

Is Social Media Blessing or Punishment? Investigating the influence of social networking sites addiction and information overload on employees' performance

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Abstract

The investigation aims to test the association between social networking site addiction and employees' performance. This research also looked at the role of information overload as a mediating factor in the link between social networking site addiction and job performance, as well as the role of self-management as a moderating factor. This is a quantitative study based on a survey approach. Data were collected from 466 SMEs' owners and managers. The finding indicated that social networking sites addiction reduces SMEs employees' performance. Information overload mediates the association among social networking sites and employees' performance. The current study also found that self-management moderates the association among social networking sites addiction and workers' performance. The study contributed to the existing knowledge on social networking site addiction by exploring its impact on employees' performance. This is the first study which offers a unique model by adding information overload as a mediator and self-management as moderator in the association between social networking site addiction and employees' performance. The study has multiple implications including a better understanding of different concepts and their relationships, proposing and testing a model, and guiding owners and managers of SMEs in limiting the SNSs use for higher performance.

Keywords: Social networking sites addiction; information overload; employees' performance; self-management; SMEs.

Introduction

There is a rising trend of technology in today's world (David, 2015; Li, Wang, Abbas, Hassan, & Mubeen, 2022). This resulted in the introduction of numerous innovative products that has highly enhanced the living standard of individuals. Such products are becoming a vital part of everyday life especially the internet and social media (Maddikunta *et al.*, 2022; Mick & Fournier, 1998). Social networking sites (SNSs) such as Google+, Twitter, Facebook, and Instagram have numerous benefits and drawbacks for working people. Similarly, employees working in SMEs are also affected by these technology-oriented innovations. As a result, organizations are also being affected by the use of SNSs

and the way employees stick with SNSs (Bin-Nashwan *et al.*, 2022; Madge *et al.*, 2009). Employees are wasting their productive time using social media on activities such as chatting with friends and family, watching their videos, and liking and/or commenting on their pictures/videos/statuses. Thus, SNSs addiction is reducing the employees' performance by distracting their duties and lowering their performance. SNSs have penetrated workers' life resulting in un-required and excessive knowledge. This SNSs addiction and excessive knowledge have overloaded information flows which harmfully affects employee performance.

The work of previous researchers has overlooked this general phenomenon and there is hardly any evidence in the literature about the interplay between SNSs addiction and employee performance through information overload. This study fills this gap and empirically tests the impact of SNSs addiction on employee performance through mediator information overload moderator self-management.

According to Matthes *et al.*, (2020), SNSs users are spending more than 150 minutes per day on SNSs. People are using SNSs during all the free available time they have (Al-Otaibi, 2022; Johannes *et al.*, 2018) they are checking SNSs more than 100 times each day. These habits are more profound in SMEs workers and they increasingly use SNSs to stay connected with friends, family, and co-workers (Vorderer *et al.*, 2017). Due to 3G – 4G connectivity (5G to be launched soon) and the common availability of smartphones to every individual, people remain active on social networks all the time which leads to frequent communication with other group members. This leads to overburdening stream of information which results in information overload. Eppler and Mengis (2004) and Stanley (2021) define information overload as the inability of a person to cope with environmental demands due to limited resources. Human beings have limited cognitive capacity however, with the introduction of SNSs; they have to deal with the demands of members of SNSs which can lead to information overload which can further leads to high stress (Lee *et al.*, 2016; Wang *et al.*, 2022), job dissatisfaction (Cao, Liu, Shang, & Zhou, 2021; Moon *et al.*, 2017), anxiety (Bawden & Robinson, 2009; Huang, Lei, & Ni, 2022), and low performance (see, Al-Kumaim, Hassan, Shabbir, Almazroi, & Al-Rejal, 2021; Benselin *et al.*, 2016; binti Suhaimi *et al.*, 2017; Edmunds & Morris, 2000; Ellwart *et al.*, 2015). There has been a lot of qualitative and quantitative work has been done on information overload (Bermes, 2021; Jones & Kelly, 2018; Sthapit *et al.*, 2019), however, some pressing research gaps still exist, especially information overload in the framework of SNSs addiction. Different investigation has investigated the individual impact of SNSs on information overload (Baruh & Cemalcılar, 2018; Lee *et al.*, 2016; Matthes *et al.*, 2020), and the influence of SNSs addiction over employees' performance (Cao *et al.*, 2018; Javed *et al.*, 2019; Moqbel *et al.*, 2018; Saleem, Feng, & Luqman, 2021). Nevertheless, the mediating effect of information overload in the association of SNSs addiction and SMEs personnel's job performance has not been evaluated so far. Employees can utilize personal resources and perform better by neutralizing the bad impact of SNSs addiction over their productivity. As a result, self-management was incorporated as a moderating variable in the link between SNS addiction and employee performance in this study. Organizations like SMEs majorly depend on their employees' performance (Aragón-Correa *et al.*, 2008; Salaudeen & Adebayo, 2021). The use of SNSs negatively affects employee performance due to easy accessibility via 3G and 4G technologies by different telecommunication companies. The study's purpose is to evaluate the influence of SNSs on employee performance in Pakistan's SMEs. This study also explores the mediating role of information overload and moderating role of self-management in the association among SNSs addiction on employees' performance. This study has notable implications for the owners and managers of SMEs and makes significant additions to the literature.

The introduction of this paper is shadowed by a literature review that describes the variables and explains their relationship on the basis of prior literature. This is followed by a theoretical framework and hypotheses. The methodology describes the way the research was conducted, and the analysis section shows the results of the study. The paper ends with discussion, conclusion, and recommendations sections.

Literature review

The interrelatedness and background of the variables is discussed in detail as under;

1.1.Social networking sites addiction

SNSs are digital-based networking sites used by individuals as a collaborative tool for communication with friends and families (Kane *et al.*, 2014; Moqbel *et al.*, 2018). In the past two decades, this virtual community has grown rapidly (Dwyer *et al.*, 2007) and has become the most popular source of communication, and SNSs are also rapidly adopted and used by SEMs employees (Skeels & Grudin, 2009). Employees use SNSs for searching information (Ladkin & Buhalis, 2016), linking with fellow employees (DiMicco *et al.*, 2008), information broadcasting (Luarn *et al.*, 2014), issue resolving (Lin *et al.*, 2014), and discussion (Heatherly *et al.*, 2017). However, at the same time SNSs addiction has reduced the employees' performance (Das *et al.*, 2011; Javed *et al.*, 2019) as employees are more engaged in chatting, watching, and sharing videos, updating, and sharing statuses. SNSs addiction reduces the work input which consequently reduces the employees' output (Pasek *et al.*, 2009). Authors such as (Javed *et al.*, 2019; Karpinski *et al.*, 2013) have observed a negative association of SNSs and workers' performance. Thus, it has been established that SNSs addiction reduces the productivity of employees. SNSs addiction is resulting in information overload because when employees are using SNSs, they are exposed to a large amount of information which they are unable to observe, ultimately affecting the quality, cost, and speed of employees' work.

Employees' performance

The term employee performance refers to the level at which a personnel accomplishes his work as per his/her job description and completes the assigned tasks on time (Mustapa *et al.*, 2016). Employees' performance is negatively affected by different factors including SNSs addiction and information overload (LePine *et al.*, 2016). Both SNSs addiction and information overload decrease the employees' performance. A study by Karaiskos *et al.* (2010) also reported that employees' performance is negatively affected by SNSs addiction. Also, another study conducted in an organization consisting of 10,018 staff members by, Andreassen *et al.* (2014) proves and supports that workers' performance is decreased due to the use of SNSs during work times. SNSs addiction leads towards destruction, it includes the energies and time of personnel's and also socially isolates them, which results in the form of a decrease in the performance of the employees, (Moqbel *et al.*, 2018). An investigation by Griffiths *et al.* (2010) demonstrates that SNSs addiction creates staff emotionally feeble, in consequence, such staff members are unable to focus on their tasks and their performance is affected negatively. From the perspective of the current study, SNSs addiction has two consequences; one its negative impact the employees' productivity and secondly it rises information overload which again leads to low employees' performance. From the arguments above the first hypothesis is created as under:

H1: Social networking sites addiction results in lowering the employees' performance.

1.2.Information overload

Information overload is defined as information that an individual is unable to cope with, and it is beyond the absorption capacity of an individual (Bawden & Robinson, 2009). Information overload acts as a noise and as a result of it, individuals are unable to handle the un-necessary information. According to Paredes (2003), when individual is engaged in numerous tasks, they are overflowed with information beyond their coping capacity of an individual, resulting in information overload. This information overload is reported in SMEs workers due to excessive use of SNSs addiction. Although literature highlighted many antecedents of information overload are discussed including the use of SNSs. According to Can *et al.* (2016), the innovation of smart devices like smartphones, laptops, and tablets and easy accessibility of social networking applications like Facebook, Whatsapp, and Instagram has a significant relationship with information overload. However, limited work is available in the literature

showing SMEs worker i.e. how SNS addiction affects their information overload. When personnel's are SNSs addicted, they spend their time and energy towards SNSs, resultantly they are information overloaded. From the arguments above the second hypothesis is created as under:

H2: Social networking sites addiction results in information overload.

On the other hand, information overload also affects employees' performance. According to Oldroyd and Morris (2012), information overloading limits the performance of employees and they are less concentrating on their job. The un-necessary and excessive information not only influences workers but also negatively affects employee performance. It has been observed in the literature that employees when informed beyond their limits can damage memory and thus effecting their job performance. We argue that employees possessing extra knowledge will become sluggish and cannot perform their tasks up-to-the-mark. Therefore, the current study third hypothesis is as under:

H3: Information overload decreases employees' performance.

Information overload also mediates the proposed connection of SNSs addiction and workers' performance. Due to the overuse of SNSs, employees are information overloaded, and this lowers their concentration to perform their assigned duties. The information overload should mediate the connection among SNSs addiction and employee performance. The monochromic attitude of employees enables them to concentrate, and employees can perform in a better way. However, employees having excessive and overflowed knowledge got through SNSs can divert their concentration negatively, ultimately affecting their performance. From the aforesaid mentioned influences, the hypothesis to be tested is:

H4: Information overload mediates the association among social networking sites addiction and employees' performance.

1.3. Self-management

Self-control one has is refer to self-management (Wilson *et al.*, 2018). It determines the concentration of a person while doing work. In the current dynamic era, the concept of self-management has become even more important as distraction during work has increased. One of the common reasons for work-distraction is the technology and social media which shifts the individual's concentration from work to other non-work issues. However, self-management can keep employees focused on their tasks (Goleman *et al.*, 2001). Self-management helps in tracking individual behavior by one-self for higher productivity (Hull & Technology, 2015). According to Gerber *et al.* (1995), self-managed person can more effectively set his/he goals and can achieve them. Self-management can also boost the employees' performance (Javed *et al.*, 2019) as employees' performance is contingent on the self-ability to improve their own performance. On one side, SNSs addiction decreases employees' performance and on other side effectively managing self-resources can enhance the employees' performance. Based on these arguments, self-management is added as moderating variable in the model; as it is likely to moderate the connection. From the above study hypothesis is:

H5: Self-management moderates the negative association among SNSA and employees' performance.

2. Theoretical Background and Framework

Current research is based on Social Cognitive Theory (SCT) proposed by Bandura (1986). Same theory has also been applicable in understanding the use of IT and its applications. SCT emphasizes the value of socializing during the learning process and contends that social channels play a role in the shaping and regulation of people's behaviors, routines, and even personal values (Bandura 1986). This theory emphasizes that individual behavior can be altered by the use of IT and its applications. From the current study perspective, SNSs addiction can lead to lowering organizational performance.

Based on SCT and derived from the literature review, the current study tests the following theoretical model:

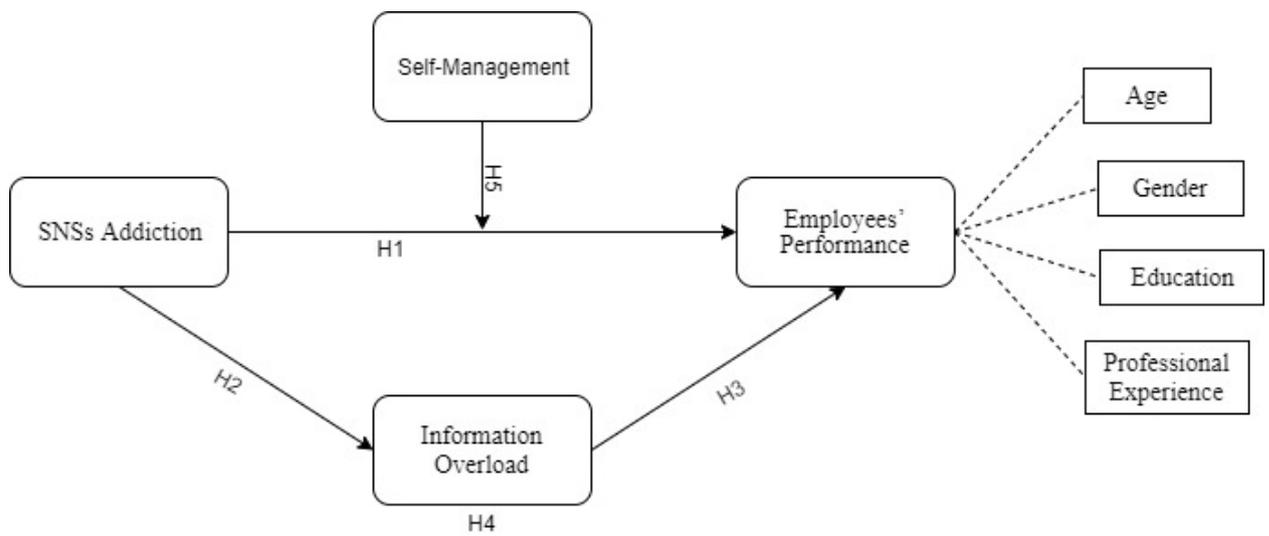


Figure I. theoretical model

Methodology

This empirical study was cross sectional in design. Data was collected from managers and owners of different SMEs in Pakistan. Standardized scales were adapted to collect the data. Samples were chosen from the list of Federation of Pakistan Chambers of Commerce, SMEs registered with SMEDA and FPCCI. Data was collected from 21 October 2018 to 22 December 2018. Power analyses were used to estimate the required sample size and get significant results. This was a mediation model, and the minimum sample size for such models, according to Wolf *et al.* (2013), was 450. Initially, 511 questionnaires were distributed. Only 357 questionnaires were received that were complete in all respects. In the second phase, 200 more questionnaires were distributed and 109 were returned fully completed. This made a total of 466 questionnaires and a response rate of 65%. Variables were constructed using SPSS's function 'construct variable' and the mean value was calculated. Furthermore, the Kaiser-Meyer-Olkin Measure of Sampling was used which generated a value of 0.78.

2.1. Measurement

The study adapted different scales from existing studies. Detail is given below:

2.1.1. SNSs addition

SNSs Addiction was assessed using a standardized questionnaire developed by Elphinston *et al.* (2011). It is eight items, a 5-point Likert scale consisting of questions like "I have no control over myself to limit the use of Social networking sites" etc. The value of Cronbach's alpha (α) coefficient of SNSs addiction scale was 0.85, and the AVE value was 0.67.

2.1.2. Employees' performance

Workers' performance was calculated via 9 items scale which is adapted from Moqbel *et al.*, (2018). Questions like "I fulfill all responsibilities required by my job" etc. were asked from respondents. The value of α coefficient of SNSs addiction scale was 0.81 and the value of AVE was 0.62.

2.1.3. Information overload

Information overload was calculated via an adapted scale developed by Chen *et al.* (2009). Four questions were asked from the respondents about use of SNSs addiction and information overload. Questions like "when I use Social networking sites, I feel that too much information on every topic is

there and I feel burdened in handling it” were asked. α was 0.93 for the information overload scale, and AVE was 0.76.

2.1.4. Self-management

For measuring self-management, a scale was adapted from Mezo and assessment (2009) which consisted of 16-items, 5-point Likert scale. A sample item includes ‘Even I don’t like the task, but even then I keep my concentration on tasks’ etc. value of α of SNSs addiction scale was 0.75 and the value of AVE was 0.64, and CR= 0.966.

Along with these variables, some variables were also controlled which gives better estimation of the effect of independent and mediating variables of SMEs staff. Demographic variables used were age, gender, education, and professional experience.

2.2. Analysis and results

Hypotheses were tested using descriptive analysis, correlation, and hierarchical regression in this study. Prior to that, a confirmatory factor analysis was performed to ensure the scale's validity. CR and AVE both confirmed convergent validity. The findings of CR were greater than the 0.7 threshold value, CR was greater than AVE and also the values of AVE were greater than 0.5, indicating that the scale was convergently valid. Detail is shown in table I.

Table I. Composite reliability, and average variance extracted

	No. of Item(s)	Range of values of Factor Loading	Value of Cronbach’s alpha	CR (Composite Reliability)	AVE
SNSs Addiction	8	0.729-0.859	0.85	0.94	0.67
Employees’ performance	9	0.770-0.871	0.81	0.93	0.62
Information overload	4	0.769-0.898	0.93	0.92	0.76
Self-Management	16	0.75-0.897	0.75	0.966	0.64

To test the overall model fitness and construct validity, AMOS v.7 was used. Initially, all the variables were merged into a single variable ($\chi^2 = 122.25$; $df = 103$ $p < .001$; CFI = .83; GFI = .87 and SRMR = .18). The two-factor model merged SNSs addiction, information overload, and self-management as single factor and employees’ performance as the second factor ($\chi^2 = 118.12$; $df = 101$ $p < .001$; CFI = .85; GFI = .89 and SRMR = .12). Three-factor model, information overload and self-management were merged as a single factor and SNSs addiction and employees’ performance were treated as separate factors ($\chi^2 = 127.26$; $df = 107$ $p < .001$; CFI = .89; GFI = .90 and SRMR = .09). Four-factor model separated all the variables into different factors. The results of three factor model show data is good fit ($\chi^2 = 134.12$; $df = 110$ $p < .001$; CFI = .91; GFI = .93 and SRMR = .08). The value of all these variables i.e., χ^2 , df , GFI, CFI, and RMSEA fall in the acceptable range. As per the recommendations of Hu and Bentler (1999), both CFI and GFI are above 0.90. The value of RMSEA is equal to 0.08 which falls as per the recommended score by Brown and Cudeck (1993).

Table II, Model fitness

Factors	χ^2	df	p	CFI	GFI	SRSM
Single-factor	122.24	103	< .001	.83	.87	.18
Two-factor	118.12	101	< .001	.85	.89	.12
Three-factor	127.26	107	< .001	.89	.90	.09
Four-Factor	134.12	110	< .001	.91	.93	.08

2.2.1. Descriptive analysis

Descriptive and correlation analyses were performed and shown in table III. As per data, the value of professional experience on average was 4.9 years, their mean age was 32.77 years, and the majority of them were males with a 16-year education. Table III also presents the correlation value between different variables. The results demonstrate a positive and substantial relationship between SNSs addiction and information overload, as well as a negative but statistically significant association between SNSs addiction and employee performance and information overload and employee performance. The major findings are also in line with Baron and Kenny (1986) norms for studying mediation.

Table III, Mean, SD, and value of 'r' (correlation)

Variables	Mean	SD	1	2	3	4	5	6	7	8
Professional experience	4.9	3.5	1							
Age	32.77	10	.13*	1						
Gender	0.8	.28	-.01	.04	1					
Education	2.3	.77	.03	.05	.06	1				
SNSs Addiction	3.2	.61	.01	.05	-.03	.06	1			
Information overload	3.6	.79	.01	.03	-.04	.02	.37**	1		
Employees' Performance	3.8	.89	-.04	.04	-.05	.06	-.23**	-.54**	1	
Self-Management	3.75	.54	.30*	.22*	.21	.17	-.21*	-.23	.54**	1

Note: * $p < 0.05$, two tailed; ** $p < 0.01$, two tailed.

2.2.2. Mediation analyses

Baron and Kenny's (1986) approach was employed to test the mediation. Tables IV and V show the outcomes of mediation. Simple and multiple regressions were used to approve the four conditions of Baron and Kenny test. All the prerequisites of mediation were fulfilled before moving forward. As shown in table V, the first hypothesis is supported by the fact that SNSs addiction is strongly but

negatively associated with worker performance ($= -0.23, t = 6.41, p < 0.00$), hence it is supported by the data. The study's second condition that SNSs addiction results in higher information overload is also confirmed from table IV ($\beta = 0.37, t = 11.78, p < 0.00$). So, H2 is also accepted. The third condition of Baron and Kenny was also met ($\beta = -0.50, t = 16.311, p < 0.00$) which also results in the acceptance of H3.

Table IV. Regression analysis

Independent factors	Information overload					Employees' performance				
	R ²	S.E	β	t-value	Sig.	R ²	S.E	β	t-value	Sig.
SNSs-A	0.18	0.039	0.37	11.78	<0.001	0.16	0.051	-0.23	6.41	<0.001
Information overload (Mediator)	--	--	--	--	--	0.33	0.037	-0.50	16.31	<0.001

For analyzing the fourth condition of Baron and Kenny, multiple regression analysis was conducted. For this study, multiple models were developed. Model 1 validates a direct connection among SNSs addiction and employees' performance ($\beta = -0.23^{**}, SE= 0.051$). The effect of control variables was tested in model 2. The results of the model by adding all the control variables still show a significant association among SNSs addictions and employees' performance ($\beta = -0.22^{**}, SE= 0.053$) which confirmed that control variables have a minimum effect on the relationship. Model 3 presents the mediator's effect in the affiliation of IV and DV. The results demonstrate that with the addition of information overload in the relationship of SNSs addition and employees' performance, the connection among SNSs addiction and employees' performance becomes insignificant ($\beta = -0.29, SE= 0.057$) whereas the relationship of information overload with employees' performance is significant ($\beta = -0.55^{**}, SE= 0.034$) which proves that information overload has fully mediated the relationship. So, the H4 of the study is accepted.

Table V. Multiple regression analysis

Independent Variable	Model-A		Model-B		Model-C	
	β	SE	β	SE	β	SE
SNSs-A	-0.23**	(0.051)	-0.22**	(0.053)	-0.29	(0.057)
Control-Variabes						
Professional -experience			0.07	(0.077)	0.034	(0.067)
Respondents-Age			0.10*	(0.043)	0.09*	(0.036)
Respondents-Gender			0.01	(0.110)	0.02	(0.091)
Respondents-Education			0.08	(0.043)	0.11*	(0.035)
Mediating variables						

As Baron and Kenny's (1986) approach only guides whether mediation has accrued or not and it does not guide about the strength of mediation. To test the strength of mediation, the normal test theory approach was utilized, and the results are demonstrated in table VI.

Table VI. Total, direct, and indirect effect

Mediation model	Total_effect			Indirect_effect (Normal-test- approach)			Indirect_effect		
	B	T	P	B	t	p	B	Z	p
SNSa-A→IO→EP	0.43	7.24	0.00	0.08	0.69	0.57	0.35	4.12	0.00

Note: SNSs-A: SNSs Addiction; IO: Information Overload; EP: Employees' Performance

The results showed that there is an insignificant direct effect of SNSs addiction on employee performance ($=0.08$, $t=0.69$) and that the outcome normal test theory ($Z=4.12$, $p<0.001$) supports the mediation outcome of information overload ($=0.43-0.08=0.35$) in the connection of SNSs addiction and worker performance, indicating that study H4 is acceptable.

2.2.3. Moderation analyses

For analyzing the moderation, hierarchical regression was used, and its results are revealed in table VII.

Table VII. Hierarchical regressions

	Step-1	Step-2	Step-3
(a) Moderating effect of self-management			
Professional -experience	0.029	0.014	0.012
Respondents-Age	-0.021	0.019	-0.020
Respondents-Gender	-0.013	0.009	0.007
Respondents-Education	0.021	0.013	-0.027
SNSs Addiction		-.19**	-.14**
Self-Management		.29**	.34**
SNSs -A x Self_Management (interaction term)			-.11**
R ²	.005	.171	.176
Adjusted-R ²	.003	.166	.173
ΔR^2	.002	.143	.021
ΔF	3.842	71.32	16.78

The moderation effect shows in step no. 3 while step no.1 and step no.2 are utilized as base model for step no. 3. The table also shows coefficient of interaction term that was created by growing SNSs-addiction and self_management. From the result it is observed that self-management is positively and significantly impact the connection among SNSs-A and employee's performance ($\beta = -.11$, $p < .001$). it is also observed that the coefficient value is negative as SNSs-A negatively but intensively impacted the job performance of the employees and overview of self-management as moderating variable decreases the negativity of performance of the staffs. From the above result it is observed that self-management moderation the association among SNSs addiction and employee's performance.

Slope analysis was conducted as recommended by Aiken *et al.* (1991), and it is presented in

figure below.

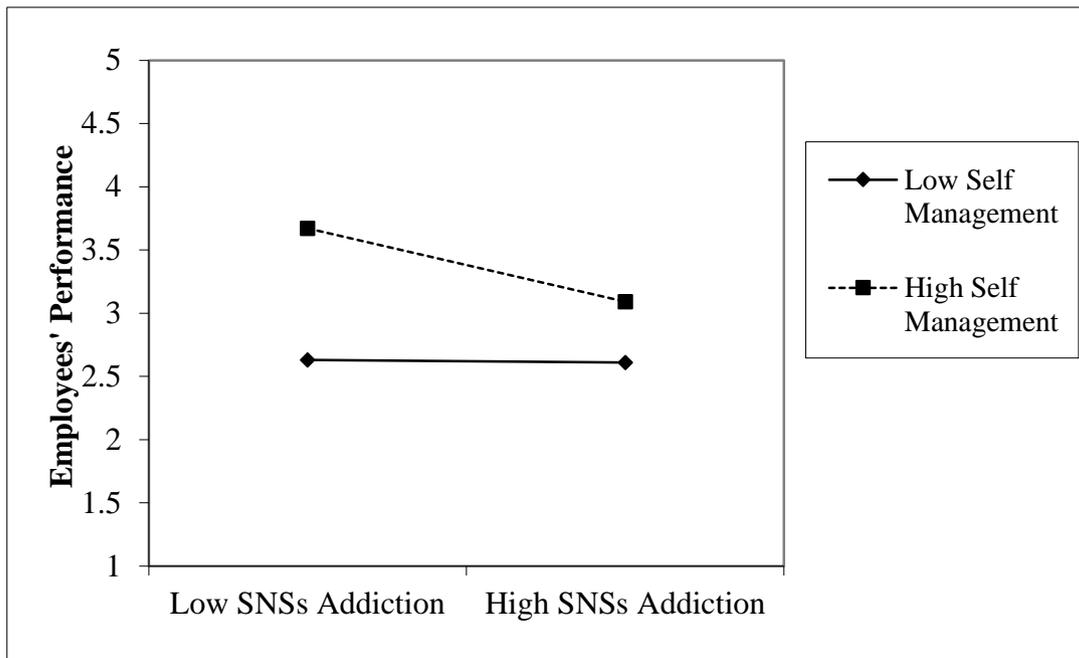


Figure II. Slope Analysis

Discussion

The SME sector is a vital sector for the success of any economy as it helps in providing jobs to a large segment of the community, increasing tax revenues, bringing innovation, and triggering social uplift (Musamali *et al.*, 2013). This is the reason, why SMEs are considered as the backbone of any society (Waterman & Peters, 1982). There is a huge number of opportunities available to SMEs but at the same time, they face many problems including shortage of funds (Van de Vrande *et al.*, 2009), low production (Muhammad *et al.*, 2010), international access (Alexander & Warwick, 2007), and lack of stakeholder's support (Doh & Kim, 2014), etc. With the development of information and communication technologies, there has been a rapid increase in the adoption and use of SNSs by the general public all over the world. The launching of 3G and 4G mobile technologies have made access to SNSs more convenient and affordable for people. However, this ease of access results in the development of addiction to these sites, and the users continue to use SNSs even at their workplace. SNSs addiction at workplace results in information overload as employees consume more of their energy and time on using SNSs and thus bombarded with a large amount of irrelevant and un-useful information. This behavior also negatively affects the performance of employees as employees' performance is an important indicator of organizational performance (Parmenter, 2015). When the employees' performance is high, it leads to better organizational performance (Katzenbach & Smith, 2015) while low employees performance adversely affects organizational performance. However, Employees who understand the art of self-management can counteract the harmful effects of SNSs addiction.

Taking the case of SMEs in Pakistan, this study has explained how SNSs addiction leads to lower employees' performance and how this connection is mediated due to information overload and moderated due to self-management. The current study is important for managers and entrepreneurs as SNSs addiction is becoming common among employees and it is affecting the employees' performance. The findings of this research would have significant implications in the field of organizational behavior, especially for SMEs.

The study confirmed five hypotheses including employees' performance, SNSs addiction, self-management, and information overload. The first hypothesis was about the association among SNSs addiction and employees' performance, and the hypothesis is accepted. Similar results were also found by Aguenza *et al.* (2012), Moqbel *et al.* (2018), and Javed *et al.*, (2019). The second hypothesis involved the evaluation of the effect of SNSs addition on information overload. Results concluded that SNSs addition increases information overload. Similar results are reported by (Lee *et al.*, 2016), and (Matthes *et al.*, 2020). The third hypothesis of the study linked information overload with employees' performance and concluded that information overload reduces employees' performance. Yin *et al.* (2018), Wu *et al.* (2019), and Watts (2016) also found that information overload with employees' performance is interrelated. The study also highlighted the mediating effect of information overload in the bond of SNSs addiction and the employee performance of SMEs. The findings show that information overload fully mediates the relationship. These results are unique and valuable as no previous studies have addressed or empirically tested this relationship. The study also looked at the role of self-management in the relationship between SNSs addiction and worker performance, finding that when self-management is high, the negative impact of SNSs addiction on worker performance is reduced because employees can better manage their own resources to overcome the negative effects of SNSs addiction. Similar results were reported by Javed *et al.* (2019) and Majid *et al.*, (2019) for nurses.

2.3.Theoretical implications

This research was conducted to achieve four objectives: *firstly*, to find the effect of SNSs addiction on staff's performance. *Secondly*, to evaluate the influence of SNSs addiction on information overload. *Thirdly*, to determine the effect of information overload in the relationship between SNS addiction and employee performance. *Lastly* to discover the moderating effect of self-management in the association of SNSs addiction and workers' performance. There are some important contributions of this research for the SME sector. The most important contribution of this research is that in prior literature, the use of SNSs was considered to have a positive impact on employees' performance. This study, on the other hand, disputed and established that SNS addiction lowers employee performance. The current study also developed and validated a conceptual model that integrates SNS addiction, employee productivity, information overload, and self-management in a novel way. This research also built arguments for and proved the relationship between SNSs addiction, information overload, self-management, and employees performance which has never been tested before.

2.4.Practical implications

This research has various management implications in addition to making major contributions to the growth of existing literature. *First*, the management of SMEs should focus on limiting the use of SNS at the workplace as it is negatively affecting employees' performance. People get addicted to technology, and they waste their time and energy using technologies that provide access to SNSs and concentrate less on their work performance which ultimately leads to lower organizational performance. Management should devise strategies to overcome this addiction of SNSs. *Second*, management can use different performance enhancing tools for neutralizing the impact of SNSs addiction. *Third*, people in pivotal positions should be allowed to limit the use of SNSs or its access should be limited to the specified time to avoid the disadvantages of information overload. *Fourth*, management should design training for better self-management as the results suggested that better self-managed employees can negate the negative impacts of SNSs addiction on employees' performance.

2.5.Limitations and future research

Despite its several merits, this research has some limitations that could be used as directions for future research. *First*, this research was conducted on general SMEs and not on any particular industrial sector/s. Conducting research on samples taken from specific industries might generate different findings. *Second*, the model used in this research employed only one independent, one dependent, one

moderator, and one mediating variable. Adding more variables like intervening variables can enhance the overall comprehensiveness of the model. In addition, cross-industry and cross-cultural research can be used for generalizing the results of this study. Along with this, studies using different instruments can validate the results of this study. This was a cross-sectional study and, in the future, longitudinal studies can also be conducted. This research used self-reported questionnaires which can cause to common method bias. Collecting data from different respondents will overcome this problem.

Conclusion

Based on Social Cognitive Theory and guided from previous studies on SNSs addiction, information overload, self-management, and workers' performance, the findings of current study support the fact that SNSs addiction reduces the personnel' performance and information overload play a mediating role in SNSs addiction-employees' performance whereas self-management plays moderating role in the SNSs addiction-employees' performance relationship. These outcomes fill the knowledge gap in an underdeveloped economy. This study guides the SMEs management that to achieve higher employees' performances, they have to limit the use of SNSs at work and have to arrange self-management workshops/training for employees. The study also suggested to more research to investigate the other factors that might explains employees' performance.

References

- Al-Otaibi, Y. D. (2022). The Effects of IT Addiction on Trust and Social Influence Perceptions: An Empirical Study of Social Networking Site Users. *International Journal of E-Adoption (IJEA)*, 14(1), 1-17.
- Aguenza, B. B., & Som, A. P. M. (2012). A conceptual analysis of social networking and its impact on employee productivity. *IOSR Journal of Business and Management*, 1(2), 48-52.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- Alexander, C., & Warwick, K. (2007). Governments, exports and growth: responding to the challenges and opportunities of globalisation. *World Economy*, 30(1), 177-194.
- Al-Kumaim, N. H., Hassan, S. H., Shabbir, M. S., Almazroi, A. A., & Al-Rejal, H. M. A. (2021). Exploring the inescapable suffering among postgraduate researchers: information overload perceptions and implications for future research. *International Journal of Information and Communication Technology Education (IJICTE)*, 17(1), 19-41.
- Andreassen, C. S., Torsheim, T., & Pallesen, S. (2014). Use of online social network sites for personal purposes at work: does it impair self-reported performance?. *Comprehensive Psychology*, 3, 01-21.
- Aragón-Correa, J. A., Hurtado-Torres, N., Sharma, S., & García-Morales, V. J. (2008). Environmental strategy and performance in small firms: A resource-based perspective. *Journal of Environmental Management*, 86(1), 88-103.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
- Baruh, L., & Cemalcılar, Z. (2018). When more is more? The impact of breadth and depth of information disclosure on attributional confidence about and interpersonal attraction to a social network site profile owner. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 12(1), 1-15.
- Bawden, D., & Robinson, L. (2009). The dark side of information: overload, anxiety and other paradoxes and pathologies. *Journal of Information Science*, 35(2), 180-191.
- Benselin, J. C., & Ragsdell, G. (2016). Information overload: The differences that age makes. *Journal of Librarianship and Information Science*, 48(3), 284-297.

- Bermes, A. (2021). Information overload and fake news sharing: A transactional stress perspective exploring the mitigating role of consumers' resilience during COVID-19. *Journal of Retailing and Consumer Services*, 61, 102555.
- Bin-Nashwan, S. A., Sarea, A., Al-Daihani, M., Ado, A. B., Begum, H., Alosaimi, M. H., ... & Abdelsalam, M. K. (2022). Fundraising Appeals for the COVID-19 Epidemic Fight: A Cross-Country Study of Donor Responses. *Sustainability*, 14(11), 6486.
- binti Suhaimi, F. A., & binti Hussin, N. (2017). The influence of information overload on students' academic performance. *International Journal of Academic Research in Business and Social Sciences*, 7(8), 2222-6990.
- Brown, M., & Cudeck, R. (1993). EQS structural equations program manual. *Multivariate Software Inc., Los Angeles*.
- Can, L., & Kaya, N. (2016). Social networking sites addiction and the effect of attitude towards social network advertising. *Procedia-Social and Behavioral Sciences*, 235, 484-492.
- Cao, J., Liu, F., Shang, M., & Zhou, X. (2021). Toward street vending in post COVID-19 China: Social networking services information overload and switching intention. *Technology in Society*, 66, 101669.
- Cao, X., Masood, A., Luqman, A., & Ali, A. (2018). Excessive use of mobile social networking sites and poor academic performance: Antecedents and consequences from stressor-strain-outcome perspective. *Computers in Human Behavior*, 85, 163-174.
- Chen, Y. C., Shang, R. A., & Kao, C. Y. (2009). The effects of information overload on consumers' subjective state towards buying decision in the internet shopping environment. *Electronic Commerce Research and Applications*, 8(1), 48-58.
- Das, B., & Sahoo, J. S. (2011). Social networking sites—a critical analysis of its impact on personal and social life. *International Journal of Business and Social Science*, 2(14), 222-228.
- David, H. J. J. O. E. P. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3-30.
- Deng, T., Kanthawala, S., Meng, J., Peng, W., Kononova, A., Hao, Q., ... & David, P. (2019). Measuring smartphone usage and task switching with log tracking and self-reports. *Mobile Media & Communication*, 7(1), 3-23.
- DiMicco, J., Millen, D. R., Geyer, W., Dugan, C., Brownholtz, B., & Muller, M. (2008, November). Motivations for social networking at work. In *Proceedings of the 2008 ACM Conference on Computer Supported Cooperative Work* (pp. 711-720).
- Doh, S., & Kim, B. (2014). Government support for SME innovations in the regional industries: The case of government financial support program in South Korea. *Research Policy*, 43(9), 1557-1569.
- Dwyer, C., Hiltz, S., & Passerini, K. (2007). Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace. *AMCIS 2007 Proceedings*, 339.
- Edmunds, A., & Morris, A. (2000). The problem of information overload in business organisations: a review of the literature. *International Journal of Information Management*, 20(1), 17-28.
- Ellwart, T., Happ, C., Gurtner, A., & Rack, O. (2015). Managing information overload in virtual teams: Effects of a structured online team adaptation on cognition and performance. *European Journal of Work and Organizational Psychology*, 24(5), 812-826.
- Elphinston, R. A., & Noller, P. (2011). Time to face it! Facebook intrusion and the implications for romantic jealousy and relationship satisfaction. *Cyberpsychology, Behavior, and Social Networking*, 14(11), 631-635.
- Eppler, M. J. & Mengis, J. (2004). The concept of information overload: A review of literature from organization science, accounting, marketing, MIS, and related disciplines. *Information Society*, 20(1), 325-344.
- Gerber, R., Lankshear, C., Larsson, S., & Svensson, L. (1995). Self-directed learning in a work context. *Education+ Training*. 37(8), 26-32

- Goleman, D. (2000). Leadership that gets results, *Harvard Business Review*, 78(2), 4-17.
- Griffiths, M. D. (2010). The role of context in online gaming excess and addiction: Some case study evidence. *International Journal of Mental Health and Addiction*, 8(1), 119-125.
- Heatherly, K. A., Lu, Y., & Lee, J. K. (2017). Filtering out the other side? Cross-cutting and like-minded discussions on social networking sites. *New Media & Society*, 19(8), 1271-1289.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Huang, Q., Lei, S., & Ni, B. (2022). Perceived information overload and unverified information sharing on WeChat amid the COVID-19 pandemic: A moderated mediation model of anxiety and perceived herd. *Frontiers in Psychology*, 13, 837820.
- Javed, A., Yasir, M., Majid, A., Shah, H. A., Islam, E. U., Asad, S., & Khan, M. W. (2019). Evaluating the effects of social networking sites addiction, task distraction, and self-management on nurses' performance. *Journal of Advanced Nursing*, 75(11), 2820-2833.
- Jones, S. L., & Kelly, R. (2018). Dealing with information overload in multifaceted personal informatics systems. *Human-Computer Interaction*, 33(1), 1-48.
- Kane, G.C. Fichman, R.G. Gallagher, J. & Glaser, J. (2009). Community relations 2.0, *Harvard Business Review*, 87 (11), 45-50.
- Karaiskos, D., Tzavellas, E., Balta, G., & Paparrigopoulos, T. (2010). P02-232-Social network addiction: a new clinical disorder?. *European Psychiatry*, 25(S1), 1-1.
- Katzenbach, J. R., & Smith, D. K. (2015). *The wisdom of teams: Creating the high-performance organization*. Harvard Business Review Press.
- Kirschner, P.A. & Karpinski, A.C. (2010). Facebook® and academic performance, *Computers in Human Behavior*, 26(6),1237-1245.
- Ladkin, A. & Buhalis, D. (2016). Online and social media recruitment: Hospitality employer and prospective employee considerations. *International Journal of Contemporary Hospitality Management*, 28(2), 327-345.
- Lee, A. R., Son, S. M., & Kim, K. K. (2016). Information and communication technology overload and social networking service fatigue: A stress perspective. *Computers in Human Behavior*, 55, 51-61.
- LePine, M. A., Zhang, Y., Crawford, E. R., & Rich, B. L. (2016). Turning their pain to gain: Charismatic leader influence on follower stress appraisal and job performance. *Academy of Management Journal*, 59(3), 1036-1059.
- Li, Z., Wang, D., Abbas, J., Hassan, S., & Mubeen, R. (2022). Tourists' health risk threats amid COVID-19 era: role of technology innovation, Transformation, and recovery implications for sustainable tourism. *Frontiers in Psychology*, 12, 769175.
- Lin, P. C., Hou, H. T., Wu, S. Y., & Chang, K. E. (2014). Exploring college students' cognitive processing patterns during a collaborative problem-solving teaching activity integrating Facebook discussion and simulation tools. *The Internet and Higher Education*, 22, 51-56.
- Luarn, P., Yang, J. C., & Chiu, Y. P. (2014). The network effect on information dissemination on social network sites. *Computers in Human Behavior*, 37, 1-8.
- Lund-Thomsen, P., Lindgreen, A., & Vanhamme, J. (2016). Industrial clusters and corporate social responsibility in developing countries: What we know, what we do not know, and what we need to know. *Journal of Business Ethics*, 133(1), 9-24.
- M Musamali, M., & Kipkirong Tarus, D. (2013). Does firm profile influence finance access among small and medium enterprises in kenya?. *Asian Economic and Financial Review*, 3(6), 714-721.
- Maddikunta, P. K. R., Pham, Q. V., Prabadevi, B., Deepa, N., Dev, K., Gadekallu, T. R., ... & Liyanage, M. (2022). Industry 5.0: A survey on enabling technologies and potential applications. *Journal of Industrial Information Integration*, 26, 100257.
- Majid, A., Yasir, M., Javed, A., & Ali. P., (2019), From Envy to Social Anxiety and Rumination: How

- Social Networking Sites Addiction is Triggering Task Distraction among Nurses?, *Journal of Nursing Management*, 28(3), 504-513
- Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work'. *Learning, Media and Technology*, 34(2), 141-155.
- Mahmood, Z., Kouser, R., & Iqbal, Z. (2017). Why Pakistani small and medium enterprises are not reporting on sustainability practices?. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 11(1), 389-405.
- Matthes, J., Karsay, K., Schmuck, D., & Stevic, A. (2020). "Too much to handle": Impact of mobile social networking sites on information overload, depressive symptoms, and well-being. *Computers in Human Behavior*, 105, 106217.
- Mezo, P. G. (2009). The self-control and self-management scale (SCMS): Development of an adaptive self-regulatory coping skills instrument. *Journal of Psychopathology and Behavioral Assessment*, 31(2), 83-93.
- Mick, D. G., & Fournier, S. (1998). Paradoxes of technology: Consumer cognizance, emotions, and coping strategies. *Journal of Consumer Research*, 25(2), 123-143.
- Moon, S. J., Costello, J. P., & Koo, D. M. (2017). The impact of consumer confusion from eco-labels on negative WOM, distrust, and dissatisfaction. *International Journal of Advertising*, 36(2), 246-271.
- Moqbel, M., & Kock, N. (2018). Unveiling the dark side of social networking sites: Personal and work-related consequences of social networking site addiction. *Information & Management*, 55(1), 109-119.
- Muhammad, M. Z., Char, A. K., bin Yaso, M. R., & Hassan, Z. (2010). Small and medium enterprises (SMEs) competing in the global business environment: A case of Malaysia. *International Business Research*, 3(1), 66.
- Musamali, M.M. & Tarus, D.K. (2013). Does firm profile influence financial access among small and medium enterprises in Kenya?. *Asian Economic and Financial Review*, 3(6), 714.
- Mustapa, A.N. & Mahmood, R. (2016). The effects of public service motivation on job performance: myth or reality. *Public Administration Research and Theory*, 7(1), 56-62.
- Oldroyd, J. B., & Morris, S. S. (2012). Catching falling stars: A human resource response to social capital's detrimental effect of information overload on star employees. *Academy of Management Review*, 37(3), 396-418.
- Paredes, T. A. (2003). Blinded by the light: Information overload and its consequences for securities regulation. *Wash. ULQ*, 81, 417.
- Parmenter, D. (2015). *Key performance indicators: developing, implementing, and using winning KPIs*. John Wiley & Sons.
- Pasek, J. & Hargittai, E. (2009). Facebook and academic performance: Reconciling a media sensation with data. *First Monday*, 14(5), 12-23.
- Raja, U., Sheikh, R. A., Abbas, M., & Bouckennooghe, D. (2018). Do procedures really matter when rewards are more important? A Pakistani perspective on the effects of distributive and procedural justice on employee behaviors. *European Review of Applied Psychology*, 68(2), 79-88.
- Salaudeen, J., & Adebayo, T. S. (2021). Impacts of Organizational Capability and Firms' Competitive Scope on Non-Oil Export Performance. *IOSR Journal of Business and Management (IOSR-JBM)*, 23(03), 2021.
- Saleem, S., Feng, Y., & Luqman, A. (2021). Excessive SNS use at work, technological conflicts and employee performance: A social-cognitive-behavioral perspective. *Technology in Society*, 65, 101584.
- Skeels, M. M., & Grudin, J. (2009, May). When social networks cross boundaries: a case study of workplace use of facebook and linkedin. In *Proceedings of the ACM 2009 International Conference on Supporting Group Work* (pp. 95-104).

- Stanley, O. E. (2021). Information Overload: Causes, Symptoms, Consequences and Solutions. *Asian Journal of Information Science and Technology*, 11(2), 1-6.
- Sthapit, E. (2019). Linking accommodation choice, information overload and choice overload. *Current Issues in Tourism*, 22(19), 2323-2326.
- Van de Vrande, V., De Jong, J. P., Vanhaverbeke, W., & De Rochemont, M. (2009). Open innovation in SMEs: Trends, motives and management challenges. *Technovation*, 29(6-7), 423-437.
- Vivarelli, M. (2014). Innovation, employment and skills in advanced and developing countries: A survey of economic literature. *Journal of Economic Issues*, 48(1), 123-154.
- Vorderer, P., Hefner, D., Reinecke, L., & Klimmt, C. (Eds.). (2018). *Permanently online, permanently connected: Living and communicating in a POPC world*. New York, NY: Routledge.
- Wang, J., Huang, X., Wang, Y., Wang, M., Xu, J., & Li, X. (2022). COVID-19 information overload, negative emotions and posttraumatic stress disorder: a cross-sectional study. *Frontiers in psychiatry*, 13, 894174.
- Waterman, R. H., & Peters, T. J. (1982). *In search of excellence: Lessons from America's best-run companies*. New York: Harper & Row.
- Watts, C. (2016). *Exploring Experiences of Information Overload: The Influence of Computer-Mediated Communication in the Workplace*. (Doctoral dissertation, Université d'Ottawa/University of Ottawa).
- Wilson, L., Crowe, M., Scott, A., & Lacey, C. (2018). Psychoeducation for bipolar disorder: A discourse analysis. *International Journal of Mental Health Nursing*, 27(1), 349-357.
- Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement*, 73(6), 913-934.
- Xu, X., & Li, Y. (2016). The antecedents of customer satisfaction and dissatisfaction toward various types of hotels: A text mining approach. *International Journal of Hospitality Management*, 55, 57-69.
- Yin, P., Ou, C. X., Davison, R. M., & Wu, J. (2018). Coping with mobile technology overload in the workplace. *Internet Research*, 28(5), 1189-1212.