FACE THE BURNOUT!
LINK BETWEEN ACADEMIC BURNOUT,
FACEBOOK USE MOTIVES AND IMPORTANCE,
AND FACEBOOK INTRUSION:
A LONGITUDINAL STUDY

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The association between problematic internet use and school burnout among adolescents so far has not gained sufficient attention. Only a few studies have been conducted about social media overuse and burnout syndrome in an educational context. The main goals of the current study were (1) to examine the mediation role of Facebook (FB) motives on the relationship between academic burnout and FB intrusion, and (2) to test the validity of the cycle. A two-wave study was carried out (measurement at the beginning, Time 1, and at the end of the semester, Time 2) on a sample of 115 university students from Poland. The Maslach Burnout Inventory for Students, the Facebook Intrusion Scale, and the Facebook Motives and Importance Scale were used. The Time 1 burnout indicators did not significantly predict Time 2 FB intrusion, however Time 2 exhaustion and Time 2 Personal importance of FB explained 57% of the variances in Time 2 FB intrusion. Time 1 Personal importance explained 21% of the variances in Time 2 FB intrusion. The predictive capacity of academic burnout on FB intrusion appeared to exist only if we consider the motives and importance of FB. Moreover, the social motives and personal importance of FB appear to be critical to breaking the mutually reinforcing academic burnout–FB intrusion cycle.

Keywords: FB motives; FB importance; FB addiction; academic burnout.

Globally, 4.66 billion people are active users of the Internet, with 4.2 billion active social media users, and 4.16 billion active mobile social users (Johnson, 2021a). Moreover, Facebook (FB) is the most popular social network with 2,740 million active users. Young people aged 18–34 are the most common digital population of users (comprising 50% of internet users in 2019) (Tankovska, 2021). As the duration of mobile internet usage per week has been rising (Johnson, 2021b), more people are being exposed to negative consequences of online activity, and in the literature more studies are being conducted on the "dark side" of digital technologies. In recent years, with the development of information technology, we can observe an increasing number of new mental problems among internet and smartphone users such as internet addiction, and one of the forms of this is social media addiction (Social Network site addiction, SDS) (Hou et al., 2019). The prevalence of FB addiction among young people is high, up to 53.3%, with 4–6% of cases indicating severe FB addiction (Gul et al., 2018; Sharma & Meena, 2017). Facebook is highly attractive for students who, by entering into new university relationships, create a close group where they exchange information, discuss the details of the subjects/ exams, and improve communication in the group. In addition, Facebook gives the opportunity to continue relationships despite distance, but also to keep up to date with information about people in one's circle. Despite the abovementioned benefits of FB activity, studies have shown that FB friendships are mostly initiated for social compensatory friending motives, and are not enough to reduce loneliness or increase self-esteem (Błachnio & Przepiórka, 2019). At the same time, the use of new social media bears a high risk of developing behavioral addictions. One example is Facebook addiction with core symptoms being excessive involvement in online activities and undisciplined use of Facebook, which results in everyday functioning problems (Elphinston & Noller, 2011). What is more, FB overuse is connected with various academic problems, e.g., lower academic performance and higher student burnout (Walburg et al., 2016). It is worth mentioning that experiencing burnout symptoms indicates chronic distress and the feeling of extreme tiredness, and impairment of emotional and cognitive processes (Schaufeli et al., 2020). Educational burnout (also student burnout, academic burnout, school burnout) is a phenomenon of exhaustion because of overwhelming study demands, a cynical and uninvolved approach to study, and a sense of inefficiency in self academic performance (Salmela-Aro et al., 2017). The problem of the level of burnout and social media is perceived by researchers from two different angles. On the one hand, emotions that an individual experiences online, such as jealousy and anxiety, are strongly associated with social media use and are consider as predictors of student burnout (Liu et al., 2011). For example, jealousy and anxiety mediate the link between social media addiction and burnout. On the other hand, researchers deal with the issues of social media

burnout, defined as the degree to which a user feels (1) *emotional exhaustion that accompanies building a network*, (2) *depersonalization* equated to emotional inconsistency and (over)involvement in a network; (3) *ambivalence* because of the lack of recognition the perks of using social media (Han, 2018).

Purpose of the Present Study

While numerous studies have proved that motives for FB use are directly connected to FB addiction among adolescents and young adults (Błachnio et al., 2016), and some of them have indicated the mediation role of FB motives on the associations between different psychological constructs and FB addiction (e.g. Lee, 2019; Omar & Subramanian, 2013), few of them have examined the associations between Facebook indicators (FB motives and FB intrusion) and burnout syndrome among adolescents and emerging adulthood in longitudinal studies (Akungu et al., 2021; Walburg et al., 2016). Therefore, in our opinion many issues in this area remain uninvestigated. Hence, we examined the mediation effect of motives for FB use on academic burnout and FB addiction. Considering past studies, we formulated the following research hypotheses:

> Hypothesis 1: *A higher level of academic burnout indicators (Time 1 and 2) is associated with a higher level of FB intrusion (Time 2).*

Students are exposed to chronic stress due to the pressures of academic and professional success. High performance academic work may be very demanding and exhausting, and leading to psychological strain. Long term exposure to educational stress may result in exhaustion, cynicism and students' personal ineffectiveness and inadequacy, known as burnout syndrome. In the Job Demands-Resources model, successfully applied to educational settings by Salmela-Aro and Upadyaya (2014), students who are overloaded by school-related demands struggle with health impairment. Bakker and de Vries (2021) stated that the mental problems occur as a result of combined depletion of personal resources and too high demands related to job/school as well as due to maladaptive (failed) self-regulation systems and coping inflexibility—the inability to start the recovery process. Furthermore, Bakker and Demerouti (2018) proposed a process that may inversely activate loss of the cycle of job/school-related demands including the appearance of maladaptive behaviours that lead to difficulties in meeting job requirements, conflicts and more unhealthy behaviors over time. Tomaszek and Muchacka-Cymerman (2020) proved that internet addiction (IA) may be considered as an example of this self-undermining process, and that problematic use of the Internet may secondarily raise the

overburden of students. According to results of longitudinal studies conducted by Akungu et al. (2021) school burnout at Time 1 is positively associated with later disturbed sleep related to social media use. Walburg et al. (2016) concluded that only the exhaustion dimension for girls and the inadequacy dimension for boys were particularly related to FB addiction. Additionally, in studies conducted by Salmela-Aro et al. (2017), school burnout measured at Time 1 predicted excessive internet use at Time 2, but only exhaustion allowed later problematic internet use to be predicted.

Hypothesis 2: *The higher the level of FB motives (Time 1 and 2), the higher FB intrusion (Time 1 and 2).*

The meta-analysis revealed the strongest associations between problematic FB use and internal FB motives with negative valence (Marino et al., 2018). The most popular motivations for FB use were social motives (maintaining relationships with friends, finding new friends, avoiding loneliness, interpersonal needs), instrumental motives (to pass time, avoid boredom), and forgetting about real life problems—escapism (Ryan et al., 2014). Lee (2019) confirmed that FB access motivation directly predicts the level of FB addiction, with the strongest associations for habitual use being curiosity about others' life, and maintenance of social connections.

Hypothesis 3: *Academic burnout indicators (Time 1 and 2) are associated with FB motives (Time 1 and Time 2).*

Empirical evidence to justify this hypothesis comes from the findings that the more adolescents report burnout symptoms, the more intensively they use the social network (Demirci et al., 2020). This is because intensive use of social networks is a way of dealing with school-stress and is an example of an escape mechanism from problems in reality. Moreover, Walburg et al. (2016) emphasized that this is an escape tool from the awareness of a gap between the ideal and the real self-image. This discrepancy may be considered as one of the motives for FB usage. In addition, Yang and Brown (2013) found that the more students used FB for new relationships, the lower their social adjustment to student life was, whereas the more they were motivated to use FB to maintain existing relationships, the higher their social adjustment to student life was, regardless of gender. This suggests an important link between FB usage and lower academic performance, and the other indicators e.g. school burnout.

Hypothesis 4: *FB motives (Time 1) mediate the association between academic burnout (Time 1) and FB intrusion (Time 1 and 2).*

Hypothesis 5: *FB intrusion (Time 2) is associated with academic burnout (Time 2) via FB motives (Time 2).*

Evers et al. (2020) suggested the existence of a vicious cycle—i.e., adolescent burnout via sleep disorders caused by excessive social media use increases the risk of poor academic performance that may later lead to higher burnout. Moreover, academic burnout may be recognized as a result of a discrepancy between academic expectations and high standards, and the real academic results. For this reason, it is possible that escaping from real life problems by engaging in extensive FB use worsened academic performance, and in turn heightened the burnout symptoms. Such a mechanism confirms the studies by Demirci et al. (2020), who found that FB addiction mediated school burnout and engagement relationship. Liu and Ma (2020) revealed that clinical and psychological characteristics, such as envy and social media use anxiety, mediated the association between social media addiction and burnout. Additionally, Kim et al. (2017) found that lower school performance predicted higher internet addiction, but this relationship was dependent on the length of time spent on the Internet, and non-educational purposes of internet use. Furthermore, Rae and Lonbory (2015) confirmed that the association between quantity of FB overuse and psychological well-being is mediated by two FB motives, i.e., access to FB for friendship purposes and for connection purposes (e.g., making new friends). The results described above, despite not proving our hypothesis directly, suggest that when considering FB addiction, we must take into account the motives of online activity.

METHOD

Participants and Procedure

The study population consisted of 130 university students. At Time 1 (T1, beginning of the semester), 120 (80%) usable questionnaires were returned. At Time 2 (T2, 4 months later, end of the semester), 115 participants took part in our research, dropout $N = 5$ (4%). Our final study sample consisted of $N = 115$ students of psychology and teaching courses from Poland ($N = 98$, 85% female). The sample size requirements were calculated with G*Power free software (Faul et al., 2009). Using a calculator for sample size, the numbers of required participants for conducted statistics were as follows: (1) *t*-test with two dependent means ($N = 44$); (2) linear multiple regression model (fixed model R^2 increase) with α error equal to

.05 for 6 predictors in the model ($N = 107$). The sample sizes necessary to achieve .80 power in bootstrap biased corrected method for mediation analysis (with the conditions $\alpha = .26$ and $\beta = .39$) according to Fritz and MacKinnon (2007) required 115 subjects. The students' ages ranged from 19 to 23 ($M = 20.41$, $SD = 0.93$). The participants were informed of the anonymity of the study. The study was approved by ethics committees. Participants were recruited during academic classes and had to meet one criterion: they had to be active FB users. They mostly accessed social media each day (87% of the participants), and 76% accessed FB each day, only 5% of them declared to use Facebook 1–2 times a month. 92% indicated the FB messenger platform as the most visited website in the last year. They answered paper-and-pencil sets of questionnaires. The students received no remuneration or credit points for participating in the research project. They were informed about the study goals and the possibility of opting out from the study at any time without any consequences. The data were collected during the 2019/2020 academic year, before the COVID 19 pandemic.

Measures

The Facebook Intrusion Scale (FIS) by Elphinston and Noller (2011) is used to measure addiction to Facebook. The scale includes eight statements (e.g., *I often think of Facebook when I do not use it*) which the tested person responds to on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*). The higher the score, the higher FB addiction intensity. The questionnaire has good psychometric value with Cronbach's α at.84. In this study, α ranged between .85 at T1 and .88 at T2.

The Facebook Motives and Importance Scale measures the level of the personal importance of Facebook and Social and Instrumental motivation to use it. The scale includes 21 statements (e.g., *I want to express and present myself*) to which the subject responds on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*) (Błachnio et al., 2016). The scale allows for measurement of three characteristics of FB users: Social motives of FB use (α between .51 at T2 and .57 at T1); Instrumental motives of FB use (α between .60 at T1 and .66 at T2) and Personal importance of FB (α between .83 at T1 and .85 at T2).

The Maslach Burnout Inventory for Students (MBI-SS) by Schaufeli et al. (2002) was used to measure academic burnout. The scale includes 15 statements (e.g., *My studies exhaust me emotionally*) to which the respondent answers on a 7-point Likert scale, from 0 (*never*) to 6 (*every day*). High scores on the Exhaustion, Cynicism and Academic Inefficacy subscales are interpreted as indicating the

presence of burnout. In this study, α ranged for the total score of MBI between .68 at T1 and .81 at T2, and for its three core dimensions ranged between .86 at T1 and .89 at T2 (Exhaustion); .69 at T1 and .70 at T2 (Cynicism); .75 at T1 and .72 at T2 (Professional efficacy).

Data Analysis

IBM SPSS Statistics v.22 with macros developed by Hayes and Rockwood (2017) was used for all statistical data analyses (descriptive statistics, Pearsons' analyses, regression models, simple mediation analysis (Model 4 by Hayes).

RESULTS

Changes in Academic Burnout and Facebook Usage Over Time

University students reported that from T1 (beginning of the semester) to T2 (end of the semester) their overall level of academic burnout was significantly higher, especially the feeling of exhaustion, and additionally their cynical attitude towards studying became stronger. In line with our prediction, there was no difference in the level of personal inefficacy. Additionally, the level of Facebook Intrusion was similar at Time 1 and Time 2, as were the levels of Facebook motives e.g. Social use of Facebook; Instrumental use of Facebook and Personal importance of Facebook (see Table 1).

Table 1
Descriptive Statistics

Variable	T1 M (SD)	T2 M (SD)	T1 α/ωh	T2 α/ωh
Exhaustion (E)	24.43 (10.63)	28.11 (10.46)***	.86/.87	.89/.89
Cynicism (C)	7.16 (5.43)	10.15 (5.35)**	.69/.70	.68/.70
Professional inefficacy (PI)	18.04 (7.40)	17.30 (6.47)	.75/.75	.72/.74
Academic burnout overall score (MBI)	49.32 (17.90)	55.49 (16.42)***	.68/.74	.77/.81
Facebook Intrusion (FB)	20.53 (9.46)	20.84 (10.12)	.83/.85	.88/.88
Social Facebook Use Motives (FBS)	9.28 (2.86)	8.86 (2.75)	.57/.60	.51/.59
Instrumental Facebook Use Motives (FBI)	8.71 (2.96)	8.73 (3.29)	.60/.67	.66/.69
Personal importance of Facebook (FBP)	22.22 (7.87)	22.76 (8.44)	.83/.84	.85/.85

Note. T1 = levels of measured variables at Time 1; T2 = levels of measured variables at Time 2.
**$p < .01$, ***$p < .001$.

Associations Between FB Usage Indicators (FB Motives and FB Intrusion) and Academic Burnout

Based on the Pearson's analysis test, Facebook intrusion had no significant correlations with academic burnout, exhaustion and personal inefficacy (measured at both times). Only cynicism positively correlated with Facebook intrusion measured at Time 2. Facebook use motives were positively correlated with Facebook intrusion at Time 1 (all indicators) and Time 2 (except social motives of use). The most significant associations were found between academic burnout indicators and social motives of Facebook use (all negative correlations). Instrumental motives of FB use mostly correlated with personal inefficacy, and the personal importance of Facebook was only associated with cynicism (both measured at Time 2).

The Predictive Power of Academic Burnout Indicators and FB Motives and Importance of FB Intrusion

A multiple linear regression was used to examine the predictive capacity of academic burnout indicators and FB use motives measured at Time 1 and Time 2 against FB Intrusion. The percentage of variance determined was of medium-high magnitude, indicating that variables from the regression models explain well the level of FB intrusion. In two blocks, FB Intrusion measured at Time 2 was explained only by personal importance of FB measured at Time 1 (16% of the variances, block 1) and measured at Time 2 (52% of the variances, block 3). In block 2, Exhaustion measured at Time 1 and personal importance of FB measured at Time 2 explained 57% of variances in FB intrusion at Time 2). In block 4, Time 2 cynicism and Time 1 Personal importance of FB explained 21% of the variances in Time 2 FB intrusion (see Table 2).

Table 2

Results of Hierarchical Regression Analyses Examining the Effect of Burnout Dimensions and FB Motives Measured at T1 and T2 on FB Intrusion at Time 2

Variables	FB Intrusion T1	FB Intrusion T2
Block 1		
F, R^2 (Adj.R^2)	$F(6, 107) = 27.85^{***}$; $R^2 = .61(.59)$	$F(6, 107) = 4.64^{***}$; $R^2 = .21(.16)$
E_{T1}	$-.03[-.16, .11]$	$-.06[-.23, .13]$
C_{T1}	$.03[-.21, .36]$	$.01[-.42, .39]$
PI_{T1}	$.13[-.02, .32]$	$.04[-.24, .28]$
FBS_{T1}	**.25**[.27, 1.32]**	$.13[-.28, 1.16]$
FBI_{T1}	$-.01[-.50, .42]$	$.16[-.06, 1.12]$
FBP_{T1}	**.67***[.66, .96]**	**.32**[.09, .83]**
Block 2		
F, R^2 (Adj.R^2)		$F(6, 106) = 25.80^{***}$; $R^2 = .59(.57)$
E_{T2}		**−.17* [−.31, −.01]**
C_{T2}		$.09 [-.22, .53]$
PI_{T2}		$.01 [-.22, .22]$
FBS_{T2}		$.10 [-.17, .87]$
FBI_{T2}		$-.04 [-.58, .27]$
FBP_{T2}		**.72*** [.69, 1.02]**
Block 3		
F, R^2 (Adj.R^2)		$F(6, 107) = 21.01^{***}$; $R^2 = .54(.52)$
E_{T1}		$.04[-.14, .19]$
C_{T1}		$-.00[-.31, .35]$
PI_{T1}		$-.06[-.30, .12]$
FBS_{T2}		$.08[-.23, .74]$
FBI_{T2}		$-.05[-.67, .33]$
FBP_{T2}		**.71***[.75, 1.01]**
Block 4		
F, R^2 (Adj.R^2)		$F(6, 106) = 5.98^{***}$; $R^2 = .25(.21)$
E_{T2}		$-.12[-.33, .09]$
C_{T2}		**.30**[.15, .96]**
PI_{T2}		$-.06[-.39, .27]$
FBS_{T1}		$.07[-.63, .92]$
FBI_{T1}		$.17[-.12, 1.20]$
FBP_{T1}		**.27**[.02, .81]**

Note. E = Exhaustion, C = Cynicism, PI = Professional inefficacy, FBS = Social motives of FB use, FBI = Instrumental motives of FB use, FBP = Personal importance of FB.
$^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Mediation Effects of FB Motives on the Association Between Time 1 Academic Burnout and Time 2 FB Intrusion

In the tested models, T2 FB intrusion was regressed on T1 motives of FB use (mediators), and the three mediators were regressed on the T1 academic burnout variable. A T1 FB intrusion path was also established between the abovementioned variables.

Table 3

Path Analysis Results of the Examined Model for FB Intrusion (Time 1 and Time 2)

Path	FB Intrusion$_{T1}$ ß[95% CI]	FB Intrusion$_{T2}$ ß[95% CI]
Model 1		
Direct paths		
Academic burnout$_{T1}$→FB Intrusion	.07[−.06, .13]	−.03[−.12, .09]
Academic burnout$_{T1}$→Social Motives of FB use$_{T1}$	−.20*[−.06, −.003]	−.20*[−.06, −.003]
Social Motives of FB use$_{T1}$→FB Intrusion	.51***[1.14, 2.27]	.28**[.32, 1.60]
Indirect paths		
Academic burnout$_{T1}$→Social Motives of FB use$_{T1}$→ FB Intrusion	−.10[−.20, −.01]	−0.6[−.13 .005]
Model 2		
Direct paths		
Academic burnout$_{T1}$→FB Intrusion	.07[−.06, .13]	−.03[−.12, .09]
Academic burnout$_{T1}$→Instrumental Motives of FB use$_{T1}$	.004[−.03, .03]	.004[−.03, .03]
Instrumental Motives of FB use$_{T1}$→FB Intrusion	.20*[.05, 1.23]	.26**[.27, 1.47]
Indirect paths		
Academic burnout$_{T1}$→Instrumental Motives of FB use$_{T1}$→ FB Intrusion	.001[−.04, .04]	.001[−.05, .06]
Model 3		
Direct paths		
Academic burnout$_{T1}$→FB Intrusion	.07[−.06, .13]	−.03[−.12, .09]
Academic burnout$_{T1}$→Personal Importance of FB$_{T1}$	.05[−.06, .10]	.05[−.06, .10]
Personal Importance of FB$_{T1}$→FB Intrusion	.75***[.75, 1.05]	.41***[.30, .72]
Indirect paths		
Academic burnout$_{T1}$→Personal Importance of FB$_{T1}$→ FB Intrusion	.03[−.08, .16]	.02[−.04, .11]

*Note.* *p < .05, **p < .01, ***p < .001.

The results indicated that T1 academic burnout did not directly contribute to FB intrusion (measured at both times), however was significantly related to Social motives of FB use (measured at both times). All FB use motives were significant predictors of FB intrusion (measured at both times), and results indicated a positive direct effect. Finally, academic burnout measured at Time 1 impacted T1 and T2 FB intrusion via FB social motives (mediator) measured at Time 1. What is more, FB social motives measured at Time 1 enhanced the impact of T1 academic burnout on T1 FB intrusion, so this relationship became significant (see Tables 3 and 4, Figures 1 and 2).

Table 4

Path Analysis Results of the Examined Model for Academic Burnout (Time 2)

Path	Academic burnout$_{T2}$ [95% CI]
Model 1	
Direct paths	
FB Intrusion$_{T2}$→Academic burnout	.04[–.24, .38]
FB Intrusion$_{T2}$→Social Motives of FB use$_{T2}$	.37***[.05, .15]
Social Motives of FB use$_{T2}$→Academic burnout	10[–.59, 1.83]
Indirect paths	
FB Intrusion$_{T2}$→Social Motives of FB use$_{T2}$→Academic burnout	.04[–.03, .11]
Model 2	
Direct paths	
FB Intrusion$_{T2}$→Academic burnout	.04[–.24, .38]
FB Intrusion$_{T2}$→Instrumental Motives of FB use$_{T2}$	.17[–.01, .12]
Instrumental Motives of FB use$_{T2}$→Academic burnout	–.09[–1.42, .48]
Indirect paths	
FB Intrusion$_{T2}$→Instrumental Motives of FB use$_{T2}$→Academic burnout	–.02[–.07, .02]
Model 3	
Direct paths	
FB Intrusion$_{T2}$→Academic burnout	.04[–.24, .38]
FB Intrusion$_{T2}$→Personal importance of FB use$_{T2}$	.75***[.53, .74]
Personal importance of FB use$_{T2}$→Academic burnout	.30*[.04, 1.13]
Indirect paths	
FB Intrusion$_{T2}$→Personal importance of FB use$_{T2}$→Academic burnout	.23[.00, .47]

Note. $*p < .05$, $**p < .01$, $***p < .001$.

Figure 1

Social Motives of FB Use Measured at Time 1
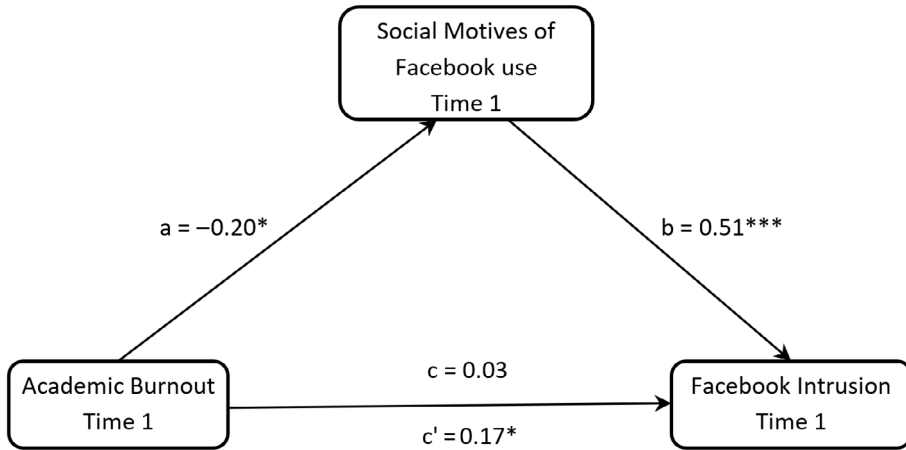
MODEL 1

Note. The mediation effect of Social Motives of FB use on the relationship between academic burnout and FB Intrusion both measured at Time 1.

Figure 2

Social Motives of FB Use Measured at Time 2
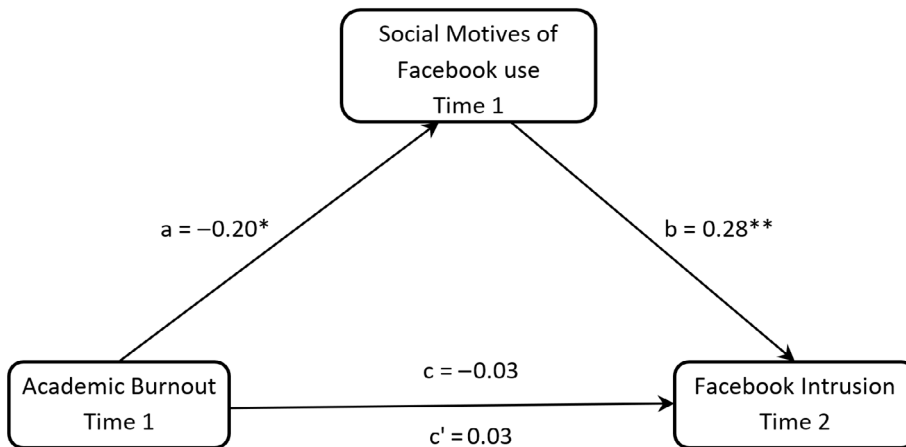
MODEL 2

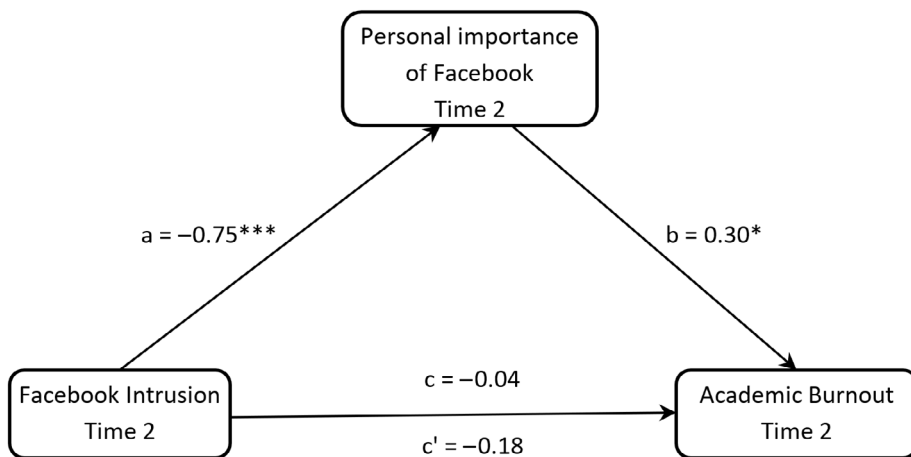*Note.* The mediation effect of Social Motives of FB use on the relationship between Time 1 academic burnout and FB Intrusion measured at Time 2.

Mediation Effects of FB Motives on the Association Between Time 2 FB Intrusion and Time 2 Academic Burnout

There was an insignificant direct effect of Time 2 FB intrusion on academic burnout (path c, c'), and on Time 3 personal importance of FB (path a). Personal importance of FB (mediator) also directly and significantly impacted the dependent variable—academic burnout (path b). An indirect effect was examined with the bootstrap method (Model 4), and it confirmed the significant mediation role of personal importance of FB on the relationship between Time 2 FB intrusion and Time 2 academic burnout. The two FB motives (social and instrumental) did not significantly mediate the association between independent and dependent variables (see Table 4, Figure 3).

Figure 3
Personal Importance of FB

MODEL 3

Note. The mediation effect of Personal Importance of FB on the relationship between FB Intrusion and academic burnout measured at Time 2.

DISCUSSION

The problem of FB excessive usage is increasingly relevant and it is important to pay more attention to risk factors and mechanisms that are related to it. In the present study, we investigated whether the previously reported academic burnout and FB motives and importance are associated with higher FB intrusion occurring later. In our analysis we confirmed this hypothesis only partially. The overall level of academic burnout, exhaustion and inefficacy were not related to FB intrusion measured at Time 2. However, cynicism positively correlated with FB intrusion measured at Time 2. Moreover, we found that the prediction power of Time 1 academic burnout dimensions on FB intrusion is insignificant. Our findings are consistent with those of De Stasio et al. (2019), who also found no significant relationship between excessive social network use and burnout among adolescents. Additionally, our results confirmed that Time 1 FB motives are positively associated with the later level of FB intrusion. Similar results were reported by Błachnio et al. (2016). We also tested the relationship between academic burnout and FB motives and demonstrated that mostly social motives for FB use are connected to this psychological syndrome. Additionally, our findings suggest the suppression effect of FB social motives on the relationship between burnout and FB intrusion. This result may indicate that students with a high level of academic burnout are less engaged in FB social life, and enjoy an online social relationship much less, than other FB users. We may assume that even online friendships do not compensate their psychological distress, loneliness and emotional impairment. It seems that feeling of disconnectedness and isolating themselves in off-line life continues in online life. This suggestion is in line with the maladaptive self-regulation cognitions and behaviors of burnout individuals. Students who experience low self-control demonstrate problems with academic performance, including higher burnout. Moreover, school burnout decreases the effectiveness of executive functions and in turn, it may block their ability to draw from the personal resource(s), which are necessary to employ self-control (Seibert et al., 2016). A diminished self-control system leads to poorer cognitive and affective outcomes which increases psychological distress. The inflexibility of coping mechanisms causes the inability to select the correct coping strategy and adaptive behavior (Bakker & de Vries, 2021), thus burnout students may just log on to FB and spend a significant part of their time online without any real benefit (social or educational) or reason e.g. surfing aimlessly just to pass the time. Raju et al. (2015) found that over 85% of social network young users spend online time without any purpose. According to Hofman et al. (2017), automatic and habitualized social media use may lead to a higher risk of media-related self-control failure. The deficits in self-con-

trol are seen in a higher level of impulsivity, distress, and frustration, and as a form of buffering these negative states, the person looks for immediate gratification (i.e., surfing the Internet or social media. In light of the suggestions mentioned above, the key psychological mechanism of an increased level of FB addiction among burned-out individuals may be related to the dysregulation of the self-control system.

Past studies also suggested that overuse of Internet activities may be a form of escapism that allow young burnout students to forget about real life school problems (Walburg et al., 2015). What is more, the authors claimed that student burnout may increase the Internet addiction (IA) level, and in turn IA may increase burnout as a form of self-undermining process (Tomaszek & Muchacka-Cymerman, 2020). According to the JD-R model, self-undermining behaviors may be defined also as a form of poor communication and interpersonal conflict that leads to an increase in psychological stress that contribute to already existing high job/school demands (Bakker et al., 2021). Our findings seems to be consistent with this idea, as burned-out university students engage in a social network mostly not for social purposes. We believe that the main reason for FB activity may be the need to compare themselves with others, the need for self-presentation or diversion. Young people try to compensate their lack of educational successes by creating online profiles that reassure them of their self-worth. The more burned out they are, the less they are interested in other network users, because they focus more and more on themselves and creating their (not necessarily true) online image. According to our findings, Time 2 exhaustion with Time 1 Personal importance of FB, as well as Time 2 cynicism with Time 2 Personal importance of FB were significant predictors of Time 2 FB intrusion. Additionally, Time 2 Personal importance of FB mediated the associations between Time 2 FB intrusion and Time 2 academic burnout. Ryan et al. (2014) identified several symptoms of social network addiction, i.e., the existence of a preference for online social interaction, mood alteration, deficient self-regulation, negative outcomes, social withdrawal, loss of control over time spent on social networking, relapse, and tolerance. The involvement in FB activities is so strong that it interferes with daily activities and interpersonal relationships (Cudo et al., 2019). Such characteristics of FB overuse suggest strong personal concentration and commitment to this platform, as the users believe that this is the only way to express and present themselves to others. It is worth adding that Błachnio et al. (2016) stated that personal importance covers similar aspects of FB addiction. However, it does not reduce the level of psychological distress symptoms; as research by Brailovskaia et al. (2018) suggests, the positive link between social network overuse and higher daily stress and relationship dissatisfaction. What is more, according to findings it may even heighten social, economic, educational and mental problems of the

addicted person (Błachnio et al., 2016; Cudo et al., 2019; Ryan et al., 2014). Some past studies confirmed the negative impact of FB addiction on academic performance and cognitive functioning (Cudo et al., 2019), as well as its relations with school burnout (Walburg et al., 2016). According to our findings, it also may increase the level of academic burnout, but only if the significance of self-presentation on FB is very high for the young person. FB addiction as well as student burnout are both strongly connected to negative self-esteem. People with low self-esteem attach great importance of FB use, because they need FB activity to improve their self-image (Błachnio et al., 2016). However, it seems that an excessive use of FB as escape tool from the awareness of a gap between the ideal and the real self-image (Walburg et al., 2016) is an inefficient coping strategy. Therefore, in real life the academic related problems such as fatigue, being overwhelmed, withdrawal, and personal incompetence remain the same, or even become worse.

Study Limitations

Our findings must be considered in the light of several limitations. Firstly, the study group was rather small, which limits the generalizability of the study results. Moreover, the study sample was composed mostly of female students (85%) from psychological and pedagogical fields of study, and some authors suggest sex differences in the relationship between burnout and FB addiction (Salmela-Aro et al., 2017; Walburg et al., 2016). Next, although the design of the study was a 2-wave data collection model, the time interval between study one and two was relatively short (half of the year), so future research should take into account the suggestions of some authors who advised to conduct longitudinal surveys on burnout by taking an interval of at least 1 year between the study waves (Boersma & Lindblom, 2009; de Lange et al., 2004). Thirdly, the data for academic burnout, as well as FB excessive use were collected by self-reports, so the participants might over- or underestimate their symptoms which could be related to no relationships between these abovementioned constructs. Finally, the Facebook intrusion scale used in this project, although is one of the most popular tools to measure FB addiction, was developed over 10 years ago. Thus, it may not capture current FB motives that may lead to intrusive use of social media as well as new online activities as they have changed dramatically. As a result, the level of FB addiction might have been underestimated or overestimated.

Overall, the current study is of importance for several reasons. The findings provide valuable information about observing serious social and educational risk factors of excessive use of the new social media by young people. The research highlighted the importance of analyzing new social media from a wider ecological

perspective. The observed relations between FB addiction and changes in social attitudes (cynical, more distant, and negative attitude) may indicate the need for including in the dedicated prophylactic programs either influencing the stress managing engagement and engagement bonds building activities as protective factors in both academic burnout and FB addiction.

Conclusion

The results of this study have improved our understanding of the mechanism underlying the relationship between academic burnout and excessive FB use, pointing to the motives of social network users as key risk factors of a new behavioral addiction type among emerging in young adult students.

CRediT Author Statement

Katarzyna Tomaszek (50%): conceptualization, formal analysis, data curation, writing (original draft), visualization.

Agnieszka Muchacka-Cymerman (50%): conceptualization, methodology, investigation, writing (original draft), writing (review and editing).

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