

Review Article

# The relationship of cell phone use and aggression among young adults with moderating roles of gender and marital status

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## Abstract

The use of cell phones has remarkably increased in the last two decades with several pros and cons. The negative consequences of cell phones on mental health have not been studied widely. Aggression, in this regard was a completely neglected area. The present study, therefore, was carried out to investigate the relationship between cell phone use and aggression and to further identify the moderating roles of gender and marital status between cell phone use and aggression. The inquiry included 500 young adults from Rawalpindi, Pakistan. Buss and Perry Aggression Questionnaire was administered. It was hypothesized that there would be a strong positive relationship between cell phone use and aggression. It was further hypothesized that gender and marital status would be significant moderators between cell phone use and aggression. The results supported the hypotheses on significant differences and made a significant contribution in the existing scientific literature.

## Introduction

Cell phone use has become an essential part of life for billions of humans in today's "digital age". Telephonic communication, text messaging, audio and video entertainment, social networking and information gathering are some of the main usages of cell phones. The global society has been bifurcated into two categories on this basis i.e. "information poor" and "information rich" and the use of cell phone is an important element of this competition. Pakistan, an underdeveloped country, is not at all behind the global race of cell phone marketing. 74.9% of its population does use cell phones as stated by Pakistan Telecommunication Authority [1]. The cell phone use is extremely cheap in Pakistan and even the poorest of the poor can afford it.

Studies reveal that, because of excessive cell phone use, people might display behaviors e.g. craving, compulsive use, neglecting duties and withdrawal when the addictive object is not available [2]. Studies have also revealed that high prevalence of excessive use of cell phone had significant relationship with mental health problems. Headache, earache, attentiveness troubles, exhaustion, and sleep disorders are

certainly connected with cell phone addiction [2]. Addictive individuals tend to feel discouraged, lost, and separated without a cell phone. Their work and lives are in some cases bothered by continuous calls, content informing, web perusing and online talks [3]. Self-reported indications connected with using cell phones most usually incorporate cerebral pains, and ear infection [2]. Ezoe and colleagues [4] found cell phone dependency associated with extraversion, neuroticism, and unhealthy lifestyle. Expanded anxiety levels on account of "the need to monitor and respond to text messages and alerts" can be due to excessive cell phone usage [5]. Delayed or rehashed presentation to unpleasant circumstances has been related to elevated aggression [6].

Aggression has been defined differently by different researchers. In fact, over 200 different definitions of aggressive behavior have been documented in the research literature [7]. Most of the definitions describe aggression as an intent to harm and as an action that is upsetting for the receiver [8-13]. Aggressive actions can be physical or non-physical [14,15] and verbal or nonverbal [12,16-18]. Aggression can be performed in a direct or indirect way [19,20]. It can be overt and observable by others, or covert and subtle

## More Information

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[16,18,]. Aggression can be performed with relational intent [16,21,10,12,22]. It can also be considered a part of social development [16,12,23].

Since the existing literature did not provide information on the relationship of cell phone use with aggression, the objective of the current study was to find out the same. The study was carried out in an underdeveloped country i.e. Pakistan where the overall levels of mental health were already inadequate and people did not have appropriate mental health awareness [24-26]. It was hypothesized that there would be a strong and positive relationship between cell phone use and aggression. The study further intended to investigate the moderating roles of gender and marital status in this regard and hypothesized that gender and marital status both would be strong moderators between cell phone use and aggression.

## Method

### Participants

The research participants were conveniently selected 500 young adults from Rawalpindi, Pakistan who further included males ( $n = 260$ ), females, ( $n = 240$ ), married ( $n = 153$ ) and unmarried ( $n = 347$ ).

### Instruments

**Buss and Perry Questionnaire (1992):** It is a 29-item questionnaire where participants rank certain statements along a 5 point continuum from “extremely uncharacteristic of me” to “extremely characteristic of me.” The questionnaire returns scores for 4 dimensions of aggression: Physical Aggression, Verbal Aggression, Anger, and Hostility. The scores are normalized on a scale of 0 to 1, with 1 being the highest level of aggression. Internal consistency for the four subscales and total score range from .72 (Verbal Aggression) to .89 (Total BPAQ score). Retest reliability for the BPAQ over nine weeks is also satisfactory (correlations ranged from .72 for Anger to .80 for Physical Aggression and for the total score [27].

**Demographic Information Questionnaire:** The demographic information questionnaire included gender, age, marital status and information on the frequencies of daily usage of cell phone use by the respondents.

### Procedure

The participants of the study were contacted by the researchers by visiting different offices, banks and academic institutions of Rawalpindi, Pakistan. The issues of confidentiality and compliance to the ethical standards were given proper consideration. The data obtained was analyzed using the Statistical Package for Social Sciences (SPSS).

## Results

In order to estimate the internal consistency of Aggression scale, the following analyses were made:

The Buss and Perry Aggression Questionnaire (BPAQ) was found reliable by measuring its reliability on Cronbach’s alpha whereas the Cronbach’s alpha reliability for the overall scale was .87 and for its subscales the values were .83, .81, .85 and .86 respectively as physical aggression, verbal aggression, anger and hostility (Table 1).

In order to see the relationship between cell phone use and aggression, the following analyses were made:

Table 2 indicates that cell phone use is positively and significantly correlated with aggression ( $r = .30, p < 0.01$ ) and its sub areas i.e. physical aggression ( $r = .28, p < 0.01$ ), verbal aggression ( $r = .18, p < 0.01$ ), anger ( $r = .19, p < 0.01$ ) and hostility ( $r = .23, p < 0.01$ ).

To analyze the moderating role of gender and marital status between cell phone use and aggression, the following analyses were made:

Table 3 reveals that cell phone was significant predictor for aggression ( $\beta = .428, p < .000$ ); gender ( $\beta = -.136, p < .05$ ) and marital status ( $\beta = -.101, p < .05$ ) were significant moderator between cell phone use and aggression.

In order to see the differences between the aggression scores by gender and marital status, the following analysis was made:

Table 4 reveals that males and unmarried cell phone users have higher levels of aggression as compared with females and married cell phone users and this difference is statistically significant.

**Table 1:** Cronbach’s Alpha reliability of Buss and Perry Aggression Questionnaire and its sub scales ( $n = 500$ )

Scale	No. of Items	Alpha
BPAQ overall	29	.87
Physical Aggression	09	.83
Verbal Aggression	05	.81
Anger	07	.85
Hostility	08	.86

**Table 2:** Correlation Matrix between Aggression (and its sub areas) and Cell Phone Use ( $n = 500$ ).

Variable	M	SD	r
Cell phone Use	480.78	335.45	-
Aggression	80.59	16.41	.30**
Physical Aggression	23.98	6.23	.28**
Verbal Aggression	15.28	4.03	.18**
Anger	19.72	5.08	.19**
Hostility	21.60	6.06	.23**

**Table 3:** The moderating role of gender and marital status between cell phone use and aggression among young adults ( $n = 500$ ).

Variables	B	SD	$\beta$	p
Cell phone Use* Aggression	.021	.006	.428	.000
Cell phone Use* Gender	-.003	.003	-.136	.05
Cell phone Use* Marital Status	-.003	.002	-.101	.05



**Table 4:** Means, standard deviations and t-value of the aggression scores by gender and marital status.

	Gender		Marital Status	
	Males	Females	Married	Unmarried
n	260	240	153	347
M	24.67	23.24	77.99	81.77
SD	6.41	5.99	17.22	15.91
t-value	2.60*		.241*	
*p < .01				

## Discussion

The current study was an effort to find out the relationship between cell phone use and aggression and to further assess the moderating roles of gender and marital status between cell phone use and aggression. Buss and Perry Aggression Questionnaire [27] was administered to measure aggression among young adults. The scale was found reliable in the current study. The frequency of cell phone use of the respondents was measured through the Demographic Information Questionnaire. The study hypothesized that there would be a positive and strong relationship between cell phone use and aggression. This hypothesis was accepted significantly (Table 2) whereas cell phone use was positively and significantly correlated with aggression and its sub areas i.e. physical aggression, verbal aggression, anger and hostility. Although, there are no such studies available so far which could have directly associated aggression with cell phone use; however, there are few studies available which have focused on the negative mental health related consequences due to cell phone use. Cell phone use was positively correlated with behavioral problems in adolescents and young adults. While using cell phone, one must monitor and supervise the flow of incoming messages in addition to writing messages and making calls. This leads to stress and anxiety [5]. This mental state may also lead to a feeling of dependency [28] as Sanjay Dixit [29], a researcher in India, call it "nomo-phobia". Frustration, on the other hand, cause by excessive cell phone use and unavoidable information traffic, may further lead to aggressive tendencies and aggressive behavior [30]. Studies, apart from the negative outcomes of cell phone to mental health, have positively associated cell phone use to several risks for brain and cancers of the head [31,32].

The current study, in this regard, was a fruitful contribution in the existing body of scientific literature by examining the positive relationship between cell phone use and aggression. The study further revealed that gender and marital status are the significant moderators in this relationship (Table 3) and it was found that males and unmarried cell phone users had higher levels of aggression as compared with female and married cell phone users (Table 4) with significant differences. Earlier studies on aggression have elaborated that males are generally more aggressive than females [33,34]. Evidences also suggest that males get aggressive quicker than females and are more likely to express their aggression as compared to females [35]. There are, however, no such

studies which would have investigated gender or marital status as moderators between cell phone use and aggression. The findings of the current study, thus, would be very useful for future researchers in this area.

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