

Contingencies of self-worth in relation to a person's Facebook use

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Abstract

The connection between the personal importance of individually specific self-aspects (self-contingencies) and the intensity of social media use is well known (e.g. people who are overly concerned with their appearance often post many photos on social media). To explore this connection more deeply, the present study examined whether the connection between the personal importance of specific self-aspects and the intensity of social media use is influenced by the increasing popularity of social media, specifically Facebook. A comparison was performed between the use intensity and self-contingencies of two samples (831 vs 224 participants). The data showed correlations between every self-contingency and use intensity, demonstrating that social media use is interpretable with relation to the self. Some correlations remained the same across measures (e.g. the competition and appearance contingencies), but others showed a positive change, whether from negative to neutral (the family and virtue contingencies) or from neutral to positive (the academic competence and others' approval contingencies). Thus, increasing social media popularity is mirrored by increasing correlations between use intensity and self-contingencies regarding particular social relationships: family, learning groups or significant others. Accordingly, the conclusion was drawn that, over time, practically any self-contingency (except God's love) fosters increases in the individual use intensity of social media.

Key words: contingencies self-worth, Hungary, Facebook, Facebook use intensity

1. Introduction

The importance of low self-esteem in relation to Facebook use, specifically social media overuse and addiction, has been emphasised extensively (e.g. Steinfeld et al., 2008; Hughes et al., 2012; de Cock et al., 2014). Facebook can facilitate compensatory self-presentation; furthermore, it provides rapid reinforcement in the form of the number of likes, particularly for individuals whose self-esteem is not supported by meaningful life goals that provide a connection to peers. Several authors have emphasised the importance of self-related peer information to explain the use of Facebook (Burrow, Rainone, 2017; Burwell et al., 2018). Hence, the conceptual framework of self-worth contingency theory (Crocker, Wolfe, 2001) suggests that others' approval contingency should be related to social media use intensity, and this assumption has been confirmed (e.g. Kanat-Maymon et al., 2018). Thus, in this study, further consideration was made of findings using contingent self-esteem theory to explain Facebook use, formulating numerous expectations regarding the relationship of the importance of contingencies with Facebook use. This research therefore observed a correlation with the intensity of Facebook use for all contingencies, confirming the central importance of the construct of self-worth to explain Facebook use.

2. Socialising on Facebook

2.1. Increasing Facebook usage

According to the data relevant to this study and its sample, 42.10% of inhabitants of Hungary used Facebook in 2014, the year in which the first sample of the present authors was collected (Toth, Mirnics, 2014). By the time the second sample was obtained, this number had increased significantly to 60.30% (Facebook Hungary, 2018). Therefore, Facebook is the most important social networking site in Hungary. There is already a large body of empirical data on the popularity and occasionally excessive use of Facebook (e.g. Kittinger et al., 2012; Hormes et al., 2014; Pontes et al., 2015). According to a study by M. A. Kiss (2021), among a sample of people who use their smartphones more than normal users, a person spends, on average, between one and three hours on social networking sites. A meta-analysis by C. Marino et al. (2018), which summarised the results of 56 articles with a sample of nearly 28,000 us-

ers, indicated that problematic Facebook use is distinct from internet addiction and should be considered a separate phenomenon. Their results showed that problematic Facebook use is positively correlated with the amount of time spent online and with internet addiction but is negatively correlated with self-esteem. According to a Hungarian study (Poto 2012), both university and high school students access Facebook approximately four times per day, with high school students spending, on average, 43 minutes per visit, while university students spend an average of 33 minutes, totaling approximately two hours per day. Although it is difficult to clarify these estimates, a university student thus spends approximately 730 hours per year on Facebook. This usage time has increased since 2012 and has affected an increasing number of people, as social media use, particularly Facebook use, has risen.

2.2. How Facebook meets social needs

There have been several studies of the role of Facebook in fostering social relationships. The platform satisfies social needs by helping to build and maintain relationships, thereby increasing life satisfaction and building trust between people (e.g. Valenzuela et al., 2009; Joo, Teng, 2017; Himat 2020; Lasode et al., 2020). Moreover, since the beginning of the COVID-19 pandemic, Facebook has been used more often than previously to alleviate feelings of social isolation (Toquero, Talidong, 2021).

2.3. The downside of Facebook: problematic use

As Facebook has become an increasingly popular platform for social interaction, researchers have also started to evaluate its dark side. Users find controlling the amount of time spent on Facebook incredibly difficult (Lee et al., 2012), and maintaining this control is especially difficult for young people (Koc, Gulyagci, 2013). C. Marino et al. (2018), in their meta-analysis based on approximately fifty articles, suggested that, compared to problematic internet use, problematic Facebook use has more individual characteristics since it meets specific psychological needs. Some authors have identified Facebook addiction, which has also been the subject of individual studies (Andraessen et al., 2011; Griffiths et al., 2014; Bányai et al., 2017). Addiction is defined as the continued engagement in substance abuse or particular behav-

aviours despite their adverse consequences. Facebook addiction thus refers to the inability of users to set limits on their Facebook use despite the adverse consequences for them (e.g. disrupted relationships or performance deficits). Among the personality factors that predispose one to addiction, D. J. Hughes et al. (2012) identified poor self-regulation, a preference for online interaction, and maladaptive thinking about the identity segments on Facebook. A recent meta-analysis (Ryan et al., 2014) showed that Facebook addiction is associated with low well-being, loneliness and a tendency towards depression; the relevant and recurring factor is that such individuals use Facebook to prevent boredom and to obtain social support to regulate and/or lift their moods. Similar results have been found by A. L. Ferris and E. E. Hollenbaugh (2018), who demonstrated a positive link of Facebook addiction with low self-esteem, introversion and neuroticism. Previous studies have also shown that Facebook overuse induces academic underachievement (e.g. Hegazy et al., 2021; Hughes et al., 2021).

2.4. The link between low self-esteem and Facebook use

The relationship between low self-esteem and Facebook use is effectively explained by the social compensation hypothesis (Valkenburg et al., 2005; Zywicki, Danowski, 2008; Ferris, Hollenbaugh, 2018), which suggests that people with low self-esteem tend to use Facebook more frequently because it helps them to shape the impressions that they form about themselves regarding others to better satisfy their need for belonging. Low self-esteem is therefore a key risk factor for maladaptive social network use (e.g. Steinfeld 2008; de Cock et al, 2014) because Facebook users are highly susceptible to rapid self-esteem reinforcements from others (Burrow, Rainone, 2017; Burwell et al., 2018). Notably, however, not all researchers have found low self-esteem to be the primary mechanism for excessive social network use. According to social enhancement theory, Facebook use is primarily associated with individuals who are active and popular offline, further strengthening their extant social relationships (Kraut et al., 2002; Valkenburg et al., 2005; Zywicki, Danowski, 2008). According to the meta-analysis by C. Marino et al. (2018), both approaches are consistent with users' motivation to reduce negative emotional states, capably regulate emotions and attempt to satisfy internal and emotional needs. These processes might also be relat-

ed to contingencies of self-worth, which shape self-worth through similar mechanisms.

3. Contingencies of self-worth

3.1. The concept of contingencies of self-worth

Early theories initially conceived self-worth as one dimensional (Piers 1969), although it was later perceived to be multidimensional (Marsh 1993). Regardless of the number of dimensions, studies have shown that positive events alone do not always lead to an increase in self-esteem (Maricutoiu et al., 2012). J. Crocker and C. T. Wolfe (2001) thus identified seven distinct aspects, i.e. contingencies, which underpin self-evaluation. They theorised that not all contingencies are equally important to an individual; hence, a change in self-worth as a result of an effect is most likely to occur if a contingency important to the person is targeted. Second, self-esteem is influenced by the extent to which people feel that they meet the claims that their personally important contingencies exert on themselves. For example, students for whom the contingency of academic competence is important experience greater fluctuations in their self-worth when they receive feedback on academic achievement than those for whom other contingencies are important (Crocker et al., 2002). Importantly, contingencies have been shown to be stable (Park et al., 2004). Moreover, according to M. A. Stefanone et al. (2011), contingencies of self-worth can be classified into two groups: public contingencies (others' approval, appearance, competition) and private contingencies (family support, virtue, God's love). Those for whom public contingencies are more important have lower self-esteem (Kernis et al., 2008), more depressive symptoms (Schöne et al., 2015), and lower levels of overall well-being (Schöne et al., 2015). In contrast, among university students, the importance of private contingencies is negatively connected to problematic behaviours, e.g. excessive alcohol consumption or eating disorders (Crocker, Knight, 2005).

3.2. The link between contingencies of self-worth and Facebook use

The relationship between certain aspects of contingencies of self-worth and Facebook use has already been shown in the literature. According to the study by

M. A. Stefanone et al. (2011), private contingencies are negatively associated with excessive social network activity. Y. Kanat-Maymon et al. (2018), who specifically included the aspect of others' approval in their study, found that others' approval contingency is strongly associated with excessive internet use and Facebook addiction. In general, salient research has not only investigated the rough correlations between contingencies and social media use intensity but has also linked specific aspects of Facebook use to self-worth contingencies. For example, an international comparative study (Prieler et al., 2021) found that the more important that others' approval contingency is to Asian and European women, the more dissatisfied that they are with their own bodies. This finding affirms that of N. M. Overstreet and D. M. Quinn (2012), who specifically observed that users who rate the contingency of others' approval as the most important compared themselves to others on Facebook more often than other users. Z. Yue and M. A. Stefanone (2021) also demonstrated a positive and significant relationship between the importance of others' approval contingency and sharing selfies on social media.

4. Empirical study

4.1. Questions and hypotheses

Given the research and findings discussed above, a reasonable question is whether the growing prevalence of social media has an impact on the relationship between Facebook use intensity and self-contingencies. To address this question, in this research hypothesis, it was hypothesised that there is a correlation between the importance of an aspect and Facebook use if aspect-relevant information is available. Furthermore, the extent of such positive relatedness will likely increase with a growing number of users. Accordingly, an examination was performed of the possible correlation of each self-contingency with use intensity separately. Since there is a positive correlation between others' approval contingency and excessive Facebook use (Kanat-Maymon et al., 2018; Yue, Stefanone, 2021), the hypothesis was that the more widespread that Facebook is, and consequently the more people that an individual knows on Facebook, the greater that the use intensity is. In other words, as the use of Facebook increases, peer feedback is increasingly sought on social media by

individuals who are particularly receptive to it. With respect to the family support contingency, the research hypothesis is that a person will use Facebook more often when he or she supposes that his or her family members will also use it; otherwise, he or she will not. The more prevalent that Facebook is, the stronger that the relationship between family support contingency and Facebook use intensity will be. This expectation is supported by many people currently communicating with their family members mostly through this social media network (Joo, Teng, 2017). Regarding competition contingency, the assumption was that the relationship between the importance of this aspect and use intensity becomes stronger over time since competing partners will increasingly use social media. Additionally, a positive correlation is assumed between the importance of appearance contingency and Facebook use intensity since the platform offers numerous photos and other visual stimuli. Thus, by its very nature, it favours the transmission of superficial external information. Since no specific partner (family member, rival) is needed to examine the success of meeting appearance criteria, the prevalence of Facebook use should not affect the relationship between the importance of appearance contingency and use intensity. T. Davidson and K. F. Lee (2014) also found that rather religious individuals report greater levels of Facebook-related anxiety; however, M. A. Stefanone et al. (2011) could not identify any association between this "God's love contingency" and Facebook use intensity. Accordingly, the hypothesis was that the spread of Facebook does not affect the association between use intensity and this contingency. In relation to the contingency of virtue, which also belongs to the group of private contingencies and is therefore rather personal, the assumption was that it does not change in the relationship between self-contingency and use intensity, which is believed to be negative according to M. A. Stefanone et al. (2011). Finally, concerning the academic competence contingency, research has posited a higher positive correlation with Facebook use intensity as this social media network becomes more pervasive as a platform for learning through its presence in study groups and its use for sharing of information.

In summary, there are relationships between Facebook and the importance of contingencies that can be considered stable due to the nature of social media, and there are similar relationships that will change over time; i.e. they will become in-

creasingly strong as the use of Facebook becomes increasingly widespread. Specifically, for a useful evaluation of the contingencies of competition, academic competence, family support, and others' approval, their relevant personal acquaintances must use Facebook. However, concerning the contingencies of virtue and God's love, individual Facebook use intensity is less likely to depend on the social media use of personal acquaintances. Finally, an evaluation involving the appearance contingency can be effective even among strangers; thus, the link between the importance of self-contingency and Facebook use intensity is not expected to change over time.

4.2. Procedure and participants

To answer the research questions and test the hypotheses, the method was chosen of comparing the experiences of two measurements that were far apart in time. The two measurements, which were obtained approximately four years apart, did not involve the same individuals but persons from similar immersion backgrounds since they were all students at the Apor Vilmos Catholic College with a wide variety of majors. Typically, students are not in their courses for such a long period of time. The requirement for participation, which was voluntary and for which no compensation was provided, was a current Facebook membership. The implementation of the present study was approved by the responsible ethics committee. The participants were fully informed about the study and provided their informed consent to participate online. During the period between the two measurements, Facebook use in Hungary and worldwide increased greatly. For contingencies necessitating person-specific peer information, it is reasonable to assume that, if more of a person's specific acquaintances use Facebook, the correlation between the importance of a contingency and social media use intensity will increase. These self-contingencies are others' approval, competition, academic competence, and family support. The importance of God's love, virtue and appearance contingencies to Facebook use intensity is, due to the nature of Facebook, unlikely to depend on the extent of acquaintances using this social media platform.

The first data collection in 2014 included 831 subjects, and the second data collection in 2018 included 224 subjects. There were 131 men in the first sample and

22 in the second, with average ages of 26 and 30 years old, respectively, and standard deviations of eight and ten years. Although men were in the minority compared to women in both measurements, the proportion of men was larger in the first data collection.

4.3. Measurements

Demographics. Respondents indicated their age and sex. Since they all were university students, questions did not address education.

Facebook questionnaire. Regarding Facebook use intensity, the questionnaire asked about the respondents' frequency of visits, how often they used Facebook and how many approved acquaintances that they had. Frequency of use was answered with a five-point scale from 1 to 5, where 1 was "I use Facebook less often than daily", 2 was "daily", 3 was "several times per day", 4 was "every hour during the day", and 5 was "I am on it almost all the time".

Contingencies of self-worth were assessed with the 35-item, seven-point Likert scale questionnaire proposed by J. Crocker et al. (2003). The scale identifies seven contingencies as follows: others' approval, e.g. "I cannot respect myself if others do not respect me"; appearance, e.g. "When I think I look attractive, I feel good about myself"; competition, e.g. "My self-worth is affected by how well I do when I am competing against others"; academic competence, e.g. "I feel better about myself when I know I'm doing well academically"; family support, e.g. "Knowing that my family members love me makes me feel good about myself"; virtue, e.g. "Whenever I follow my moral principles, my sense of self-respect receives a boost" and God's love, e.g. "My self-esteem goes up when I feel that God loves me". Exploratory factor analysis was used and revealed two dimensions that corresponded to the previous research findings of M. A. Stefanone et al. (2011). These dimensions comprised the group of private contingencies (Stefanone et al., 2011; Toth, Mirnics, 2014) and included the contingencies of family support, virtue, and God's love, while the group of public contingencies included others' approval, appearance, competition and academic competence.

4.4. Results

Table 1 shows Cronbach's alpha values from data collections 1 and 2, means for frequency of use and number of acquaintances, the mean values for different contingencies, and the Z values from Mann-Whitney-U tests and p values. The scales showed good consistency with respect to all contingencies and data collections. The two samples did not differ in their frequency of use but differed in the number of acquaintances. For those who participated in the second data collection, competition and appearance mattered less, while the God's love contingency mattered more.

Table 1. Frequency of use and number of acquaintances by data collection and Cronbach's α values and means by contingencies

Variables	α_1	α_2	Mean 1	Mean 2	Z	p
Frequency of use			2.637	2.705	-0.896	0.370
Number of acquaintances			471.687	583.442	-3.332	0.001
Family support	0.782	0.775	5.327	5.365	-0.750	0.450
Competition	0.849	0.910	4.981	4.485	-4.419	0.001
Appearance	0.723	0.759	4.839	4.590	-2.562	0.010
God's love	0.958	0.954	3.633	4.176	-3.450	0.001
Academic competence	0.795	0.801	5.075	4.932	-1.493	0.130
Virtue	0.718	0.709	5.167	5.293	-1.501	0.130
Others' approval	0.842	0.827	4.013	4.036	-0.114	0.910

Source: Own research (n1 = 831, n2 = 224)

Table 2 shows the relationships among age, frequency of use and number of acquaintances in data collection 1 and 2. Clearly, younger people used Facebook more often and had more acquaintances. Age and frequency of use were thus positively correlated in both data collections.

Table 2. Relationships among age, frequency of use and number of acquaintances in data collection 1 and 2 (rho values)

Variables	Data collection 1		Data collection 2	
	Frequency of use	Number of acquaintances	Frequency of use	Number of acquaintances
Age	-0.320**	-0.345**	-0.410**	-0.400**
Frequency of use		0.320**		0.376**

Source: Own research (n1 = 831, n2 = 224; ** p < 0.01)

Table 3 shows how the frequency of Facebook use and number of acquaintances in the two measures were related to the importance of different self-worth contingencies. In relation to the frequency of use, the results showed that there are temporally stable and variable aspects.

Table 3. The importance of contingencies regarding Facebook use frequency and number of acquaintances (rho values)

Contingency	Frequency of FB use		Number of approved acquaintances	
	Data collection	Data collection	Data collection	Data collection
	1	2	1	2
Family support	-0.127**	0.039	0.047	0.087
Competition	0.111*	0.192**	0.100**	0.103
Appearance	0.170**	0.245**	0.026	0.144*
God's love	-0.135**	-0.182**	0.033	-0.029
Academic competence	0.049	0.187**	0.054	0.117
Virtue	-0.166**	-0.079	-0.047	0.026
Others' approval	0.027	0.182**	-0.025	0.095

Source: Own research (n1 = 831, n2 = 224; *: p < 0.05; **: p < 0.01)

There is a stable correlation over time among the patterns of the competition, appearance, and God's love contingencies. Those paying more attention to appear-

ance and those emphasising the competition contingency used Facebook more intensively than people with less interest in these two contingencies in both the first and second data collections. In contrast, those with an important God's love contingency used Facebook less.

Changes were observed in the other four contingencies. While in the first sample, those who reported family support and virtue as more important used Facebook less, this case was no longer true for the second sample. However, for the academic competence and others' approval contingencies, a positive relationship was only found between Facebook use and these contingencies in the second measure.

Although there was a correlation between frequency of use and number of acquaintances in both measurements, the self-worth contingencies showed little correlation with the number of acquaintances. Only in the domains of the competition contingency (first measurement) and the appearance contingency (second measurement) were positive correlations with the number of acquaintances observed.

5. Discussion

Based on these results, over time, practically any self-contingency (except God's love) pushes a person increasingly towards more intense use of social media. This finding affirms the suggestion that contingencies of self-worth are a promising concept for understanding the intensity of Facebook use. However, the results of this research should be interpreted with caution considering the imbalances in the numbers of participants and distributions of gender in the two samples. In the samples, these imbalances like occurred because the college that the participants attended had mostly female students (kindergarten teachers, teachers). However, the overrepresentation of women in a sample has also been found in many other studies (Wilson et al., 2010; Alabi 2013; Wolniczak et al., 2013; Eijnden et al., 2016; Jafarkarimi et al., 2016), most likely because of women's gendered role in offering cooperative replies to requests for participation in the included studies.

A correlation was found between the frequency of use and each of the seven self-assessment contingencies. Of these contingencies, some were specific to only one of the measures, so the hypothesis concerning change over time was confirmed. No-

tably, the correlation of the others' approval contingency and use intensity in the second measurement mirrored the correlation of Y. Kanat-Maymon et al. (2018), who pointed out that the others' approval contingency is able to predict Facebook addiction and excessive internet use. That this correlation was only observed in the second sample could be explained by the pool of users and thus the pool of acquaintances and feedback providers having to be quite large to receive satisfactorily intense feedback from Facebook. Thus, this finding affirms the hypothesis that there are relationships between self-contingencies and Facebook use, which become increasingly stronger as the use of this social media network becomes increasingly widespread. Specifically, those relationships of certain self-contingencies, i.e. competition, others' approval, family support and academic competence, with Facebook use intensity are expected to strengthen when the identity of a significant feedback provider is crucial. Thus, several other time-varying correlations beyond the correlation between others' approval and Facebook use were identified: the connection between competition and Facebook use intensity changed somewhat, and the correlation became stronger. The assumption is that the correlation between the academic competence contingency and the frequency of Facebook use among students has increased in the context of the increasing use of social media; thus, the hypothesis on this point is also supported. Furthermore, since family members have likely started to interact more on Facebook, the association with the family support contingency has changed in line with the hypothesis. How common Facebook has become for family communication was indicated by T. M. Joo and C. E. Teng (2017), who described how 90% of their respondents said that they interact with family members on Facebook more than in person. With the increasing expansion of this social networking site and growing numbers of friends, Facebook has presumably become more normative, which might be a reason for the disappearance of the negative relationship between Facebook use intensity and virtue contingency. Thus, this hypothesis was not confirmed since no change was expected.

Correlations that did not change over time were also identified (the contingencies of appearance and God's love), so assumptions about these essential correlations were confirmed. These correlations might be due to the nature of Facebook commu-

nication, which has always tended to focus more on external aspects, rapid and attention-attracting information, and social comparisons (competition) and less on deep and elaborate thoughts. Facebook is highly suited to obtaining quick reinforcements of the aspects of self-worth that concern externalities (Stefanone et al., 2011; Pounders et al., 2016). Thus, the content that people share about themselves on social networks can be considered specific forms of behaviour that aim to create and maintain positive impressions of themselves (Yue, Stefanone, 2021).

The above characteristics of overall superficiality likely reflect that Facebook use, like all media use, can be characterised by the quality of consumption in addition to the quantity. Of course, it is also possible to read quality literature, attend theatre performances or concerts, listen to scientific or public debates and even conduct worship services on Facebook. Particularly during the period of physical remoteness entailed by the COVID-19 pandemic, the above activities were practically exclusively available on the internet and, in many cases, on Facebook. Accordingly, many individuals who had not been Facebook users before became social media users, sometimes by necessity. Further research comparing Facebook use with the contingences of self-worth should also consider these qualitative aspects. Nevertheless, research thus far has suggested that people become addicted to Facebook primarily due to its social interaction potential rather than as impersonal consumers of content designed for a larger audience (Aksoy 2018).

6. References

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