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**Mediating Effect of Self-Efficacy on Social Media Addiction, Appearance-Related Consciousness, and Social Physique Anxiety among Young Adults**

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Fauzia Batool<sup>1</sup>, Ansa Quratulain<sup>2\*</sup>**Abstract**

Across the world, social media usage has become a very common leisure activity; however, its excessive use may lead to its misuse or social media addiction. This abuse of social media in turn may affect one's self-efficacy; giving birth to several issues such as increased appearance-related consciousness and social physique anxiety. Therefore, the purpose of the study was to examine the direct and indirect relationship of social media addiction with appearance-related consciousness and social physique anxiety through self-efficacy as a mediator among young adults. A convenient sample of 200 young adults fulfilling the criteria of social media addiction was selected from different universities in Islamabad, Pakistan. To assess the study variables, Berger Social Media Addiction Scale (BSMAS), Appearance-Related Social Media Consciousness (ASMC) scale, Social Physique Anxiety Scale (SPAS), and Generalized Self Efficacy Scale (GSE) were used. The study concluded significant relationships between the study variables. Social media addiction was significantly and positively found to be related to both appearance-related consciousness and social physique anxiety. Moreover, Self-efficacy was negatively related to appearance-related consciousness and social physique anxiety. In addition, mediation analysis found that self-efficacy is not a significant mediator between social media addiction, appearance-related consciousness, and social physique anxiety. The findings of this study highlighted how addictive use of social media can increase serious issues among today's youth. Awareness programs regarding social media use should be conducted to mitigate such concerns.

**Keywords:** Appearance-Related Consciousness, Self-efficacy, Social Media Addiction, Social Physique Anxiety, University Students

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**Introduction**

Social media use has become a very common leisure activity around the world (Ahn, 2011). However, across several cultures, apart from providing benefits, the prevalence of excessive Social Media Usage (SMU) is

high (Golder et al., 2015; Kesici, 2019; Kowal et al., 2020). Such excessive SMU may become a type of behavioral addiction (Griffiths, 2013), also known as Social Media Addiction (SMA), which has been defined as an obsession; wherein an individual finds an intense urge to log in or use social networking sites, stays occupied or concerned about such sites, and spends most of the time on these platforms that consequently impairs his/her personal life i.e., educational, occupational life, physical, psychological well-being and/or interpersonal relationships (Andreassen & Pallesen, 2014; Ryan et al., 2014; Wu et al., 2013).

This addiction may result in the contribution of several psychological health-related issues for instance, low self-esteem, anxiety

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disorders, depression, stress, eating disorders, addiction disorders, substance use, neurodegenerative problems, ADHD, body dysmorphic disorder, insomnia, and behavioral issues are some of the most common mental health issues caused by SMA (Delgado-Rodríguez et al., 2022; Ergun & Alkan, 2020; Gürbüz et al., 2016; Kuss & Griffiths, 2011; Ryding & Kuss, 2020; Shannon et al., 2022; Vogel et al., 2014; Wilksch et al., 2020).

Likewise, concerns related to body image and appearance can be triggered by certain social media features (Cohen et al., 2018; Nesi et al., 2017). Through creating opportunities to change one's appearance with the help of filters and editing, to make oneself look attractive, social media has both i); raised the bar for the perfect body, and ii); set the bar for body or appearance dissatisfaction (Fardouly & Vartanian, 2016; Fox & Vendemia, 2016; McLean et al., 2015).

In addition, these features may tap into the possibilities causing serious appearance-related concerns i.e., appearance-related consciousness. Choukas-Bradley et al. (2019) stated that in a normal day-to-day life, people may stay anxious regarding their appearance, and may keep monitoring their bodies to make sure they look fine if photos get taken. If the photos get posted, these individuals anticipate their peer's comments and objectifying gaze (de Vries et al., 2014). Also, they get exposed to perfect images of other people such as influencers and celebrities with perfect physiques. Such individuals may develop anxiety related to their own perceived physique which could further lead to Social Physique Anxiety (SPA) (Bhalla & Singh, 2020). SPA has been defined as a distressed feeling related to one's perception of being evaluated by others based on one's physical appearance i.e., body structure and composition (Jin & Fung, 2021; White, 2013).

Image-based SNS such as Instagram, Facebook, and Snapchat are the main sources that showcase plenty of unrealistic and flawless body images (Aziz, 2017).

According to Macmillan (2017), Instagram along with Twitter, Facebook, and Snapchat, has been declared as the worst SNS for people's mental wellbeing. The users on these sites may idealize such visuals including their peer's pictures, and comparisons to such idealized photos then further lead to a dissatisfied attitude toward one's self (Kleemans et al., 2016; Fox & Vendemia, 2016). Not to forget, the amount of time one spends on SM has been also one of the key factors for negative body image. Also, with time this relationship may become stronger (Fardouly & Vartanian, 2016). Furthermore, it has been observed that internet addiction more specifically Social Media Addiction can influence the user's self-efficacy also. Self-efficacy is defined as an individual's belief to perform a task or accomplish a goal by having control over his or her motivations, feelings, and behaviors (Aydin, 2017; Berte et al., 2021; Steffen et al., 2002; Stepanikova et al., 2010). Several studies (Rothberger et al., 2015; Thakur & Joshi, 2016) has also reported that social media addiction lowers self-efficacy which in turn may make a person conscious about his appearance.

It would not be wrong to say that Internet addiction more specifically social media addiction can influence the user's self-efficacy (Aydin, 2017; Berte et al., 2021; Kim & Davis, 2009; Stepanikova et al., 2010). Hence, along with Social Media Addiction, self-efficacy can aggravate anxiety associated with one's physique and appearance-related consciousness (Thakur & Joshi, 2016; Rothberger et al., 2015). Kim and Davis (2009) in their study demonstrated that internet addiction was positively correlated with low self-efficacy and anxiety. Similarly, in a cross-sectional research, a negative relation was indicated was found between internet usage and self-efficacy and a positive relation between internet usage and loneliness (Stepanikova et al., 2010). In a 2015 study, the role of self-efficacy was examined in adolescents with internet addiction. The results concluded that there

was a significantly negative association between internet addiction, social self-efficacy, general and total self-esteem, and family-home self-esteem (Aydin, 2017). Furthermore, the association between Social Media Addiction and self-efficacy has been studied across several cultures for instance, Odaci (2011) conducted a study in a sample of around 400 university students in Turkey to probe the link between academic self-efficacy, academic procrastination, and problematic internet usage. The findings of the study concluded a negative correlation between problematic internet usage and academic self-efficacy. Similarly, a study conducted in Palestine by Berte et al. (2021) selected a sample of more than 500 university students to demonstrate the excessive and problematic use of the internet i.e., social media and perceived self-efficacy. The findings revealed a negatively high correlation between excessive internet usage and self-efficacy among the study sample. Interestingly, an indigenous study investigated the impact of social media sites and appearance related consciousness on symptoms of body dysmorphic disorder and self-esteem. The sample consisted of 200 females from universities, colleges and workplaces of Pakistan. The study concluded that increased usage of social applications and appearance related awareness was positively correlated with symptoms of body dysmorphic disorder. Whereas, with self-esteem there was a negative correlation of social applications and AR consciousness (Waqar et al., 2022).

Moreover, another study explored the relationship between SMU, Self-efficacy, preventive behavior, and perceived threat of COVID-19 in a sample of 310 Pakistanis. The outcomes of the study concluded that social media usage predicted low self-efficacy, perceived threat of COVID-19. Findings highlighted the influence of SM on different health related factors (Mahmood et al., 2021).

As appearance-related consciousness is relatively a new construct (Choukas-Bradley

et al., 2019). Hence, the literature available on this very construct was limited (Choukas-Bradley et al., 2019). Therefore, this study was intended to explore the association of Social Media Addiction (SMA), Appearance-Related Consciousness (ARC), and Social Physique Anxiety (SPA) along with the mediating role of Self-Efficacy (SE) among young adults.

The sub-objectives of the study are; to examine the relationship between social media addiction and appearance-related consciousness among young adults; to explore the relationship between social media addiction and social physique anxiety among young adults, to investigate the relationship between social media addiction and self-efficacy among young adults and to explore the mediating role of self-efficacy on the relationship between social media addiction, social physique anxiety, and appearance-related consciousness among young adults.

## **Method**

### **Research Design**

This study was a cross-sectional research design. A quantitative approach more specifically the survey method was employed to collect the data (Tu, 2018).

### **Sample**

A sample of 200 young adults, ages between 18-25 years, calculated from G-power, was selected through a convenient sampling technique (Canêo & Neirotti, 2017; Faul et al., 2009; Peng et al., 2020). The data was collected from various universities in Islamabad. Unmarried participants, who had no comorbidities, used image-based SNS such as Instagram, Facebook, Snapchat, Tiktok, and WhatsApp, along with five or more five hours a day usage was selected as the study sample.

### **Instruments**

Following instruments were used for data collection.

#### ***Bergen Social Media Addiction Scale (BSMAS)***

BSMAS, with original standardized English version, was used to assess SMA (Andreassen et al., 2016). It was originally made to gauge

Facebook addiction i.e., Bergen Facebook Addiction Scale. There are total six items answered on a five point Likert scale ranging from 1; very rarely to 5; very often. The score ranges from 6 to 30. The higher score implies high risk of addiction to SM. The Chronbach's  $\alpha$  of BSMAS is .88 (Andreassen et al., 2016).

#### ***Appearance-Related Social Media Consciousness (ASMC)***

In order to assess appearance related consciousness, among the study sample, the original English version of Appearance-Related Social Media Consciousness (ASMC) was used (Choukas-Bradley et al., 2020). It is a 13 items scale answered on a seven point likert scale ranging from 1; Never to 7; Always. The Chronbach's  $\alpha$  of ASMC has been reported to be very high i.e., .94. The score ranges from 13 to 91. Higher score indicated higher awareness about appearance (Choukas-Bradley et al., 2020; Maheux et al., 2022).

#### ***Social Physique Anxiety Scale (SPAS)***

The original English version of SPAS, developed by Hart and colleagues (1989), was employed to measure Social Physique Anxiety among the sample. It has 12 items. Items are rated on a five-point Likert type scale where 1 means "not at all characteristic of me" while 5 means "extremely characteristic of me". The score ranges from 12 to 60. Higher score indicates high physique anxiety. The  $\alpha$  reliability of SPAS is .90 (Hart et al., 1989; Jin and Fung, 2021).

#### ***Generalized Self Efficacy Scale (GSE)***

Self-efficacy was gauged by, the English version of, GSE developed by Schwarzer and Jerusalem (1995), later on implemented by Scholtz et al. (2002) on a population of more than 20 thousand people from 25 countries. It has 10 items; rated on a four point-Likert scale where 1 means "not at all true" and 4 means "exactly true". The score ranged from 10 to 40. Higher score indicate more self-efficacy. The Cronbach's  $\alpha$  of GSE lies between .76 to .90 (Scholtz et al., 2002; Schwarzer & Jerusalem, 1995).

#### **Procedure**

This research was carried out on a sample of 200 young adults' ages between 18 to 25 years from Islamabad. Students from different universities of Islamabad were selected through random sampling technique as the study sample. For the proposed sample, Social media addiction, Social Physique Anxiety, Appearance-Related Consciousness, and Self-efficacy were used as variables of the study. The instruments were administered in the form of questionnaires. Participants were informed about the purpose of the study along with the protocols to be followed and a surety regarding the confidentiality was provided. Furthermore, informed consent was taken from the students and rapport was established to ensure a smooth administration of the study instruments. Moreover, the students were requested to complete the questionnaires without leaving any statement or question unanswered. Any queries or ambiguities by the participants were answered during the administration and completion of questionnaires. Similarly, in case of any discomfort the participants were given full autonomy to withdraw their participation. After the completion, questionnaires were checked to make sure that no questions are left unanswered. Likewise, no time limit was given to the sample of the study in order to have a smooth data collection process. Lastly, at the end, participants were thanked for their cooperation and participation in the study.

#### **Statistical Analysis**

The current study analyzed results using SPSS v.26 model to conduct initial data analysis. Pearson Product Moment Correlation was applied to test first three hypotheses i.e., to assess correlation between the study variables. Moreover, Multiple Linear Regression Analysis with Process Macro were applied on the results in order to test the fourth hypothesis i.e., to investigate the mediation effect of self-efficacy among the study variables.

**Results****Table 1***Descriptive Statistics of Demographic Variables of the Study (N=200)*

<b>Variables</b>	<b>F</b>	<b>%</b>	<b>M</b>	<b>SD</b>
Age			22.5	2.02
Hours a Day			6.34	1.95
Gender				
Male	100	50%		
Female	100	50%		
Device				
Smartphone	160	80%		
Computer/Laptop	37	18.5%		
Tablet	3	1.5%		
Social Media Application				
Facebook	54	27%		
Whatsapp	126	63%		
Instagram	160	80%		
Snapchat	46	23%		
Tiktok	19	9.5%		
Frequency				
As soon as notification is received	62	31%		
At every spare moment	60	30%		
Several times a day	78	39%		
Purpose				
To stay in touch with friends & family	115	57.5%		
To stay up to date (trends, celebrities, etc.)	74	37%		
To share pictures/videos	59	29.5%		
To tackle boredom	100	50%		

Table 1 shows that the study sample was comprised of equal numbers of men and women. The average age was 22.5 years. Mostly, smartphone was used to access social media sites (80%), and laptop/computer system was the second most used device (18.5%) after smartphone. Moreover, among the study sample, the most used SM site was Instagram (80%). Whatsapp (63%) was the

second most used application, followed by Facebook (27%), Snapchat (23%), and Tiktok (9.5%) which was the least used site. Also, the frequency of checking SM was usually found to be several times a day (39%). Nonetheless, there was not a huge difference among the other categories i.e., checking SM as soon as the notification was received (31%) and at every spare moment

(30%). Among the sample, the purpose of SMU was mostly to stay in touch with friends and family (57.5%). To cope with boredom, was the second most reason for SMUs (50%)

followed by staying up to date (37%), and sharing pictures/videos (29.5%). Lastly, the average hour use of SM was 6 hours and 34 minutes among the sample.

**Table 2**

*Descriptive Statistics and Reliability Estimates of the Study Variables (N=200)*

Variables	K	M	SD	$\alpha$	Range	
					Potential	Actual
Social Media Addiction	06	24.87	2.49	.75	6-30	19-30
Appearance-Related Consciousness	13	55.02	11.90	.89	13-91	16-88
Social Physique Anxiety	12	40.48	5.84	.75	12-60	19-51
Self-Efficacy	10	24.74	4.48	.80	10-40	11-39

Table 2 shows high SMA and SPA and a moderate level of ARC and SE. Furthermore,

the alpha reliability of all the study variable scales was found to be satisfactory.

**Table 3**

*Correlations Matrix of the Study Variables (N=200)*

Variables	M	SD	1	2	3	4
1 Social Media Addiction	24.87	2.49	-	.177*	.147*	-.036
2 Appearance-Related Consciousness	55.02	11.90	-	-	.411**	-.104
3 Social Physique Anxiety	40.48	5.84	-	-	-	-.277**
4 Self-Efficacy	24.74	4.48	-	-	-	-

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

Table 3 shows the results of Pearson Product Moment Correlation, along with descriptive statistics, which revealed inter-correlations among study variables. Findings discovered that SMA was found to be significantly positively correlated with ARC and SPA, while with SE it was negatively correlated

among the study sample. Furthermore, ARC and SPA were concluded to be positively and significantly correlated. On the contrary, a negative relationship was found between ARC and SE. Similarly, a significantly negative correlation was also demonstrated between SPA and SE.

**Table 4**

*Mediating Effect of Self-Efficacy on the Relationship between Social Media Addiction, Appearance-Related Consciousness, and Social Physique Anxiety (N=200)*

Predictors	Self-Efficacy		Appearance-Related Consciousness		Social Physique Anxiety	
	$\beta$	SE	$\beta$	SE	$\beta$	SE
Social Media Addiction	-.036	.128	.173*	.334	.137*	.159
Self-Efficacy	-	-	-.098	.183	-.272***	.088
$R^2$	.001		.041		.095	
$F$	.262		4.187*		10.397***	

Table 4 shows the findings of multiple linear regression. Results revealed that SMA was found to be the negative predictor of SE. Yet, it significantly and positively predicted ARC and SPA. Moreover, SE negatively predicted ARC. While for SPA, SE was found to be a

significant negative predictor. SMA did not account for any variance in SE (001%). In addition, SMA and SE explained 4% of the variance in ARC. Similarly, 9% of the variance in SPA was validated by SMA and SE.

**Table 5**

*Indirect Effects of Social Media Addiction on Appearance-Related Consciousness and Social Physique Anxiety through Self-efficacy as a Mediator (N=200)*

IV	M	DV	IE	Boot SE	Boot LLCI	Boot ULCI
SMA	SE	ARC	.004	.009	-.013	.026
SMA	SE	SPA	.010	.019	-.029	.048

*Note.* IV = Independent Variable, M = Mediator, DV, Dependent Variable, IE = Indirect Effect, BootSE, Bootstrap standard error, Boot LLCI = Bootstrap lower limit confidence interval, Boot ULCI = Bootstrap Upper limit confidence interval, SMA = Social Media Addiction, SE = Self-Efficacy, ARC = Appearance-Related Consciousness, SPA, Social Physique Anxiety.

Table 5 displays that indirect effect of SMA on ARC and SPA through SE as a mediator was validated to be negative which

demonstrates that mediation was insignificant.

**Discussion**

The current study analyzed the direct and indirect association of Social Media Addiction with Appearance Related Consciousness, and Social Physique Anxiety through Self-Efficacy as a mediator among a sample of young adults, comprising university students from Islamabad, Pakistan (N= 200). To assess these study variables,

psychometrically sound tools such as Bergen Social Media Addiction Scale (BSMAS), Appearance-Related Social Media Consciousness Scale (ASMC), Social Physique Anxiety Scale (SPAs), and Generalized Self-Efficacy Scale (GSE) were employed. Furthermore, to assess the data, SPSS 26 model was used. Pearson Product Moment Correlation, Multiple Linear

Regression, and Process Macro were used to test the study objectives.

The findings of the study, by the first hypothesis, indicated a significantly positive correlation between SMA and ARC among young adults (Table 3). Similar findings have been revealed in an indigenous study conducted specifically among females, recruited from colleges, universities, and workplaces (Waqar et al., 2022). The study validated a positive association between social media use and appearance-related awareness/consciousness along with their positive correlation with body dysmorphia and a negative relationship with self-esteem. Several other studies also yielded the same results (Choukas-Bradley et al., 2019; Delgado-Rodríguez et al., 2022; Hawes et al., 2020).

Likewise, the next hypothesis proposed a positive relationship between SMA and SPA which was further proved by the results of this study i.e., a significantly positive relationship between SMA and SPA (Table 3). Several other relevant studies have endorsed a positive association between these two study variables i.e., SMA and SPA (Altındış et al., 2017; Baltacı et al., 2021; Doğan & Çolak, 2016). Since SPA is one of the types of Social Anxiety, Dong and colleagues (2018) reported in their study a positive and significant correlation between SMA and Social Anxiety. Numerous other researchers have also elaborated on such findings in their studies (Lee & Stapinski, 2012; Levinson et al., 2013; Weinstein et al., 2015).

Another finding of this research illustrated a negative relationship between SMA and SE. This further provides validation to the third hypothesis of this research (Table 3). A large number of existing literature supports this finding, such as Stepanikova and colleagues (2010) in their cross-sectional study claimed a negative association between self-efficacy and Internet Usage. In addition, Aydin (2017)

in a sample of adolescents found relevant findings i.e., the higher the internet addiction, the lower the self-efficacy. Numerous other studies across the world have exemplified a similar relationship (Berte et al., 2021; Lee et al., 2001; Mahmood et al., 2021; Odaci, 2011).

Moving forward to another finding of the study; self-efficacy did not act as a mediator between SMA, ARC, and SPA. Hence, the fourth and last hypothesis of this research was refuted (Table 6). Various reasons can justify this finding, for example, a vast variety of literature endorsed an association between social media and self-efficacy, yet many others also found no such association between these two variables (Berte et al., 2021; Chen et al., 2020; Craparo et al., 2014; Du & Zhang, 2022; Mahmood et al., 2021; Odaci, 2011). For instance, Craparo et al., (2014) conducted research to investigate a relationship between internet abuse, self-efficacy, and shame. The study concluded a significant correlation between shame and internet abuse, whereas no such meaningful relationship was validated between internet use/abuse and self-efficacy. In contrast, a Korean study conducted among middle and high school students revealed that addictive use of the internet caused high self-efficacy developed specifically from internet usage (Lee et al., 2001).

Similarly, in a sample of women with high SPA, self-efficacy, more specifically task self-efficacy, did not act as a mediator between the appearance-related class environment and future goals or responses to those exercises (Raedeke et al., 2009). Yet, in a sample of women, Faries and Espie (2016) investigated the association between constructs similar to ARC i.e., Objectified body consciousness, diet intake, and self-efficacy. It was revealed that self-efficacy turned out to be a partial mediator between the study variables (Veldhuis et al., 2020).



Therefore, keeping in view the above-mentioned research, diverse findings across the world, have been found about self-efficacy as a mediator and/or predictor of the study variables. Hence, such findings may provide the basis and/or may justify the current study's findings of self-efficacy not acting as a mediator among the study variables. Additionally, several other reasons can be considered to justify the study findings such as cultural differences, sampling technique, small sample size, etc. (Low et al., 2017; Qin et al., 2003).

#### **Limitations and Recommendations**

- Convenient sampling was used which could have hindered the process of getting a representative sample. Random sampling can accommodate this limitation.
- Sample size was relatively small; comprising of university students only. Therefore, a relatively large and diverse sample is suggested for future researches.
- It is a purely quantitative study, hence the study did not delve in to the reasoning of the proven relationships between the study variables. A mix-method approach can overcome the said limitation.

#### **Implications**

This study contributes to the contemporary literature of several fields of psychology such as abnormal, clinical, cognitive and social psychology due to the nature of the study variables (SMA, ARC, SPA, and SE). As the findings highlight the positive association of SMA with ARC and SPA and possible risk factors of addiction. Hence it can help in; organizing several awareness programs and seminars to assist people, more specifically young adults, understand the threats of SMA, and the necessary protective factors needed to overcome them.

Clinicians, counsellors, and psychologists can formulate therapies, interventions and treatment plan to help their clients to deal effectively with addictive behaviors such as SMA and its adverse consequences. Lastly,

this study can provide a further baseline to future researchers to explore the other causal and protective factors leading to addiction of SM since SMA has been very common around the world.

#### **Conclusion**

This study validates a significantly positive correlation of Social Media Addiction with Appearance-Related Consciousness and Social Physique Anxiety among young adults. Self-Efficacy was studied as a mediator between these study variables. However, it was not validated as a mediator in the current study. Yet, it still negatively and significantly predicted Social Physique Anxiety. Therefore, the study's findings contribute to the existing literature by highlighting an association between the study variables. Lastly, the findings underscore the importance of organizing several awareness programs i.e. seminars, and conferences, regarding the perils of addictive social media usage in educational institutions to help students identify the problems caused by SMA.

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#### **Contribution of Authors**

Fauzia Batool: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft

Ansa Quratulain: Methodology, Writing - Reviewing & Editing, Supervision

#### **Conflict of Interest**

There is no conflict of interest declared by the authors.

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#### **Data Availability Statement**

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [A.Q.] upon the reasonable request.

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