Milena Monika Chmielik\* Agata Błachnio

Till Phone Do Us Part: The Role of Phubbing in Relationship Satisfaction and Self-Esteem

## ABSTRACT

Being distracted by the mobile phone while interacting with a love partner poses a negative threat to well-being. The present study focused on researching the correlation between phubbing, relationship satisfaction and self-esteem with the use of age and relationship length as mediators among 200 adults, men and women, in informal relationships and marriages. In regards to phubbing, two dimensions, "communication disturbance" and "phone obsession" were taken into consideration. Methods used include the Phubbing Scale, the Self-Esteem Scale, and the Relationship Assessment Scale. Women and participants in informal relationships were found to be characterized by a higher phone obsession. The findings also revealed that married couples are shown to have a higher self-esteem and a longer relationship tenure. Phubbing was found to have a negative correlation with both self-esteem and relationship satisfaction. Results have also shown gender differences and differences based on the type of relationship regarding the extent and power of correlations. Age, relationship length, self-esteem and relationship satisfaction were proven to

<sup>\*</sup> Correspondence regarding the paper should be sent to: Milena Monika Chmielik (ORCID: 0000-0002-3063-5686), dott.milenachmielik@gmail.com, or Agata Błachnio (ORCID: 0000-0002-2384-2396), gatta@kul.pl, Institute of Psychology, John Paul II Catholic University of Lublin, Poland, Al. Racławickie 14, 20-950 Lublin, Poland.

be significant predictors of phubbing behaviour. The paper shows the impact of intrusive phone use on the quality of our lives and suggests new directions for research.

KEYWORDS: phubbing; self-esteem; relationship satisfaction; relationship length; relationship type; gender.

## INTRODUCTION

Prior to the popularity of mobile phones, we used to direct our focus on faces rather than screens. Today, our worth is measured by the number of likes we receive rather than the smiles of those sharing a room with us. Over the past few years, scholars have been examining the relationship between the quality of interpersonal interactions and the style/frequency of phone use, resulting in various research on disregarding the conversation partner in favour of the phone in a variety of circumstances. The effects of phubbing have been analyzed in many contexts, including work setting (Roberts & David, 2019), in schools, and educational context (Nazir, 2020), in reference to parenting (Liu et al., 2019) and many other social factors. In case of romantic relationships, there have already been prior investigations on the correlation of phubbing and jealousy (David & Roberts, 2021), as well as attachment styles (Bröning & Wartberg, 2022). One key question, however, remains unresolved: is there a significant correlation between partner phubbing and relationship satisfaction as well as self-esteem, and if so, does the length of the relationship and age matter in this context? The aim of the study was to investigate the relationship between phubbing and relationship satisfaction as well as self-esteem in informal relationships and marriages with the use of age and relationship duration as mediators, as well as the correlation between self-esteem and relationship satisfaction with phubbing as a mediator.

The complete absence of interaction with a smartphone in the presence of a partner is proving almost impossible these days, as connectivity governs our sense of security and control (McDaniel & Coyne, 2016), therefore the terminology *partner phubbing* (*pphubbing*) refers to the situation in which one partner's focus on the phone has a substantial impact on the interpersonal interaction (Roberts & David, 2016). According to the literature, partner phubbing is the phenomenon of disregarding a life partner due to mobile phone use (Roberts & David, 2016). Previous research has identified internet, social media and phone addictions as the most common determinants of the manifestation of phubbing behaviour (Karadağ et al., 2015), with other sources citing FOMO and lack of self-control as well (Chotpitayasunondh & Douglas, 2016).

Relationship satisfaction in an informal romantic relationship or a marriage is defined as a subjective assessment of one's own feelings and opinions regarding the intimate relationship and the partner (Sakalli-Ugurlu, 2003). The complex concept of satisfaction in a relationship is made up of several variables, including a sense of partner stability, communication quality, romance in an intimate relationship, feeling of support, sexual fulfilment, and a sense of belonging and commitment (Fincham et al., 2018). Emerging research in which relationship satisfaction moderated the effect of phubbing on depression prevalence revealed an association of phubbing with relationship satisfaction in depression in married adults (Wang et al., 2017). Regarding the direct relationship between phubbing and relationship satisfaction, contradictory studies can be found in the literature: some studies have found no correlation between these variables (Cizmeci, 2017), others showed a statistically significant correlation (Chotpitayasunondh & Douglas, 2018), meanwhile other studies found the association to be significant only when it was moderated by other variables such as phone use conflicts and attachment style (Roberts & David, 2016). Because of the inconsistency of the findings, it was decided to perform new research on the correlation between phubbing and relationship satisfaction, this time incorporating mediators such as age and relationship length.

Self-esteem is defined as a person's subjective, individual and internal self-image in terms of morality, competency, and decency (Sciangula & Morry, 2009). As a quantifiable trait in psychology, its dimension is considered as the sum of self-evaluations in terms of personality, physical and temperamental characteristics (Boyle et al., 2015). In previous studies, self-esteem in the context of phubbing was used exclusively as a mediator (Hong et al., 2019; Xie et al., 2020) or as one of the elements of a multi-dimensional predictor model of phubbing (Błachnio & Przepiórka, 2019). Considering the results obtained in the aforementioned studies, the relationship between self-esteem and phubbing may be significant.

Previous research on the impact of individual technology use on interpersonal relationships has revealed that along with the increment of technology use, the relationships deteriorate and negative feelings emerge (Abeele et al., 2016). An experimental study by these authors showed, among other things, that individual's phone interaction has a negative effect on the perception of conversation quality regardless of whether or not the participants knew each other before the experiment. It can therefore be assumed that since neglecting the conversation partner is enough to impair short-term interpersonal relationships, the correlation between partner phubbing and relationship satisfaction would also be negative. Furthermore, a meta-analysis of 37 empirical studies on the impact of phone use on the quality of partner relationships discovered that the phone had significant negative effects on relationship perception and satisfaction among partners who were neglected (Courtright & Caplan, 2020). The adopted hypothesis was H1: phubbing has a negative correlation with relationship satisfaction.

Previous research has focused on determining whether selfesteem can operate as a moderator in the relationship between partner phubbing and relationship satisfaction (Wang et al., 2019; Xie et al., 2020). The substantial significance of self-esteem moderation in the setting of phubbing may imply that the two have a direct relationship as well. One of the dimensions of phubbing is phone obsession. Problematic, excessive phone use in the context of self-esteem has been studied repeatedly and its negative correlation confirmed in many scientific publications (You et al., 2019). It can therefore be assumed that in this dimension of phubbing results will confirm the negative correlation between the variables. The lack of research on the relationship of communication disturbance or quality of face-to-face communication with self-esteem makes the study of the relationship between two-dimensional phubbing and self-esteem innovative. The second hypothesis states that H2: phubbing has a negative correlation with self-esteem.

Additionally, it was decided to find an answer to an exploratory question: Does gender influence perception of phubbing and its correlation with relationship satisfaction and self-esteem? The 2020 moderation–mediation analysis noted that the perception of phubbing and its association with depression differed significantly between genders, discovering that the correlation was stronger in the male group (Ivanova et al., 2020). Similar results confirming gender differences in the phubbing context were noted in a Mexican study on phubbing behaviour in the school environment (Escalera-Chávez et al., 2020). Given the relevance of gender differences in the context of phubbing, it is conceivable that checking the correlation results separately in the female and male groups may be relevant.

It can be assumed that relationship type will differentiate the results of the correlation between phubbing and relationship satisfaction. Previous research using relationship type as a moderator between phubbing and relationship satisfaction noted a significant correlation only for adults in marriages, not informal relationships (Wang et al., 2019). Other research on the correlation between relationship type and relationship satisfaction has found

that married couples show greater relationship satisfaction than couples in informal relationships (Dush & Amato, 2005). Research on self-esteem in married and unmarried women found a significant correlation between relationship status and self-esteem (Azam Tahir, 2012). For this reason, it was decided to analyse the correlation results in subgroups, separately for adults in informal relationships and married adults.

Another exploratory question is also related to a demographic variable: Can age be a mediator of the correlation of phubbing behaviour with relationship satisfaction and self-esteem? A 2014 research on phone use discovered a difference in phone etiquette during social interactions based on age (Forgays et al., 2014). It was established that older adults were more restrictive in this regard than younger people, for whom using the phone while socializing was rather natural. Therefore, it is worth investigating whether this truly indicates that older people would score lower on the phone obsession scale, and whether this will result in improved relationship satisfaction. Self-esteem has been demonstrated to rise with respondents' age (Erol & Orth, 2011; Bleidorn et al., 2016). Thus, if age is a substantial forecaster of self-esteem, it will also be a significant mediator in the context of phubbing and its relationship with self-esteem. The same assumption was made in the context of relationship length. The mediation model used in the study is presented below (Figure 1).

Previous cross-sectional research on the correlation between self-esteem, loneliness, and phubbing revealed that self-esteem had a profound impact on loneliness (Błachnio & Przepiórka, 2019). Considering that feelings of loneliness may present themselves while being in a relationship as well, it was chosen to undertake a mediation analysis of the correlation between relationship satisfaction and self-esteem adopting the dimensions of phubbing as mediators. The following is a pictorial conceptual model on the basis of which the mediation analysis was carried out (Figure 2).

Figure 1. Conceptual model of mediation employed to investigate the correlation of phone obsession and communication disturbance with relationship satisfaction and self-esteem using relationship length in years and age as mediators.

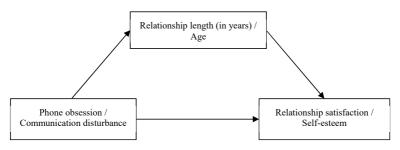
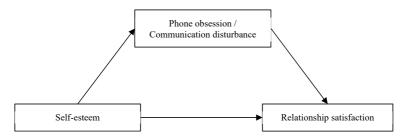


Figure 2. Conceptual model of mediation used to investigate the correlation of self-esteem and relationship satisfaction using phone obsession and communication disturbance as mediators.



#### **METHOD**

# Participants and procedure

The research was conducted on a group of N=200 adults (52.5% were women) aged 18–73 years (M=31.72, SD=10.18) currently in informal relationships or married. In the research sample, 61.5% of participants were currently in an informal relationship, while 38.5% were married. The minimum length of relationship in the study was 3 months, the maximum 50 years (M=7.87, SD=7.95).

The study was conducted online in a questionnaire form using the Google Forms software. Individuals were recruited using the snowball selection method through social media (Facebook, LinkedIn, Instagram). The research was entirely anonymous, voluntary and the participants were not retributed.

## Measures

Phubbing was measured using the Phubbing Scale (Karadağ et al., 2015) in the Polish adaptation by Błachnio and Przepiórka (2019). The scale consists of 10 statements within 2 dimensions: communication disturbance (e.g., "People complain about me dealing with my mobile phone") and phone obsession (e.g., "I feel incomplete without my mobile phone"). The statements are assessed on a 5-point Likert scale, where 1 means *never* and 5 means *always*. The reliability of the scale in the study measured by Cronbach's alpha scored 0.82 in the dimension of communication disturbance and 0.73 in the dimension of phone obsession.

Self-esteem was measured using the Self-Esteem Scale (SES) (Rosenberg, 1965) adapted for the Polish language by Łaguna, Lachowicz-Tabaczek, and Dzwonkowska (2007). The scale consists of 10 statements used to assess unidimensional self-esteem (e.g. "I feel that I'm a person of worth, at least on an equal plane with others"). The statements are rated on a 4-point Likert scale (from 1 = completely agree to 4 = completely disagree). The reliability of the scale in the study measured by Cronbach's alpha scored 0.87.

Relationship satisfaction was measured using the *Relationship Assessment Scale* (RAS) (Hendrick, 1988) in the Polish adaptation Błachnio et al. (unpublished materials). The scale consists of 7 statements exploring a one-dimensional sense of relationship satisfaction (e.g. "To what extent has your relationship met your original expectations?") assessed on a 5-point Likert scale, where 1 denotes low satisfaction and 5 means high satisfaction. The reliability of the scale in the study measured by Cronbach's alpha scored 0.92.

# Statistical analyses

The IBM SPSS Statistics 27 software was used to perform statistical calculations. Descriptive statistics of all variables were performed. Spearman's rho correlation calculations were carried out. In the following step, a linear regression analysis was performed. The PROCESS v.40 for SPSS procedure by Hayes was used to perform mediation model analyses.

### RESULTS

Table 1 presents descriptive statistics and correlations between the variables relationship satisfaction, self-esteem, phone obsession and communication disturbance (phubbing), relationship length (in years) for the entire sample group, for two genders (men and women) and for two types of relationship (informal partnership and marriage). It was examined whether there were statistically significant differences between the genders. Higher scores on the phone obsession scale were observed in the female group: 3.10 (SD = 0.76) vs. 2.79 (SD = 0.83), t(198) = 2.73, p = .007, d = 0.80. It was also analyzed whether there were any statistically significant differences in participants' responses based on the type of relationship. Results of a t-test showed higher self-esteem in married couples: 3.12 (SD = 0.45) vs. 2.93 (SD = 0.52), t(198) = -2.56,p = 0.01, d = 0.50. Higher phone obsession was observed in informal relationships: 3.08 (SD = 0.77) vs. 2.75 (0.84), t(198) = 2.81, p = .005,d = 0.79. Married couples were also proven to have a longer relationship length: 12.98 (SD = 9.44) vs. 4.68 (SD = 4.57), t(198) = -8.33, p < .001, d = 6.86.

It was hypothesised that phubbing negatively correlates with feelings of relationship satisfaction (H1). Results have shown that among the studied factors, only communication disturbance was correlated with relationship satisfaction (Table 1). It was hypothesised that phubbing negatively correlates with self-esteem (H2).

It was demonstrated that phone obsession and communication disturbance were both negatively correlated with self-esteem. Phone obsession was negatively correlated meanwhile communication disturbance was positively correlated with relationship length (Table 1).

Among women, phone obsession correlates negatively with both relationship satisfaction and self-esteem. In both the female and male groups, communication disturbance correlates negatively with both variables, but only in the female group does communication disturbance correlate positively with relationship length.

It was also determined that phone obsession was not correlated with any variable in case of informal relationships, meanwhile it correlates negatively with self-esteem in married adults. In both informal and married relationships, communication disturbance negatively correlates with both relationship satisfaction and self-esteem.

The next stage was to determine which variables predict the level of phubbing, and therefore a stepwise linear regression analysis was carried out (Table 2). In the first model, the dependent variable was phone obsession (F[3, 196] = 16.375, p < .001). The predictors age and self-esteem had the highest and negative power in this model. Relationship duration had a positive significant power as well. No collinearity between predictors was detected (VIF below 1.05). This model explains 18.8% of the variance in the dependent variable, which means it is able to predict 18.8% of the subjects' scores. In the second model, the dependent variable was communication disturbance (F[4, 195] = 10.624, p < .001). The predictor relationship length had the highest and positive power in this model. Age and relationship satisfaction were also found to be significant predictors. No collinearity between predictors was detected (VIF below 1.20). This model explains 16.2% of the variance in the dependent variable, which means it can predict 16.2% of the subjects' scores.

Table 1. Spearman's rho correlations between variables in the male group, the female group, the informal relationships group, the married couples group and the entire study group.

1 2 - 0.26**			Descriptive statistics		Spearmar	Spearman's rho correlations	elations	
variable         M (SD)         1         2           urticipants         1. Relationship satisfaction         4.09 (0.84)         -         -           2. Self-esteem         3.00 (0.50)         0.26**         -           3. Phone obsession         2.95 (0.81)         -0.14         -0.24**           4. Communication disturbance         2.24 (0.64)         -0.32**         -0.24**           5. Relationship length         7.87 (7.95)         -0.20**         0.12           1. Relationship satisfaction         4.04 (0.81)         -         -           3. Phone obsession         2.79 (0.83)         -0.07         -0.17           4. Communication disturbance         2.20 (0.68)         -0.33**         -0.26**           5. Relationship length         4.14 (0.86)         -         -           2. Self-esteem         2.95 (0.49)         0.24*         -0.29**           3. Phone obsession         3.10 (0.76)         -0.24*         -0.29**           4. Communication disturbance         2.27 (0.60)         -0.24*         -0.29**           5. Relationship length         7.35 (7.81)         -0.22*         0.03**								
urticipants         1. Relationship satisfaction         4.09 (0.84)         -           2. Self-esteem         3.00 (0.50)         0.26**         -           3. Phone obsession         2.95 (0.81)         -0.14         -0.24**           4. Communication disturbance         2.24 (0.64)         -0.32**         -0.24**           5. Relationship length         7.87 (7.95)         -0.20**         0.12           1. Relationship satisfaction         3.07 (0.52)         -0.20**         -0.17           4. Communication disturbance         2.20 (0.68)         -0.33**         -0.26**           5. Relationship length         8.46 (8.12)         -0.16         0.01           le         1. Relationship satisfaction         4.14 (0.86)         -         -           2. Self-esteem         2.95 (0.49)         0.24*         -0.29**           3. Phone obsession         3.10 (0.76)         -0.24*         -0.29**           4. Communication disturbance         2.27 (0.60)         -0.24*         -0.20*           5. Relationship length         7.35 (7.81)         -0.22*         0.18		Variable	M(SD)	1	2	3	4	гO
2. Self-esteem       3.00 (0.50)       0.26**       -         3. Phone obsession       2.95 (0.81)       -0.14       -0.24**         4. Communication disturbance       2.24 (0.64)       -0.32**       -0.24**         5. Relationship length       7.87 (7.95)       -0.20**       0.12         1. Relationship satisfaction       4.04 (0.81)       -       -         2. Self-esteem       3.07 (0.52)       0.32**       -         4. Communication disturbance       2.20 (0.68)       -0.07       -0.17         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18	All participants	1. Relationship satisfaction	4.09 (0.84)	ı				
3. Phone obsession       2.95 (0.81)       -0.14       -0.24**         4. Communication disturbance       2.24 (0.64)       -0.32**       -0.24**         5. Relationship length       7.87 (7.95)       -0.20**       0.12         1. Relationship satisfaction       3.07 (0.52)       0.32**       -         2. Self-esteem       3.07 (0.52)       0.32**       -         4. Communication disturbance       2.20 (0.68)       -0.37*       -0.17         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -       -         3. Phone obsession       3.10 (0.76)       -0.24*       -       -         4. Communication disturbance       2.27 (0.60)       -0.24*       -       -         5. Relationship length       7.35 (7.81)       -0.22*       0.018		2. Self-esteem	3.00 (0.50)	0.26**	I			
4. Communication disturbance       2.24 (0.64)       -0.32**       -0.24**         5. Relationship length       7.87 (7.95)       -0.20**       0.12         1. Relationship satisfaction       3.07 (0.52)       0.32**       -         2. Self-esteem       3.07 (0.83)       -0.07       -0.17         4. Communication disturbance       2.20 (0.68)       -0.33**       -0.26**         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		3. Phone obsession	2.95 (0.81)	-0.14	-0.24**	ı		
5. Relationship length       7.87 (7.95)       -0.20**       0.12         1. Relationship satisfaction       4.04 (0.81)       -       -         2. Self-esteem       3.07 (0.52)       0.32**       -         3. Phone obsession       2.79 (0.83)       -0.07       -0.17         4. Communication disturbance       2.20 (0.68)       -0.33**       -0.26**         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		4. Communication disturbance	2.24 (0.64)	-0.32**	-0.24**	0.55**	I	
1. Relationship satisfaction       4.04 (0.81)       –         2. Self-esteem       3.07 (0.52)       0.32**       –         3. Phone obsession       2.79 (0.83)       –0.07       –0.17         4. Communication disturbance       2.20 (0.68)       –0.33**       –0.26**         5. Relationship length       8.46 (8.12)       –0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       –       –         2. Self-esteem       2.95 (0.49)       0.24*       –         3. Phone obsession       3.10 (0.76)       –0.24*       –0.29**         4. Communication disturbance       2.27 (0.60)       –0.34**       –0.20**         5. Relationship length       7.35 (7.81)       –0.22*       0.18		5. Relationship length	7.87 (7.95)	-0.20**	0.12	-0.16*	0.21**	I
2. Self-esteem       3.07 (0.52)       0.32**       -         3. Phone obsession       2.79 (0.83)       -0.07       -0.17         4. Communication disturbance       2.20 (0.68)       -0.33**       -0.26**         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18	Male	1. Relationship satisfaction	4.04 (0.81)	I				
3. Phone obsession       2.79 (0.83)       -0.07       -0.17         4. Communication disturbance       2.20 (0.68)       -0.33**       -0.26**         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		2. Self-esteem	3.07 (0.52)	0.32**	I			
4. Communication disturbance       2.20 (0.68)       -0.33**       -0.26**         5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		3. Phone obsession	2.79 (0.83)	-0.07	-0.17	I		
5. Relationship length       8.46 (8.12)       -0.16       0.01         1. Relationship satisfaction       4.14 (0.86)       -       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		4. Communication disturbance	2.20 (0.68)	-0.33**	-0.26**	0.58**	I	
1. Relationship satisfaction       4.14 (0.86)       -         2. Self-esteem       2.95 (0.49)       0.24*       -         3. Phone obsession       3.10 (0.76)       -0.24*       -0.29**         4. Communication disturbance       2.27 (0.60)       -0.34**       -0.20*         5. Relationship length       7.35 (7.81)       -0.22*       0.18		5. Relationship length	8.46 (8.12)	-0.16	0.01	-0.14	0.16	I
2.95 (0.49) 0.24* – 3.10 (0.76) –0.24* –0.29** turbance 2.27 (0.60) –0.34** –0.20* 7.35 (7.81) –0.22* 0.18	Female	1. Relationship satisfaction	4.14 (0.86)	I				
3.10 (0.76) -0.24* -0.29** turbance 2.27 (0.60) -0.34** -0.20* 7.35 (7.81) -0.22* 0.18		2. Self-esteem	2.95 (0.49)	0.24*	I			
turbance 2.27 (0.60) -0.34** -0.20* 7.35 (7.81) -0.22* 0.18		3. Phone obsession	3.10 (0.76)	-0.24*	-0.29**	I		
7.35 (7.81) -0.22* 0.18		4. Communication disturbance	2.27 (0.60)	-0.34**	-0.20*	0.48**	I	
		5. Relationship length	7.35 (7.81)	-0.22*	0.18	-0.15	0.28**	I

					I					I
				I	0.14				I	0.17
			I	0.48**	-0.15			I	0.71**	0.01
		I	-0.17	-0.20*	0.13		I	-0.25*	-0.34**	-0.08
	I	0.21*	-0.14	-0.28**	-0.23*	I	0.41**	-0.12	-0.37**	-0.15
	4.13 (0.81)	2.93 (0.52)	3.08 (0.77)	2.17 (0.55)	4.68 (4.57)	4.04 (0.88)	3.12 (0.45)	2.75 (0.84)	2.35 (0.75)	12.98 (9.44)
	1. Relationship satisfaction	2. Self-esteem	3. Phone obsession	4. Communication disturbance	5. Relationship length	Married couples 1. Relationship satisfaction	2. Self-esteem	3. Phone obsession	4. Communication disturbance	5. Relationship length
Informal	relationships					Married couples				

< 0.05, \*\*p < 0.01.

Explanatory variable		bsession R <sup>2</sup> =0.188		on disturbance $R^2 = 0.162$
	Step 1	Step 2	Step 1	Step 2
Relationship length	0.15**	0.26**	0.40***	0.38***
Age	-0.34**	-0.53***	-0.32***	-0.34***
Relationship satisfaction		-0.12*		-0.25***
Self-esteem		-0.22***		-0.17*

Table 2. Multivariate linear regression analysis for phone obsession and communication disturbance.

It was examined whether relationship duration in years and age could mediate the correlation between communication disturbance/phone obsession and self-esteem/relationship satisfaction. It was also investigated whether the dimensions of phubbing, communication disturbance and phone obsession, could be mediators of self-esteem in relation to relationship satisfaction (Table 3). Relationship length in years proved to be a significant mediator only for relationship satisfaction (b=-0.02, boot SE=0.02, CI [0.01, 0.07]). Age also proved to be a significant mediator only in case of relationship satisfaction (b=0.07, boot SE=0.03, CI [0.02, 0.13]). Communication disturbance is a significant mediator of the correlation between self-esteem and relationship satisfaction (b=0.09, boot SE=0.04, CI [0.03, 0.19]).

<sup>\*\*</sup> p < 0.01, \*\*\* p < 0.001.

Independent variable Communi-S											
b late				Total	le		Direct	ct		Indirect	ect
	Dependent variable	Mediator	В	SE	95% PU	В	SE	95% PU	В	SE	95% PU
cation dis- turbance	Self-esteem	Relationship length	17	.05	28 to07	19	90.	30 to08	.01	.01	01 to .04
		Age	17	.05	28 to07	17	.05	28 to07	01	.01	02 to .01
× s	Relationship satisfaction	Relationship length	38	60:	56 to21	37	60:	54 to19	02	.02	06 to .01
		Age	38	60:	56 to21	39	60:	56 to21	.01	.01	02 to .04
Phone S obsession	Self-esteem	Relationship length	15	.04	24 to07	15	.04	23 to06	01	01	02 to .01
		Age	15	.04	24 to07	15	.05	25 to06	.01	.02	03 to .03
E S	Relationship satisfaction	Relationship length	13	.07	28 to .01	16	.07	30 to01	.02	.02	.01 to .07
		Age	13	.07	28 to .01	20	80:	35 to05	.07	.03	.02 to .13
Self-esteem R	Relationship satisfaction	Communication disturbance	.37	.12	.14 to .60	.27	Ξ.	.05 to .50	60.	.04	.03 to .19
		Phone obsession	.37	.12	.14 to .60	.34	.12	.10 to .57	.03	.03	02 to .10

### DISCUSSION

The main aim of the study was to investigate the correlation between phubbing and relationship satisfaction and self-esteem. Research has shown that partners in relationships with more communication disturbances rate their relationship satisfaction lower and have lower self-esteem; that is valid for both men and women in both informal and married relationships. Interestingly, higher phone obsession in men does not translate into their self-esteem or relationship satisfaction, whereas women with severe phone obsession are characterized by reduced self-esteem and evaluate their relationships less favourably. Elevated phone obsession does not predict relationship satisfaction or self-esteem in informal relationships, but it is associated with low self-esteem in married couples. It is also worth noting that people in long-term relationships have a lower obsession with the phone than those in short-term relationships. Long-term relationships are also related with increased communication disturbances than short-term partnerships, but that is valid exclusively for women.

Communication disturbance is negatively correlated to relationship satisfaction, whereas phone obsession is not related to relationship satisfaction, the results have shown (Hypothesis 1). Considering that effective communication is a critical component of any relationship, any disruption in this area will result in misunderstandings, disagreements, and conflicts, hence a decline in the quality and happiness with the relationship. Previous research has demonstrated that technology use has a negative influence on satisfaction with interpersonal connections (Abeele et al., 2015), and this study shows similar findings. In a research performed by Wang, Zhao, and Lei (2019), the authors, using a unidimensional method of studying partner phubbing, expressed doubts about the correlation between partner phubbing and relationship satisfaction, finding no correlation, yet anticipating that it might be important to introduce moderators. Following the application

of a bivariate approach to analyze partner phubbing in this study, it was discovered that there was a correlation between relationship satisfaction and phubbing; however, directly only in relation to communication disturbance. We were also able to discover that both age and relationship length in years are significant mediators in the correlation of phone obsession with feelings of satisfaction in the relationship, whereas the correlation was statistically insignificant without mediation. This supports the above-mentioned authors' argument that more variables in the model may be required to find a significant correlation (Wang et al., 2019).

Phubbing (both the communication disturbance and phone obsession), negatively correlates with self-esteem (Hypothesis 2). This may be because long-term ignoring your partner in favour of your phone means increasing exposure to internet content, particularly social media, which is a major source of comparison to others in today's environment. Numerous articles have confirmed a negative correlation between self-esteem and the use of: Facebook (Błachnio & Przepiórka, 2019), technology (Jackson et al., 2010; Ehrenberg et al., 2008), technoference (McDaniel & Brandon, 2015), and social media (Chmielik, 2019). What is impressive about the results is that the correlation between phubbing and self-esteem is mediated neither by age nor relationship duration; rather, there is a direct and statistically significant correlation between phubbing and self-esteem.

Relationship length is a significant predictor of phubbing (exploratory question). It turns out that the longer the relationship record, the less obsession with the phone. Perhaps this is an age thing. Younger people, Generation XYZ, raised in the smartphone era are more prone to be phone-obsessed, as shown in a study on age-related phone use etiquette (Forgays et al., 2014), while at the same time having limited possibilities in regards to the seniority of the relationship (in simple terms, a 23-year-old cannot be in a 20-years-long relationship, but a person over 40 can).

A longer relationship, on the other hand, is associated with more communication disturbances. This outcome is rather surprising, because one would assume that after many years of relationship, couples would have developed an appropriate technique of communicating – but perhaps daily routine negatively translates into effective communication. The results also showed that age and relationship length were significant mediators of the relationship between phone obsession and relationship satisfaction. As noted, the greater phone obsession and the longer the relationship, the greater relationship satisfaction, too, which - just as higher phone obsession and older age entail higher relationship satisfaction – is hugely surprising. These shocking results contradict the hypothesis of a negative correlation of phubbing with relationship satisfaction, which was confirmed in the absence of the introduction of mediators. Logically, the rise of phone obsession with age might suggest longer exposure to the triggering factors responsible for mobile phone addiction, as with time of use the phone becomes useful in more and more areas and therefore the time spent using it becomes longer. On the other hand, the correlation between older age and higher relationship satisfaction is often connected with acceptance of reality and rejecting unrealistic love standards that are believed to be true earlier in life (Bredow, 2015), as well as a better understanding of love language and intimacy markers of the partner.

As the mediation results have shown, communication disturbance is a significant predictor of the correlation of self-esteem with relationship satisfaction. The positive direction of the analysis means that the higher self-esteem and the more severe communication disturbances there are, the higher relationship satisfaction. This result is also extremely surprising, yet not completely new in literature. Several studies have shown that couples who fight more have a more fulfilling and long-lasting relationships (University of Michigan, 2008). Further research into this phenomenon has shown that there is a correlation

between the pattern of resolving conflicts and relationship satisfaction (Rauer et al., 2019). What might seem irrational at first glance can often prove to be a significant scheme of how our relationships work.

## LIMITATIONS AND FUTURE STUDIES

The study has its limitations, which need to be mentioned. In the case of relationship satisfaction, the results do not follow a normal distribution, indicating that the majority of respondents are highly satisfied, with only a small proportion evaluating their relationship as unsatisfactory. A problem such as this is particularly difficult to solve for a precise reason: if a person was extremely unsatisfied with their relationship (and so rated their satisfaction low), they would opt out of the relationship rather than persist in it, and therefore would not be able to participate in a study meant for couples. Therefore, a normal distribution is not achievable in this case, and such results are natural. However, this may translate into final research results. It is worthwhile to focus attention on this issue. Perhaps a method other than a questionnaire could prove more appropriate to eliminate the problem.

Additionally, the method used to measure phubbing leans more towards the perspective of the person ignoring (phubber) rather than the person being ignored (phubee). When planning new research in this area, it is worth considering perspectives, which perhaps as moderators would explore the results even more concretely.

Furthermore, the study is correlational in nature, so no causal conclusions can be drawn. When designing further research in this area, it is worth setting up a study of an experimental nature to be able to investigate the causal effect of variables.

### **CONCLUSIONS**

In summary, the aim of the study was to discover how phubbing affects the image of ourselves and our relationships. The results mostly show the negative impact of ignoring your partner in favour of your phone on both relationship satisfaction and self-esteem; meaning that excessive phone use negatively affects your quality of life. Correlations were found between relationship length, phone obsession and communication disturbance, and it was found that the relationship between phubbing, relationship satisfaction and self-esteem was most pronounced in women and married couples, as opposed to men and those in informal relationships. These findings show that when dealing with the phone, it is important to find a balance between use that makes everyday life easier and excessive, threatening introduction of the phone into one's life.

### REFERENCES

- Abeele, M. M. V., Antheunis, M. L., & Schouten, A. P. (2016). The effect of mobile messaging during a conversation or impression formation and interaction quality. *Computers in Human Behavior*, 62, 562–569. https://doi.org/10.1016/j.chb.2016.04.005
- Azam, Tahir M. (2012). Determinants of psychological well-being and self-esteem in married and unmarried women. *Pakistan Journal of Clinical Psychology*, 11(2), 3–14.
- Bleidorn, W., Arslan, R. C., Denissen, J. J. A., Rentfrow, P. J., Gebauer, J. E., Potter, J., & Gosling, S. D. (2016). Age and gender differences in self-esteem—A cross-cultural window. *Journal of Personality and Social Psychology*, 111(3), 396–410.
- Błachnio, A., & Przepiórka, A. (2019). Be aware! If you start using Facebook problematically you will feel lonely: Phubbing, loneliness, self-esteem, and Facebook intrusion. A cross-sectional study. *Social Science Computer Review*, 37(2), 270–278.

- Boyle, G. J., Saklofsky, D., & Matthews, G. (2015). *Measures of personality and social psychological constructs*. Academic Press.
- Bredow, C. A. (2015) Chasing Prince Charming: Partnering consequences of holding unrealistic standards for a spouse. *Personal Relationship*, 22, 476–501. https://doi.org/10.1111/pere.12091
- Bröning, S., & Wartberg, L. (2022). Attached to your smartphone? A dyadic perspective on perceived partner phubbing and attachment in long-term couple relationships. *Computers in Human Behavior*, 126. http://doi.org/10.1016/j.chb.2021.106996
- Chmielik, M. (2019). *ICT e depressione: fra causa e prevenzione.* Thesis, Università degli Studi di Bologna.
- Chotpitayasunondh, V., & Douglas, K. M. (2016). How "phubbing" becomes the norm: The antecedents and consequences of snubbing via smartphone. *Computers in Human Behavior*, 63, 9–18. https://doi.org/10.1016/j.chb.2016.05.018
- Chotpitayasunondh, V., & Douglas, K. M. (2018). The effects of "phubbing" on social interaction. *Journal of Applied Social Psychology*, 48(6), 304–316. https://doi.org/10.1111/jasp.12506
- Çizmeci, E. (2017). Disconnected, though satisfied: Pphubbing behavior and relationship satisfaction. *The Turkish Online Journal of Design, Art and Communication*, 7(2). https://doi.org/10.7456/10702100/018
- Courtright, J., & Caplan, S. (2020). A meta-analysis of mobile phone use and presence. *Human Communication & Technology*, 1(2), 20–35. https://doi.org/10.17161/hct.v1i2.13412
- David, M. E., & Roberts, J. A. (2021). Investigating the impact of partner phubbing on romantic jealousy and relationship satisfaction: The moderating role of attachment anxiety. *Journal of Social and Personal Relationships*, *38*(12), 3590–3609. https://doi.org/10.1177/0265407521996454
- Dush, C. M. K., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships*, 22(5), 607–627.
- Ehrenberg, A., Juckes, S., White, K. M., & Walsh, S. P. (2008). Personality and self-esteem as predictors of young people's technology use. *CyberPsychology & Behavior*, 11(6), 739–741. https://doi.org/10.1089/cpb.2008.0030
- Erol, R. Y., & Orth, U. (2011). Self-esteem development from age 14 to 30 years: A longitudinal study. *Journal of Personality and Social Psychology*, 101(3), 607–619.
- Escalera-Chávez, M. E., García-Santillán A., & Molchanova V. S. (2020). Phubbing behavior: Is there a gender difference in college students? *European Journal of Contemporary Education*, 9(3).

- Fincham, F. D., Rogge, R., & Beach, S. R. H. (2018). *Relationship satisfaction*. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 422–436). Cambridge University Press. https://doi.org/10.1017/9781316417867.033
- Forgays, D. K., Hyman, I., & Schreiber, J. (2014). Texting everywhere for everything: Gender and age differences in cell phone etiquette and use. *Computers in Human Behavior*, 31, 314–321.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, 50, 93–98.
- Hong, W., Liu, R.-D., Ding, Y., Oei, T. P., Zhen, R., & Jiang, S. (2019). Parents' phubbing and problematic mobile phone use: The roles of the parent–child relationship and children's self-esteem. *Cyberpsychology, Behavior, and Social Networking*, 22(12). https://doi.org/10.1089/cyber.2019.0179
- Ivanova, A., Gorbaniuk, O., & Błachnio, A. et al. (2020). Mobile phone addiction, phubbing, and depression among men and women: A moderated mediation analysis. *Psychiatr Q*, 91, 655–668. https://doi.org/10.1007/s11126-020-09723-8
- Jackson, A., Von Eye, A., Fitzgerald, H. E., Zhao, Y., & Witt, E. A. (2010). Self-concept, self-esteem, gender, race and information technology use. *Computers in Human Behavior*, 26(3), 323–328. https://doi.org/10.1016/j.chb.2009.11.001
- Karadağ, E., Tosuntaş, Ş. B., Erzen, E., Duru, P., Bostan, N., Şahin, B. M., & Babadağ, B. (2015). Determinants of phubbing, which is the sum of many virtual addictions: A structural equation model. *Journal of Behavioral Addictions*, 4(2), 60–74. https://doi.org/10.1556/2006.4.2015.005
- Liu, K., Chen, W., Wang, H., Geng, J., & Lei, L. (2020). Parental phubbing linking to adolescent life satisfaction: The mediating role of relationship satisfaction and the moderating role of attachment styles. *Child: Care, Health and Development*, 47(2), 281–289. https://doi.org/10.1111/cch.12839
- Łaguna, M., Lachowicz-Tabaczek, K., & Dzwonkowska, I. (2007). Skala samooceny SES Morrisa Rosenberga polska adaptacja metody [The Rosenberg Self-Esteem Scale: Polish adaptation]. *Psychologia Społeczna*, 2, 164–176.
- McDaniel, B. T. (2015). "Technoference": Everyday intrusions and interruptions of technology in couple and family relationships. In C. J. Bruess (Ed.), Family communication in the age of digital and social media (pp. 228–245). Peter Lang.
- McDaniel, B. T., & Coyne, S. M. (2016). "Technoference": The interference of technology in couple relationships and implications for women's personal and relational well-being. *Psychology of Popular Media Culture*, 5(1), 85–98.
- Nazir, T. (2020). Impact of classroom phubbing on teachers who face phubbing during lectures. *Psychology Research on Education and Social Sciences*, 1(1), 41–47.

- Rauer, A., Sabey, A. K., Proulx, C. M., & Volling, B. L. (2019). What are the marital problems of happy couples? A multimethod, two-sample investigation. *Family Process*, 59(3), 1275–1292. https://doi.org/10.1111/famp.12483
- Roberts, J. A., & David, M. E. (2016). My life has become a major distraction from my cell phone: Partner phubbing and relationship satisfaction among romantic partners. *Computers in Human Behavior*, 54, 134–141.
- Roberts, J. A., & David, M. E. (2019). Boss phubbing, trust, job satisfaction and employee performance. *Personality and Individual Differences*, 155, 109702. https://doi:10.1016/j.paid.2019.109702
- Sakalli-Ugurlu, N. (2003). How do romantic relationship satisfaction, gender stereotypes, and gender relate to future time orientation in romantic relationships? *The Journal of Psychology*, 137(3), 294–303.
- Sciangula, A., & Morry, M. M. (2009). Self-esteem and perceived regard: How I see myself affects my relationship satisfaction. *The Journal of Social Psychology*, 149(2), 143–158.
- The Morris Rosenberg Foundation. (2006). *The Rosenberg Self-Esteem Scale*. http://www.bsos.umd.edu/socy/grad/socpsy\_rosenberg.html
- University of Michigan. (January 23, 2008). A good fight may keep you and your marriage healthy. *ScienceDaily*. Retrieved November 25, 2021, from www. sciencedaily.com/releases/2008/01/080122173036.htm
- Wang, X., Xie, X., Wang, Y., Wang, P., & Lei, L. (2017). Partner phubbing and depression among married Chinese adults: The roles of relationship satisfaction and relationship length. *Personality and Individual Differences*, 110, 12–17. https://doi.org/10.1016/j.paid.2017.01.014
- Wang, X., Zhao, F., & Lei, L. (2019). Partner phubbing and relationship satisfaction: Self-esteem and marital status as moderators. *Current Psychology*. https://doi.org/10.1007/s12144-019-00275-0
- Xie, X., Tang, X., Rapp, H., Tong, D., & Wang, P. (2020). Does forgiveness alleviate depression after being phubbed for emerging adults? The mediating role of self-esteem. *Computers in Human Behavior*, 109, 106362. https://doi.org/10.1016/j.chb.2020.106362
- You, Z., Zhang, Y., Zhang, L., Xu, Y., & Chen, X. (2019). How does self-esteem affect mobile phone addiction? The mediating role of social anxiety and interpersonal sensitivity. *Psychiatry Research*, 271, 526–531.