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Educational management in a digital age: boss phubbing and teacher motivation

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ABSTRACT

The study aims to assess the level of phubbing behavior -an antisocial common mobile phone using behavior- of school principals and how it affects the motivation of the teachers working at Anatolian High Schools and Vocational High Schools. This relational screening modelled study was conducted in these schools in the 2nd term in 2022 to 2023 school year. For data collection purposes, Boss Phubbing Scale and Multidimensional Work Motivation Scale were used and 268 answers were collected from the whole population. The data was analyzed through descriptive statistics, exploratory factor analysis (EFA), Cronbach's alpha reliability analysis, one-way analysis of variance (ANOVA), unpaired t test, Pearson correlation analysis and regression analysis. The data derived from these analyses indicates that while school principals phub teachers at a low level and their boss phubbing scores differentiate in accordance with the work experience of teachers; teachers' motivation is high and there is a significant and positive relationship between boss phubbing of school principals and two factors of Multidimensional Work Motivation Scale, which were extrinsic motivation and amotivation. It may be suggested that school principals should alter their boss phubbing behavior or modify it to make the best of it.

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1. INTRODUCTION

Communication is the most crucial function of human being, and it may be considered as a survival skill. It helps a person to make social connections, to adapt the society [1], to get information and it has many other functions to create a society, where people need to work together collaboratively with others for common purposes. Communication has always been the most important feature of being a human and people have been looking for ways to make it better via technology. It can be said that in this age of change, communication, its tools, and functions change [2].

Technology has created many tools to enhance human communication such as radio, television, telephone, computer, the internet, and mobile phones. The internet has spread far and wide and continue spreading mercurially [2]. It brings people together in cyberspace and connects [3]. Internet use rates in Türkiye show that 95.5% of houses have internet connection and 87.1% of 16-74 aged people use the internet [4]. It is understood that people use the internet for different purposes other than communication such as official proceedings, to purchase goods and service, to order food, to access virtual content (series and movies) or education. The Turkey Statistics Institute (TurkStat) report also showed that social media applications which are mostly used for communication are quite high. To illustrate, WhatsApp, an instant

messaging application, has a rate of 84.9%; Instagram, a photo sharing application, has a rate of 61.4%. It can be stated that technological tools with internet connection make people's lives easier by removing the barriers to communication such as distance [2].

Technological tools with internet connection create a new cyberspace. People get used to this new environment easily because they make instant communication possible and make the flow of information faster ever than before [2]. Mobile phones are the most used technological tool with internet connection. They are like small portable computers that one can take with themselves wherever they want. They are now a part of people's daily lives. They carry and use mobile phones all the time. These tools make everything easier for people from shopping to getting online courses. Despite having so many advantages, mobile phones may have devastating effects on face-to-face communication [2], [3].

In social gatherings, where people should communicate face-to-face with a genuine eye contact and simply talking to each other, due to mobile phones and its "useful" features, people stop talking and are mostly unwilling to engage with each other. This impolite behavior is called phubbing and it expresses the situation in which the face-to-face communication is interrupted by people's use of their mobile phones [5]. Phubbing is a portmanteau word consisting of 'phone' and 'snub' and is defined as 'the act of ignoring someone you are with and giving attention to your mobile phone instead' [6]. It can be understood that, using this word, the annoying habit that mobiles phones have brought into interpersonal communication is emphasized [7].

The word was coined and defined by linguists who were brought together by advertising agency, McCan, and Macquire Dictionary in 2012; then, it spread with a campaign called 'Stop Phubbing Campaign' [8]. It was initially defined as "instead of paying attention to other person in a social setting, snubbing that person by looking at one's mobile phone" [8]. In years, some different definitions have been created in the literature having common features like conversation being interrupted, attention is being given to any technological device, mostly mobile phone, and being rude to other people in the social environment. The term is mostly related to breaking the social communication rules [7]–[11]. Research by Karadag *et al.* [9] defined phubbing as a situation in which one directs their attention to their smart phone and fiddles around on their smart phone and avoid the attention of interpersonal communication. It is interesting that smart phone is preferred to mobile phone. Therefore, it can be inferred that phubbing may be caused not only by mobile phone itself but also by its functions such as connection to the internet, different social applications which let people connect instantly, entertainment tools which give the opportunity to access online content like videos, podcasts, even series and movies. Accordingly, Karadag *et al.* [9] predicted that phubbing may be caused by internet addiction, social media addiction, game addiction, mobile application addiction. All these possible causes may end up with digital distraction [10] and because of it, people may experience phubbing or being phubbed by others in any social environment.

People can encounter phubbing in any social circumstances among different people. It is classified according to who exhibits the behavior. Phubbing has different types which are named after people who display phubbing behavior, namely phubber. When the phubber is a parent, the behavior is called parental pubbing [11]–[14]; when the phubber is one of a couple, then it is called as partner-phubbing [15]; when you are phubbed by your supervisor or principal, then it is called boss phubbing [16], [17].

Boss phubbing (Bphubbing) was first used in the research by Roberts and David [17], in which they investigated the effects of Bphubbing on employee commitment. They defined Bphubbing as the perception that an employee has while s/he is talking to their supervisor, their supervisor turns her/his attention to her/his mobile phone. They found out that this phubbing behavior of the supervisor harms the supervisor-employee relationship and lowers employee commitment. It has also been found that Bphubbing lowers trust that an employee has in their supervisors, work performance and work satisfaction [16], [18].

The purpose of this study is to assess the effect of phubbing behavior of Anatolian High School and Vocational High School principals on teacher motivation from the viewpoint of teachers working in these schools. For this purpose, the following research questions were examined.

- At what level do school principals of Anatolian High Schools and Vocational High Schools show phubbing behavior?
- Does the level of phubbing behavior of school principals of Anatolian High Schools and Vocational High Schools vary according to teachers' gender, age, work experience, the duration of teachers working with their principals, the program conducted in the school that teachers work at, branch?
- At what level is teachers' work motivation?
- Does the phubbing behavior of school principals of Anatolian High Schools and Vocational High Schools affect teachers' motivation?
- What is the effect of the phubbing behavior of school principals of Anatolian High Schools and Vocational High Schools on teachers' motivation if there is?

2. METHOD

In this research, relational screening model was used to find out the effect of phubbing behavior of school principals on teachers' motivation. This effect was inspected depending on the following variables: teachers' gender, teachers' age, teachers' work experience, teachers' work duration spent working with the same principal, school type, teachers' branch. Relational screening model was chosen among general survey models which help to get a general opinion on the population studied [19] because it aims to discover the relationship between two or more variables [19], [20].

Two scales were used in this study to survey the aimed factors. To measure phubbing behavior of school principals, Boss phubbing Scale, designed by Roberst and David [17] and adapted by Ozdemir [21] for Turkish, was used. To measure teachers' motivation, Multidimensional Work Motivation Scale, adapted by Civilidag and Sekercioglu [22] for Turkish, was used. The scales were sent to the whole population. After data collection stage ended, descriptive and correlational analyses were conducted to be able to answer the research questions.

The population of this research consists of the teachers working at state schools in Tepebaşı District of Eskişehir, Türkiye in the second term of 2022-2023 education year. Convenience sampling was used and the schools in only one district of this city are chosen for data collection purposes. In Türkiye, at secondary stage, there are schools having different programs. Among these schools, Anatolian High Schools and Vocational High Schools are predicted to have more employees than the others because they have more students than the others. It is expected that when the number of employees is higher, it may be higher that the school principals show phubbing behavior more. Therefore, the participants are limited to teachers working in these schools. Participation was voluntary. All teachers were tried to be approached in the sample. The scales were shared with all the teachers online. 608 teachers were reached in total. However, 268 teachers answered the scales, which is 44% of the whole population.

To examine the phubbing behavior of school principals, the independent variable of the study, Boss phubbing Scale was used. The Bphubbing Scale is a measurement tool containing 9 items. It is a seven-point Likert scale. The items are graded as 1 point standing for 'strongly disagree' and 7 points standing for 'strongly agree'. The original version of this scale had been used in research gathering data from employees in different sectors including education; therefore, it is thought acceptable to use in this research to gather data from teachers in the field of education.

To examine teachers' motivation, the dependent variable of the study, Multidimensional Work Motivation Scale was used. This scale is a measurement tool containing 19 items. It is a seven-point Likert scale. The items are graded as 1 point standing for 'not appropriate' and 7 points standing for 'very appropriate'. This scale had also been used for employees in different sectors containing educations. So, it was decided as appropriate to use in this research.

The data collected with these scales was analyzed in SPSS in accordance with the aim of the study. For data analysis, the following statistical analyses were carried out: descriptive statistics, exploratory factor analysis (EFA), Cronbach's alpha reliability analysis, one-way analysis of variance (ANOVA), unpaired t test, Pearson correlation analysis and regression analysis. In this study, for inferential statistics analyses, in the evaluation process, the confidence interval was 95%.

In the data collection stage, 268 participants answered the scales. To be able to decide which statistical analysis tests would be conducted, normality distribution was checked because the tests can be conducted when there is normal distribution or near-normal distribution in the data to be statistically analyzed. So, checking normality distribution is an important step in analysis [23]. Skewness and Kurtosis values were examined to check univariate normal distribution. The standard scores of the items in the scales used in this research were calculated and it is found that the standard scores were not over the threshold value 2.2 [24]. To test multivariate normal distribution, which is a must for the multivariate statistical analyses, an approach recommended by Arifin [25] was used. After these evaluations, it was seen that 6 sets of data were over the threshold values, and they were taken out of the data set. As a result, it is decided to use parametric tests to choose the inferential tests which are going to be used to find answers for research questions.

To prove the validity and reliability of the scales used in this research, EFA and Cronbach's alpha reliability analysis were conducted. To prove the validity of these scales EFA was conducted. In studies that EFA used, before the analysis applied, while Kaiser Meyer-Olkin (KMO) for sampling adequacy was conducted to test if the factor model is appropriate to the data, Bartlett's Test was conducted to test if there is a correlation between variables. When KMO value based on the test results is 0.80 and above, it means that the research data is suitable for factor analysis [26].

In EFA for Boss Phubbing Scale, KMO value is 0.90 and the result of Bartlett's Test is statistically significant ($x2=1260.58$; $df=36$; $p<0.001$). That means that the data has an excellent level of compliance in terms of EFA. As a method of factorization, principal component analysis was used. Varimax, one of orthogonal rotations, was used as rotation method. These applications showed that the scale had a single

factor model and factor loadings were scattered between 0.636 and 0.854. Lastly, while total variance explained is 56.57%, eigenvalue is 5.09. These findings show that Boss Phubbing Scale is valid for this study. EFA findings are given in Table 1.

In EFA for Multidimensional Work Motivation Scale, KMO value is 0.813 and the result of Bartlett's Test is statistically significant (x2=2096.97; df=171; p<0.001). That means that the data has an excellent level of compliance in terms of EFA. As a method of factorization, principal component analysis was used. Varimax, one of orthogonal rotations, was used as rotation method. These applications showed that the scale had six factors and factor loadings were scattered between 0.642 and 0.868. Lastly, while total variance explained is 69.68%. These findings show that Multidimensional Work Motivation Scale is valid for this study. EFA findings are presented in Table 2.

Table 1. Exploratory factor analysis results for boss phubbing scale

Items	Factor loadings	Variance explained	Eigenvalue
While my boss is talking to me, s/he glances at his/her phone.	0.854		
My boss keeps his/her cell phone in his/her hand when we are together.	0.827		
My boss uses his/her cell phone when are in meetings.	0.787		
When my boss' cell phone beeps or rings, s/he checks his/her phone even if we are in the middle of a conversation.	0.786		
My boss takes out his/her phone and checks it in a typical meeting where my boss and I are present.	0.737	56.57%	5.09
I always feel I am competing with my boss' cell phone for his/her attention when we are talking.	0.730		
When I am talking to my boss, s/he is constantly on his/her phone.	0.723		
My boss does not use his/her cell phone when we are talking.	-0.662		
My boss places his/her cell phone where I can see it when we are together.	0.636		

KMO = 0.900; x2 = 1260.58; df = 36; p<0.001; Total variance explained = 56.57

Table 2. Exploratory factor analysis results for multidimensional work motivation scale

Items	Factor loadings	Variance explained	Eigenvalue
Identified regulation		29%	5.66
Because putting efforts in this job aligns with my personal values.	0.855		
Because putting efforts in this job has personal significance to me.	0.754		
Because I personally consider it important to put efforts in this job.	0.725		
Amotivation		13.80%	2.62
I do little because I do not think this job is worth putting efforts into.	0.868		
I do not put efforts in this job because I feel that I am wasting my time at work.	0.787		
I do not know why I am doing this job although I think it is pointless.	0.723		
Extrinsic regulation-Material		8.27%	1.57
Because others (e.g., employer, colleague, and family) will reward me financially only if I put enough effort in my job.	0.745		
Because I risk losing my job if I do not put enough effort in my current job.	0.733		
Because others (e.g., employer, colleague, and family) offer me greater job security if I put enough effort in my current job.	0.709		
Because I have to prove that I can.	0.650		
Extrinsic regulation-Social		6.66%	1.27
Because others (e.g., employer, colleague, and family) will respect me more.	0.832		
To get others' (e.g., employer, colleague, and family) approval.	0.831		
To avoid being criticized by others (e.g., employer, colleague, and family).	0.670		
Intrinsic Motivation		5.80%	1.10
Because I have fun doing my job.	0.777		
Because the work I do is interesting.	0.764		
Because the work I do is exciting.	0.741		
Introjected regulation		5.37%	1.02
Because otherwise I will feel ashamed of myself.	0.791		
Because otherwise I will feel bad about myself.	0.680		
Because it makes me feel proud of myself.	0.642		

KMO = 0.813; x2 = 2096.97; df = 171; p<0.001; Total variance explained = 69.68%

Reliability can be explained as the consistency among the answers of the participants to the items of the scales. It can be said that reliability is that to what extent the scale is measuring the feature that it is going to aim measuring correctly [27]. According to Cronbach's alpha reliability coefficient, the reliability of the scale is evaluated as [23]: i) $0.00<\alpha<0.40$ scale is not reliable; ii) $0.40<\alpha<0.60$ reliability of the scale is low; iii) $0.60<\alpha<0.80$ scale is quite reliable; and iv) $0.80<\alpha<1.00$ scale is highly reliable.

These analyses are conducted for both scales and then factors. The results are presented in Table 3. As can be seen in Table 3, reliability coefficient is 0,902, which shows that the scale is highly reliable. Multidimensional Work Motivation Scale is also consisting of factors quite reliable and highly reliable. It can be said that both scales are reliable.

Table 3. Reliability analysis results [23]

Scale	Factor	Number of items	α	Reliability level*
Boss Phubbing	-	9	0.902	Highly reliable
Multidimensional	Identified regulation	3	0.834	Highly reliable
Work motivation	Amotivation	3	0.839	Highly reliable
	Extrinsic regulation - Material	4	0.700	Quite reliable
	Extrinsic regulation - Social	3	0.763	Quite reliable
	Intrinsic motivation	3	0.729	Quite reliable
	Introjected regulation	3	0.683	Quite reliable

3. RESULTS AND DISCUSSION

Descriptive analyses result of both scales are given in the following two tables, Boss Phubbing Scale and Multidimensional Work Motivation Scale, respectively. Descriptive analyses were conducted to find answers to research questions 1 and 3. Table 4. indicates that depending on the teachers' views, school principals display phubbing behavior at a relatively low level (Mean=3.46). In the scale, the first item "*When I'm with my supervisor, s/he puts her/his mobile phone somewhere I can see*," has the highest score ($\bar{x}$=4.35; *s*=1.98). The last item of the scale, "*While talking to my supervisor, I feel that I need to compete with her/his mobile phone to get her/his attention*," has the lowest score ($\bar{x}$=2.24; *s*=1.69).

Table 4. Distribution of descriptive statistics of boss phubbing scale

Item	Mean	Standard Deviation
My boss places his/her cell phone where I can see it when we are together.	4.35	1.98
When my boss' cell phone beeps or rings, s/he checks his/her phone even if we are in the middle of a conversation.	4.08	2.06
My boss does not use his/her cell phone when we are talking.	4.06	2.12
My boss uses his/her cell phone when are in meetings.	3.70	2.02
My boss takes out his/her phone and checks it in a typical meeting where my boss and I are present.	3.62	2.04
My boss keeps his/her cell phone in his/her hand when we are together.	3.60	2.06
While my boss is talking to me, s/he glances at his/her phone.	3.10	1.93
When I am talking to my boss, s/he is constantly on his/her phone.	2.42	1.71
I always feel I am competing with my boss' cell phone for his/her attention when we are talking.	2.24	1.69
Arithmetic Mean	3.46	1.47

1=strongly disagree; 7=strongly agree

The analyses showed that school principals show phubbing behavior at relatively low level and teachers' motivations is high. It was also found that school principals' phubbing behavior significantly predicted teachers' motivation. It is significant that although the level of phubbing behavior of school principals is low, the item with the highest score reveals that teachers are disturbed by their principals' mobile phones' presence in the room even though they are reported not to phub teachers. This finding was supported by Przybylski and Weinstein's study [28] which tries to find if the presence of mobile phone in a social environment hinders interpersonal communication. This research has revealed that two acquaintances indicated that they feel less close to each other and lower quality of relationships in environments where mobile phones are present compared to the people in environments where mobile phones are not present. It was also noted that the presence of mobile phones affects the speaker's trust towards the listener and perceived empathy.

It is interesting to note that the level of phubbing behavior of school principals is low but the disturbance by the presence of mobile phones is high. This inconsistency can be explained by remembrance of mobile phone use during conversation, both showing phubbing behavior or exposure to this behavior. It was reported that, in research in which people were observed for the purpose of identifying the duration and frequency of mobile phone use during face-to-face conversation, 33.7% people identified to use their mobile phones do not remember that the other person has used their mobile phone during conversation, 18.5% misremember it [29]. It is also found that because mobile phones are portable and a cause of increase in people's checking behavior [30]. As a result, this inconsistence can be explained by that this phubbing behavior is getting normal and it happens without people recognizing it during daily face-to-face communication.

Table 5 gives the descriptive analyses results of multidimensional work motivation scale. The factor with the highest score ($\bar{x}$=6.20; s=1.11) is identified regulation factor, the factor with the lowest score ($\bar{x}$=1.61; s=1.06) is amotivation factor. It can be said that teachers are motivated, their amotivation level is low.

After the descriptive analyses were done, predictive analyses were conducted to answer the rest of the research questions and to find the relationship between Bphubbing and teachers' motivation. At this stage, in parametric difference statistics, for unpaired t-test, when variances were homogeneous, the significance of equal variances were evaluated and when variances were not homogeneous, unequal variances were evaluated. On the other hand, for one-way analysis of variance (ANOVA), when variances were homogeneous, the significance of ANOVA statistics were used, and when variances were not homogeneous, the significance of Brown-Forsythe statistics were used [31]. Independent Samples T-test was used to see if the level of Bphubbing behavior of school principals differentiates depending on teachers' gender. The results are given in Table 6.

Table 5. Distribution of descriptive statistics of multidimensional work motivation scale

Factors and related items	Mean	Standard deviation
Identified regulation		
Because I personally consider it important to put efforts in this job.	6.26	1.25
Because putting efforts in this job aligns with my personal values.	6.25	1.28
Because putting efforts in this job has personal significance to me.	6.11	1.33
Arithmetic Mean	6.21	1.11
Extrinsic Regulation - Material		
Because I have to prove that I can.	2.87	1.91
Because I risk losing my job if I do not put enough effort in my current job.	2.42	1.62
Because others (e.g., employer, colleague, and family) offer me greater job security if I put enough effort in my current job.	2.39	1.71
Because others (e.g., employer, colleague, and family) will reward me financially only if I put enough effort in my job.	1.59	1.22
Arithmetic Mean	2.32	1.18
Extrinsic Regulation - Social		
Because others (e.g., employer, colleague, and family) will respect me more.	2.13	1.58
To avoid being criticized by others (e.g., employer, colleague, and family).	2.02	1.49
To get others' (e.g., employer, colleague, and family) approval.	1.84	1.36
Arithmetic Mean	2.00	1.21
Amotivaton		
I do not know why I am doing this job although I think it is pointless.	1.62	1.20
I do not put efforts in this job because I feel that I am wasting my time at work.	1.61	1.30
I do little because I do not think this job is worth putting efforts into.	1.60	1.17
Arithmetic Mean	1.61	1.06
Introjected Regulation		
Because otherwise I will feel bad about myself.	6.52	0.79
Because it makes me feel proud of myself.	6.08	1.38
Because otherwise I will feel ashamed of myself.	5.95	1.43
Arithmetic Mean	6.18	0.96
Intrinsic Motivaton		
Because I have fun doing my job.	5.49	1.69
Because the work I do is exciting.	5.13	1.77
Because the work I do is interesting.	4.47	2.19
Arithmetic Mean	5.03	1.52

1=strongly disagree; 7=strongly agree

Table 6. Analysis of the level of phubbing behavior of school principals depending on teachers' gender

Variables		Group	n	$\bar{x}$	s	t	df	p
Gender	Phubbing Behavior	Women	179	3.49	1.43	0.357	260	0.722
		Men	83	3.41	1.55			

As can be seen in Table 6, there is not a significant difference ($p<0.05$) in Bphubbing behavior of school principals depending on teachers' gender. It means that for both men and women, the level of Bphubbing behavior of school principals is similar. There is no significant difference in the level of phubbing behavior of school principals depending on the gender of teachers. The results are like the results in literature. It was found that the probability of exposure to phubbing of both men and women are equal [28]. Other than this specific research, there are others showing that gender has no effects on phubbing [13], [28], [32]–[34], Age was found not to influence phubbing, which can be supported by the results in Table 7 provided by TSI [4] showing that the Internet use of people in Türkiye are close regardless of their age and profession.

Table 7. Proportion of individuals using the internet in the last 3 months by gender and age 2004-2023 [4]

Year	25-34			35-44			45-54			55-64		
	T	M	W	T	M	W	T	M	W	T	M	W
2004	15.7	21.5	9.9	9.4	13.9	4.9	9.5	9.3	1.7	1.6	2.7	0.6
2023	97.7	98.7	96.7	94.6	96.7	92.5	88.6	93.2	84.0	68.1	75.8	60.5

(T: total, M: Men, W: Women)

One-way analysis of variance (ANOVA) was done to see if the level of Bphubbing behavior of school principals differentiates depending on teachers' age. The results are given in Table 8. As can be seen in Table 8, there is not a significant difference ($p>0.05$) in Bphubbing behavior of school principals depending on teachers' age. It means that regardless of their age, the level of Bphubbing behavior of school principals is similar for teachers.

One-way analysis of variance was done to see if the level of Bphubbing behavior of school principals differentiates depending on teachers' work experience. The results are given in Table 9. It is clearly seen in Table 9 that the level of Bphubbing behavior of school principals significantly differentiates depending on teachers' work experience ($F=12.781$; $p<0.001$). To see between which groups there is the difference, Tamhane's test was performed [23]. The results obtained from the Tamhane's Test show that there is a significant difference between the teachers who have 0-3 years of work experience and the ones who have 4-10 years of experience ($md=-1.70$; $p<0.001$) and more than 11 years of experience ($md=-1.81$; $p<0.001$). From these results in can reasonably be inferred that when inexperienced teachers are compared to teachers with many years' experience, inexperienced teachers think that school principals display phubbing behavior less. Whereas teachers with many years of experience think that school principals show phubbing behavior more.

One-way analysis of variance was done to see if the level of Bphubbing behavior of school principals differentiates depending on the duration that teachers have worked with their principals. Table 10 shows that there is no significant difference in school principals' phubbing behavior depending on the length of time they have worked with their principals ($p>0.05$). It means that the level of phubbing behavior of school principals is similar regardless of the length of time for shared worktime.

Independent Samples T-test was used to see if the level of Bphubbing behavior of school principals differentiates depending on the level/stage of the school at which teachers work. The results are given in Table 11. The table shows that there is no significant difference in school principals' phubbing behavior depending on the school level of teachers working at ($p<0.05$). It can be inferred that for teachers working at both Anatolian High School and Vocational High School, the level of phubbing behavior display is similar.

Table 8. Analysis of the level of phubbing behavior of school principals depending on teachers' age

Variables		Group	n	$\bar{x}$	s	F	p	PP
Age	Phubbing Behavior	1. 26-29 years	9	2.98	1.13	0.559	0.642	-
		2. 30-39 years	80	3.56	1.39			
		3. 40-49 years	120	3.49	1.59			
		4. 50 years and more	53	3.35	1.37			

PP=post-processing

Table 9. Analysis of the level of phubbing behavior of school principals depending on teachers' job experience

Variables		Group	n	$\bar{x}$	s	F	p	PP
Job experience	Phubbing behavior	1. 0-3 years	9	1.73	0.57	12.781	<0.001	1-2
		2. 4-10 years	42	3.43	1.34			1-3
		3. 11 years and more	211	3.55	1.48			

PP=post-processing

Table 10. Analysis of the level of phubbing behavior of school principals depending on teachers' working duration with the principal

Variables		Group	n	$\bar{x}$	s	F	p	PP
Duration worked together	Phubbing Behavior	1. Less than 1 year	57	3.24	1.25	0.584	0.626	-
		2. 1-3 years	62	3.49	1.48			
		3. 4-10 years	130	3.54	1.54			
		4. 11 years and more	13	3.62	1.60			

PP=post-processing

Table 11. Analysis of the level of phubbing behavior of school principals depending on teachers' school level

Variables		Group	n	$\bar{x}$	s	t	df	p
School level	Phubbing behavior	Anatolian High School	203	3.52	1.47	1.14	260	0.254
		Vocational High School	59	3.27	1.44			

One-way analysis of variance (ANOVA) was done to see if the level of Bphubbing behavior of school principals differentiates depending on teachers' branches. The results are given in Table 12. It can be seen in Table 12. that there is no significant difference in school principals' phubbing behavior depending on teachers' branches (p>0.05). It can be said that regardless of their branches, participants think that the level of school principals' phubbing behavior is similar.

Table 12. Analysis of the level of phubbing behavior of school principals depending on teachers' branches

Variables		Group	n	$\bar{x}$	s	F	p	PP
Branch	Phubbing Behavior	1. German	9	3.12	1.24	1.08	0.371	-
		2. Physical Education	7	3.41	2.05			
		3. Information Technologies	8	3.82	1.49			
		4. Biology	16	3.17	1.47			
		5. Geography	16	3.92	1.34			
		6. Others	17	2.92	1.10			
		7. Religion	9	3.80	1.72			
		8. Philosophy	8	3.64	1.46			
		9. Physics	14	4.06	1.82			
		10. Visual Arts	9	2.91	1.17			
		11. English	32	3.55	1.46			
		12. Chemistry	14	4.11	1.35			
		13. Maths	46	3.50	1.36			
		14. Music	9	3.12	1.49			
		15. History	20	3.61	1.68			
		16.Turkish Language and Literature	28	2.98	1.47			

PP=post-processing

Pearson Correlation Analysis was performed to examine the relationship between the level of school principals' phubbing behavior and teachers' multi-dimensional work motivation. The result of the analysis can be seen in Table 13. In this table, the correlation coefficients of the level of school principals' phubbing behavior and teachers' multi-dimensional work motivation. Based on these coefficients, there is a statistically significant and positive relationship between the level of school principals' phubbing behavior and the extrinsic regulation material factor (r=0.17; p<0.01). In this regard, it is clearly understood that the more school principals display phubbing behavior the higher the extrinsic regulation material motivation of teachers get, and the less school principals display phubbing behavior the lower the extrinsic regulation material motivation of teachers get.

Table 13. Analysis of the relationship between boss phubbing scale and multidimensional work motivation scale

Variable	1	2	3	4	5	6	7
1. Phubbing behavior	-	-0.09	0.17**	0.06	0.17**	-0.02	0.09
2. Identified regulation		-	-0.15*	-0.21**	-0.48**	0.55**	0.39**
3. Extrinsic regulation - Material			-	0.42**	0.31**	-0.04	0.01
4. Extrinsic regulation - Social				-	0.37**	-0.19**	-0.24**
5. Amotivaton					-	-0.40**	-0.37**
6. Introjected regulation						-	0.33**
7. Intrinsic motivation							-

**p<0.01; *p<0.05

In addition, there is a statistically significant and positive relationship between the level of school principals' phubbing behavior and the amotivation factor (r=0.17; p<0.01). Depending on this relationship, the more school principals display phubbing behavior the higher the amotivation level of teachers gets, and the less school principals display phubbing behavior the lower the amotivation level of teachers gets. It is also found that there is no statistically meaningful difference between the level of school principals' phubbing behavior and the other factors of the Multi-dimensional Work Motivation Scale, which are respectively identified regulation, extrinsic regulation social, introjected regulation, and intrinsic motivation

(p>0.05). Simple Regression Analysis was performed to see the effect of the level of school principals' phubbing behavior on the multi-dimensional work motivation of teachers. Before this analysis was applied, the results of the previous Pearson Correlation Analysis were evaluated to meet the condition of regression analysis, which is condition that there should be a meaningful relationship between the dependent variable and independent variable [35].

In this regression analysis, while the independent variable is the level of school principals' phubbing behavior, the dependent variables are extrinsic regulation material and amotivation. The other dependent variables which do not have a significant relationship with the independent variable of the study were not included in the analysis. The results are given in Table 14. As can be seen in Table 14, the variable, the level of school principals' phubbing behavior, indicates extrinsic regulation material factor of multi-dimensional work motivation of teachers at the rate of 15.8% (F(1.260)=8.127; p<0.001). the level of school principals' phubbing behavior has statistically meaningful and positive effect on extrinsic regulation material factor (B=0.135; p<0.001). When there is one point increase in the level of school principals' phubbing behavior, there will be 0.135-point increase in teachers' extrinsic regulation material motivation.

Table 14. The effect of the level of phubbing behavior of school principles on extrinsic regulation - material factor

Variable	B	SE B	β
The level of phubbing behavior of school principles	0.135	0.049	0.167***
Invariant	1.847	0.186	-

R2=0.398; ΔR2=0.158; p<0.001; ***p<0.001; dependent variable: extrinsic regulation-material

As can be seen in Table 15, the variable, the level of school principals' phubbing behavior, indicates amotivation factor of multi-dimensional work motivation of teachers at the rate of 13.1% (F(1.260)=8.341; p<0.001). The level of school principals' phubbing behavior has statistically meaningful and positive effect on amotivation factor (B=0.148; p<0.001). When there is one point increase in the level of school principals' phubbing behavior, there will be 0.148-point increase in teachers' amotivation level.

When looked at the relationship between phubbing and teachers' motivation, it can be inferred from the results of this study that teachers are motivated and there is significant and positive relationship between phubbing and extrinsic regulation material and amotivation factors. It indicates that when phubbing behavior of school principals increase, teachers' extrinsic motivation and the level of their amotivation may increase. There are similar results in literature showing that leader behaviors affect teachers' motivation [36], [37] and teachers' motivation is mostly affected by intrinsic factors rather than extrinsic factors [22], [38].

Table 15. The effect of the level of phubbing behavior of school principles on Amotivation factor

Variable	B	SE B	β
The level of phubbing behavior of school principles	0.148	0.042	0.174***
Invariant	1.177	0.167	-

R2=0.362; ΔR2=0.131; p<0.001; ***p<0.001; dependent variable: amotivation

4. CONCLUSION

In this research, the relationship between phubbing behavior of school principals and teachers' motivation was examined. The analyses showed that school principals show phubbing behavior at relatively low level and teachers' motivation is high. It was also found that school principals' phubbing behavior significantly predicted teachers' motivation. It is significant that although the level of phubbing behavior of school principals is low, teachers are disturbed by their principals' mobile phones' presence in the room even though they are reported not to phub teachers. Additionally, it was found that there is a significant difference in the level of phubbing behavior of school principals depending on teachers' job experience. Inexperienced teachers think that school principals show phubbing behavior less compared to more experienced teachers. It is predicted that inexperienced teachers have worked with no other principals whom they can make comparisons with. Therefore, they have a thought that their principals show phubbing behavior less compared to teachers with more teaching experience. In terms of other variables, which are the duration teachers worked with their principals, school level, teachers' branches, there is no significant difference in the level of phubbing behavior of school principals. When looked at the relationship between phubbing and teachers' motivation, it can be inferred from the results of this study that teachers are motivated and there is significant and positive relationship between phubbing and extrinsic regulation material and amotivation

factors. It indicates that when phubbing behavior of school principals increase, teachers' extrinsic motivation and the level of their amotivation may increase.

This study has provided many valuable contributions to literature. Based on the results of this study, it can also be suggested that age and gender of school principals can be designated as a variable, the level of teachers' phubbing behavior can also be researched, the reasons of difference identified based on work experience of teachers can be explored in further studies. Although phubbing is perceived as a common behavior, it is thought to be a negative behavior by the people exposed to it. School principals may be suggested to set regulations regarding mobile phone use at school.

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