended process technique to improve the expansiveness of the outcomes of the examination. In addition, it was discovered that conscientiousness negatively and insignificantly impacts HFU among Generation Y students. This result suggests that Generation Y students with a conscientiousness personality trait are not interested in using Facebook. A plausible reason might be that conscientious individuals tend to keep away from social network sites (Facebook) because these sites encourage procrastination and are considered a source of distraction from important tasks (Butt & Phillips 2008).

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