Impact of social media addiction on librarians' performance: mediating role of task distraction, moderating role of effective self-control

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Abstract

Purpose – The study was initiated to test the relationship of social media site addiction on librarians' performance. Furthermore, the study also tested the mediating role of task distraction and moderating role of effective self-control in aforesaid relationship.

Design/methodology/approach – This was an empirical study, and data for the research were collected through a standardized questionnaire from 503 librarians who were having Facebook accounts and are questionnaire developed through "Google Forms" and the link of the questionnaire was distributed using Facebook groups. Data was analyzed using descriptive analysis, correlation, Baron and Kenny's approach, and Normal Test Theory.

Findings – Results indicate that social media addiction is an important factor for that is reducing librarians' performance. At the same time task distraction also adds to negative impact of social media addiction on librarians' performance. However, effective self-control can reduce the negative impact of social media addiction on their performance.

Research limitations/implications – This research has some important theoretical as well as practical implications for librarians, library management, and well as for policy makers and government.

Originality/value – Social media is commonly used for communication but when it becomes addiction, it can reduce the employees' performance. Most of existing researched focused on positive aspects of social media; only few researches explored the negative impacts of social media. The proposed relationship was never tested on librarians. This study filled this literature gap and proposed as well as empirically tested a model for evaluating negative impact of social media on librarians' performance.

Keywords Mediation, Moderation, Social media addiction, Effective self-control, Librarian's performance, Task distraction

Paper type Research paper

1. Introduction

There has been enormous progress in science and technology over the previous years (Das *et al.*, 2016). Technology-based innovations have dramatically improved the quality of life of all humankind by supplying them with the gadgets and tools for every possible need. This is the reason that humans are becoming increasingly dependent on technology-based gadgets for performing their day-to-day activities (Lavikka *et al.*, 2018). Social media and the Internet are

among the most readily accepted and widely used products based on technological innovations (Maskeliūnas *et al.*, 2019; Mnzava, 2021; Rafi *et al.*, 2020). People use social media sites including Instagram, Twitter, Facebook, Google+ and others to connect and socialize. These social media sites have significantly altered the social landscape and modes of connection among individuals. These sites bring masses from all across the world together to share ideas, communicate and discuss various topics of mutual interest. However, while social media is bringing ease in communication and socialization, it is also causing addiction to its use (Drahošová and Balco, 2017). People use social media at home, at work, while traveling, and elsewhere, and cannot even imagine living their lives without its use. Despite several advantages of social media, addiction to its use is having negative effects on people's health and well-being. Social media addiction (SMA) also damages the performance of organizations (Rao and Prasad, 2018). People working for organizations spend a huge amount of their work time accessing social media sites hence compromising their productivity and performance on the job (Yu *et al.*, 2018). They would communicate with their buddies, watch their posts and like or share social media posts while on the job, which adversely affects their job performance (Zivnuska *et al.*, 2019). Thus, it could be inferred that using social media at work has a negative impact on employee performance.

In places such as libraries where greater concentration at work is required, task distractions triggered by the use of social media cause more adverse effects. Therefore, considering the significance of increased attention to their effective job performance, the current research is taking librarians as the target population. Librarians are in charge of gathering, arranging and issuing library resources such as books, films and audio recordings (Ewing, 1994); in public libraries, school libraries and museums. They are responsible for issuing resources, classifying books and performing routine audits (Brophy, 2006). However, they are facing several job-related challenges including inadequate funds (Khan and Bhatti, 2012), lack of bibliographic resources (Anyaoku *et al.*, 2015), shortage of librarian skills (Baro *et al.*, 2013) and irresponsible behavior of readers (Ross, 2009).

Libraries, as the organizations providing customer service, need to ensure smart utilization of their resources (especially human resources) to generate learning opportunities, encourage literacy and education, as well as contribute to the generation of fresh ideas and views. However, with the widespread use of smartphones and the introduction of 4G and 5G technology, SMA among professionals is becoming more common. SMA has a significant negative impact on librarians' performance as it causes task distraction and decreases their productivity. However, with effective self-control, librarians can minimize the negative effects of SMA on their task performance.

Some of the existing studies found both negative and positive impacts of social media (like see: Akram and Kumar, 2017; Chukwuere and Chukwuere, 2017; Siddiqui and Singh, 2016; Venegas-Vera *et al.*, 2020). Whereas some other studies found a positive impact of social media (Like see: Jones *et al.*, 2015; Kim *et al.*, 2016; Zulqurnain *et al.*, 2016). However, most of the literature found a negative impact of social media (Like see: Corstjens and Umblijs, 2012; Kaur *et al.*, 2022; Sahebi and Formosa, 2022). Various studies, such as Perera and Samaraweera (2019) and Zivnuska *et al.* (2019), looked into the impact of SMA on employee performance. Researchers such as Javed *et al.* (2019) and Maher and Von Hippel (2005), looked at the impact of task distraction on employee performance. However, the mediating role of task distraction in the association between SMA and employee performance taking the case of librarians has been relatively less explored. As in other industries, SMA might cause lowered performance for the librarian. Thus, a research gap exists, particularly involving the population of librarians. In addition, some individual characteristics may act as moderators in defining the impact of SMA. Therefore, effective self-control is anticipated to have a moderating role in the relationship between SMA and librarians' performance. As per the knowledge of researchers, this relationship has never been examined in the literature. Furthermore, there has not been any SMA research done on librarians. The current study is addressing this empirical research gap.

The present study was designed on the theoretical foundations of social cognitive theory (SCT) keeping in view a dramatic increase in the use of social media sites by people from all walks of life, and the fact that there is a general lack of understanding of its negative impacts on job performance. Furthermore, the nature of librarians' job demands concentration as well as control over the environment; however, it can be negatively influenced by social media sites addiction. Thus, this study was carried out to evaluate the impact of SMA on librarian performance and how this relationship is moderated by effective self-control and mediated by task distraction. This research will have significant implications for librarians besides having important contributions to the extant literature in the area. The current research findings can be used by library administration and employees to improve their performance.

This paper begins with an introduction that explains the background of the research, the research gap, and the objectives of the study, followed by a literature review that defines and describes the relationship of all variables of interest. The methodology section explains how the research was carried out. The findings and conclusion present the acceptance or rejection of hypotheses along with literature support. The last part of the paper presents a description of the further research agenda.

2. Theoretical background

The current study is grounded in Bandura's SCT (1986). The theory has three perspectives explaining human behavior, that is, environmental, behavioral and personal. The behavioral aspect of SCT explains SMA. SCT is also helpful in explaining the negative impact of social media and how other human behaviors can be used to minimize the negative impact of social media. SCT emphasizes on the importance of social interaction during the learning process and maintains that social media are important for regulating and developing people's routines, behaviors, work habits and even personal beliefs (Bandura, 1986). This theory explains how the use of social media can change a person's job attitude. The current research is founded on the assumption that excessive use of social media by librarians leads to task distraction and poor performance. However, if they are trained to manage their activities, they can reduce the negative impacts related to excessive use of social media.

3. Literature review

A detail of all the variables of current research along with their relationship is provided below.

3.1 Social media addiction

Social media are internet-based programs that allow users to communicate digitally with their family and friends (Aichner *et al.*, 2021). The use of such applications has significantly increased in recent years, and it is becoming an addiction (Torous *et al.*, 2021). Social cognitive theory explains that this addiction could have certain other behavioral consequences closely linked to it. Existing research proves that SMA is directly related to different emotional disorders including anxiety and depression (Al Mamun and Griffiths, 2019; Arslan *et al.*, 2022; Keles *et al.*, 2020; Robinson *et al.*, 2019). When social media is used while performing a task requiring working memory, it could even cause a "brain drain" (Pardo and Mianda, 2022). Thus, it could be inferred that SMA has negative impacts on the mental health of users (Zhao and Zhou, 2020). In addition to the aforesaid problems, SMA also results in interpersonal issues (Savci *et al.*, 2018), as it may distract the attention of users while interacting with others. Thus, addiction to social media sites has several disadvantages for its users. According to Cho *et al.* (2017), the social skills of people have been influenced by the usage of social media. Most of the people involved in heavy use of social media exhibit reluctance to participate in

meaningful dialogue and express themselves only using social media. Thus, the abilities of people to socialize and engage in meaningful dialogue are being compromised in favor of the use of social media sites. According to Uzunoğlu *et al.* (2017), social media sites have created a new "alone together" technology-oriented culture in which far-away people are virtually connected with their family and friends however, they are far away from physically close persons.

As social media have numerous advantages, such as being an effective tool for communication, idea generation and refinement as well as information dissemination, a huge number of organizations have adopted them (Ahmad *et al.*, 2018; Lee, 2021; Wang *et al.*, 2018). Employees also use social media to connect with coworkers (Robertson and Kee, 2017), search for information (Househ *et al.*, 2014), solve problems (Bertot *et al.*, 2012), have discussions (Abi-Jaoude *et al.*, 2020), and disseminate information (Jung *et al.*, 2018). On the other hand, using social media extensively while at work has a negative impact on their performance (Javed *et al.*, 2019; Syrek *et al.*, 2018). According to Zivnuska *et al.* (2019), social media excessive use diminishes employee input, which has an impact on their overall performance. Other researchers, such as Sriwilai and Charoensukmongkol (2016), Hoşgör *et al.* (2021), and Priyadarshini *et al.* (2020) have discovered a negative link between SMA and employee performance. Employees who are addicted to social media and use it excessively at work are unable to focus on their assigned duties, which results in lower performance. Within the context of this research, SMA has two consequences: SMA reduces librarians' productivity and increases job/work distraction, and librarians that are engrossed in social media are unable to focus on their work, resulting in task distraction.

3.2 Librarians' performance

A librarian's performance is the extent to which he/she fulfills his duties as specified in his/her job responsibilities (Connaway and Powell, 2010). The style or the way librarians are led (Tella *et al.*, 2007), the librarian's work environment (Peng, 2014), their job security (Sultana and Begum, 2012), and SMA are all elements that influence the performance of any librarian. However, most research on employee performance, such as those by Dodokh and Al-Maaitah (2019) and Ali *et al.* (2020) focused on the positive effects of various elements linked with social media on employee performance. Only a few researchers have looked into the negative aspects that affect employee performance. Furthermore, only a very few studies use SCT to explain social media and librarian performance. O'Donnell and O'Donnell (2020) conducted a study that empirically established that employees' performance is harmed by SMA. Andreassen *et al.* (2014) conducted a study on 10,018 employees and found that using social media during work hours reduces employee performance. Employees' time and energy are wasted as a result of their addiction to social media sites, and their performance suffers as a result (Moqbel and Kock, 2018). According to Griffiths (2010), employees who are addicted to social media sites are emotionally weak, have low concentration on their assigned tasks, and thus show lower performance on the job than expected. Although a good deal of studies has been conducted in various contexts, none of these studies identified and addressed the issues linked with SMA in the context of libraries and librarians' performance, particularly through the lens of SCT. Thus, the study's first hypothesis is based on these arguments and given as under:

H1. Librarian performance is negatively influenced by social media addiction.

3.3 Task distraction

An employee's lack of ability to perform duties is termed as task distraction (Sanders and Baron, 1975). In the current research, task distraction is defined as the librarian's inability to perform as per the job description. Task distraction occurs when the attention of an employee is

diverted to other non-duty issues and tasks, from their allocated task (Sanders and Baron, 1975). Overburden (Majid *et al.*, 2020), lack of skills essential for performing the assigned work (Gaillard, 1993), stress (Roberts *et al.*, 2019), other non-job work engagement (Hoşgör *et al.*, 2021), and SMA (Brooks *et al.*, 2017) are some of the reasons for task distraction. Behavioral dimensions of SET explain that employees' mental ability to do any job-related task is lowered when they spend most of their time on social media sites due to the lack of focus on the assigned job while concentrating on social media. According to Zivnuska *et al.* (2019), SMA decreases employees' commitment to their work. As explained by SCT, social media addiction can further trigger negative behaviors such as diverting librarian's attention from their actual work. Additionally, social media sites divert essential energy away from job-related responsibilities. The study's second hypothesis is based on these arguments and is given as under:

H2. The higher the social media addiction, the higher will be the task distraction.

Librarians' ability to accomplish their given jobs is significantly influenced when work distraction occurs as an effect of extreme use of social media sites. They consume their energy more on social media than on their job-related obligations, tasks, and functions (Tufts *et al.*, 2015). As a result, their productivity may suffer. Drawing from these arguments, the study's third hypothesis is:

H3. Librarian's performance is negatively influenced by task distraction.

The association between SMA and librarians' performance is also affected by task distraction which establishes the indirect link between SMA and librarians' performance. When librarians become addicted to social media, it causes task distraction since they are unable to focus on their work, resulting in lower performance. The study's fourth hypothesis is based on these arguments:

H4. The negative relationship of social media addiction with librarians' performance is mediated by task distraction.

3.4 Effective self-control
The ability or the self-controlling power of an individual, to deliberately modify physiological, emotional and behavioral reactions in a positive direction, is referred to as effective self-control and it is a key component of self-regulation. It is the control one has over his or her emotions or behaviors. Within the context of the present research, effective self-control is defined as the librarian's ability to resist the use of social media. Effective self-control is linked to social adaptation, academic competence, and achievement, whereas it is also linked to both internalizing and externalizing behavior problems (Zhang *et al.*, 2021). Effective self-control arises during childhood in the setting of the social environment, and it manifests at various levels in different individuals. Effective self-control has also been discovered to play a key part in the process of risk factors leading to internal and external problems (Wikström and Svensson, 2010). As a risk-buffering element, effective self-control may thereby reduce the potential negative consequences of SMA. In other words, excellent self-control may help librarians cope with the harmful impacts of SMA. Furthermore, librarians with high levels of effective self-control are generally better at dealing with their emotional exhaustion and reducing unpleasant emotions, high levels of effective self-control may operate as a protective factor against the harmful impacts of SMA. As a result, effective self-control may act as a moderator in the association between SMA and librarian performance. Drawing from these arguments, the hypothesis formulated is as under:

H5. Effective self-control moderates the relationship between social media addiction and librarian performance.

4. Theoretical model
Figure 1 below depicts the theoretical model for the current research.

5. Methods
For the current cross-sectional empirical research, data were collected from a web-based survey wherein to get the maximum output, the recommendations of Granello and Wheaton (2004) were followed. The questionnaire was prepared using "Google Forms." The participants of the study were all professional librarians, had Facebook ID(s) and had joined various Facebook groups related to their profession. To access these groups, the official website of Facebook (www.facebook.com) was used. In the Facebook search field, the keywords "library" and "librarian" were used to find out the groups. There were 132 results in total for the search. However, examining the descriptions of groups in further detail revealed that just 39 groups were specifically pertinent to our current topic of this paper. The remaining groups were quotes, job search groups, journals, colleges, etc. In open groups, the link to the online questionnaire, research objectives and who should fill it out were posted. In addition, because most of the groups were only accessible to group members, a Facebook message was sent to all of the administrators asking them to distribute the link within their relevant groups. After the initial request, made on March 23, 2021, only 13 group admins posted the link in their groups. The second reminder was issued to group admins on April 19, 2021, and the third on May 15, 2021. In total, 18 groups were contacted directly or through the group administrators. For more than three months, the questionnaire was kept visible (March 23rd to June 25th, 2021). This was done to get the maximum responses from librarians. Although, there was no sensitive information in the survey instrument, even then, participation in the study was entirely voluntary and anonymous. Participants were also given the assurance that the data gathered would only be used for this research purpose and would not be shared with anyone. In three months, 503 respondents filled out the questionnaires. Following the recommendations of Wolf *et al.* (2013), it was sufficient enough for examining the mediating model.

5.1 Scale development
The data were gathered using structured questionnaires. The link to the web-based questionnaire was shared on selected groups on Facebook from the account of the researcher. Further detail of scale adaptation is given as under.
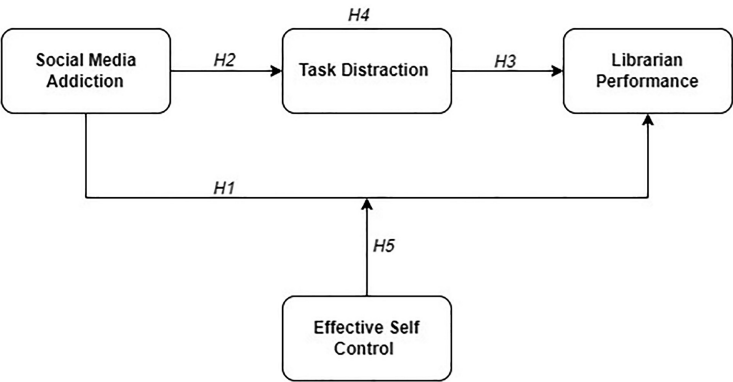

Figure 1.
Theoretical model

To measure SMA standardized scale was adapted from the study of Longstreet and Brooks (2017). It is an eight-item, five-point Likert scale measure with questions like "I keep on using social media while I am in the library" and so on. The SMA scale has Cronbach's alpha coefficient value of 0.76, an AVE of 0.66 and a CR of 0.93.

Task distraction was measured by means of a six-item Likert scale modified from the work of Zwarun and Hall (2014). It was a five-item scale. It included items such as "while I am in the library, my smartphone beep or notification sound diverges my concentration from work" and so on. The SMA scale has a Cronbach's alpha coefficient value of 0.81, an AVE of 0.74 and a CR of 0.95.

For measuring effective self-control, an adapted questionnaire from the study of Bertrams and Dickhäuser (2009) was utilized which was a 13-item scale, measured on a five-point Likert scale. It included items like "while in the library, I want to be more self-disciplined" and so on. This scale generated Cronbach's alpha coefficient value of 0.73, an AVE of 0.64, and a CR of 0.95.

Librarian performance was tabbed using a six-item, five-point Likert scale adapted from the study of Williams and Anderson (1991). Sample items included, "I usually perform all the tasks assigned to me in the library". This scale generated Cronbach's alpha coefficient value of 0.81, an AVE of 0.63 and a CR of 0.91.

In total, it was 33-item scale measured on a 5-point Likert scale. Some variables, such as the librarian's age, librarian's gender and librarian's experience, were controlled for better assessment. For a better understanding of the questionnaire, it was split up into two parts: the first part focused on measuring current research variables, whereas the second part was about the controlled variables of the study. It was deliberately designed in such a sequence because respondents may become hesitant to respond when they see their personal information at the top, and they may give a biased response or may not respond at all. As data were obtained via "Google Forms" from all over the world, the nationality of respondents was also added which could help in generalizing the study's results.

6. Analysis
Descriptive analyses are shown in Table 1. The average respondent's experience was 5.6 years which shows that respondents were experienced and capable of providing accurate data for current research. The average respondent's age was 36.22 years, whereas the majority of respondents were males.

6.1 Data analysis
To examine the relationship among the proposed variables of the study, different tests including descriptive analysis, correlation and regression tests were performed. To test the

S. No	Variable's name	Mean	SD	1	2	3	4	5	6	7
1	LE	5.6	2.4	1						
2	RA	36.22	7	0.12	1					
3	RG	0.35	0.26	0.08	0.06	1				
4	SMA	3.12	0.77	0.12	0.14*	−0.12	1			
5	TD	3.05	0.47	0.22*	0.11	0.11	0.15*	1		
6	E-SC	3.13	0.61	0.04	0.06	0.14	0.09**	−0.08*	1	
7	LP	3.43	0.42	0.15	0.11	0.03	−0.32*	−0.33*	0.24**	1

Note(s): LE: Librarian experience; RA: Respondent age; RG: Respondent gender; SMA: Social media addiction; TD: Task distraction; E-SC: Effective self-control; LP: Librarian performance
(* = $p < 0.05$ one tailed; **$p < 0.01$ two-tailed)

Table 1.
Results of correlation and descriptive statistics

mediation, Baron and Kenny's (1986) recommendations were followed. However, as this test merely indicates the presence of mediation rather than its strength, normal test approach was adopted, as recommended by Preacher and Hayes (2008). Multiple hierarchical regression analyses were also performed to assess the moderation effect. As the study used self-reported scales for measuring all the variables, it was essential to test the scale for common method bias. For this purpose, the Harman test was used in the study. Cronbach's alpha was used to determine the reliability of the instrument and is shown in Table 2. The discriminant validity of the construct was determined using the Fornell and Larcker (1981) method.

Confirmatory factor analysis (CFA) was used to verify the model's fitness. Degree of freedom (DF), comparative-fit-index (CFI), goodness-of-fit index (GFI) and root mean square error of approximation (RMSEA) were among the other indicators utilized. Four-factor model provided the best-fit values. The value of the four-factor models is given in Table 3 below.

According to the Harman test, factor analysis can be utilized for detecting common method variance (CMV). There is a common method bias if the one-factor account for the bulk of covariance or only one component appears during factor analysis. To test it, the suggestions of Podsakoff et al. (2003) were followed, and all of the items used to measure different variables were loaded onto one exploratory factor, with no rotation. The outcomes confirmed the presence of 4 separate factors with eigenvalues>1. These four factors accounted for 51% of the variance, with the greatest component accounting for 19%. Other tests, such as common latent analysis (CLA), were also performed in addition to the Haman test, as suggested by Podsakoff et al. (2003). The result computed a variance of 23% which is less than 50% results. As a result, it can be safely assumed that there is no issue of CMB in the data of the current study.

Discriminant validity was established using Fornell and Larcker's (1981) method. The value of AVE > shared variance for all of the variables confirms the scale's convergent validity. Furthermore, the value of AVE > 0.5 and CR > 0.7 for all variables, and AVE < CR. All these results established the discriminant validity. Further information is given in Table 2. The guidelines of Myers (1990) were used to examine the issue of multicollinearity. According to Myers (1990), if the VIF value is greater than 10 and the value of tolerance is less than 0.2, and the AVE is less than 1, there may be a multicollinearity issue. However, analyses showed that there were no such concerns in the study at hand as values of tolerance, VIF and AVE meet the threshold values. It confirmed that there was no issue of multicollinearity in the study.

Variable	No. of items	FL	α	CR	AVE
Social media addiction	04	0.72–0.90	0.76	0.93	0.66
Task distraction	06	0.79–0.94	0.81	0.94	0.74
Effective self-control	13	0.77–0.87	0.73	0.95	0.64
Librarian's performance	06	0.77–0.90	0.81	0.91	0.63
Note(s): FL: Factor loading, AVE: Average variance extracted, CR: Composite reliability α: Cronbach's alpha					

Table 2.
Factor loading, reliability and validity of construct

S. No	Index	Value for four-factor solution	Accepted values
1	DF	8	>2
2	GFI	0.93	=>0.9
3	CFI	0.95	>0.9
4	RMSEA	0.039	<0.8

Table 3.
Models

7. Results

7.1 Mediation analyses

The technique of Baron and Kenny (1986) was followed for assessing the mediation effect. The substantial correlation results presented in Table 1 are pre-requisite for conducting Baron and Kenny's (1986) test. Table 4 shows that the first requirement of the test is satisfied, and SMA is significantly but adversely associated with librarian performance ($\beta = 0$–0.31; t-value $= 9.13$; p-value<0.001), also confirming the study's first hypothesis. The second condition is likewise met, with SMA being found to be positively and significantly associated with task distraction ($\beta = 0.27$; t-value $= 09.45$; p-value<0.001), confirming the second hypothesis (H2). The third criterion is satisfied, with task distraction found to be significantly but negatively associated with librarian performance ($\beta = 0$–0.39; t-value $= 13.14$; p-value<0.001), and hence H3 of the study is also supported by data.

To evaluate the fourth condition and hypothesis, multiple regression analysis was used. Three different models were established. The first model ($\beta = -0.31^{**}$, SE $= 0.049$) confirmed the direct link between IV and DV of the study. In model 2, the effect of controlled variables on the association between IV and DV was examined, and those variables had the least impact ($\beta = -0.32^{**}$; SE $= 0.051$). The effect of IV, DV, controlled and mediating variables were captured in Model 3. With the addition of task distraction, the link between SMA and librarian's performance becomes insignificant, indicating the relationship between SMA and task distraction is fully mediated by task distraction ($\beta = -0.30$; SE $= 0.049$). As a result, the study concluded that data supported H4 of the study (see Table 5).

Baron and Kenny's method proves only the occurrence of mediation but does not give any indication of the strength and direction of mediation. Therefore, the normal test theory approach was utilized. Table 6 shows the results.

The results demonstrated that there is an insignificant direct effect of SMA on librarian performance ($\beta = 0.11$; $t = 0.21$), and the outcome normal test theory ($Z = 4.41$; $p < 0.00$)

Independent variable	Task distraction					Librarians' performance				
	R^2	S.E	β	t-value	Sig.	R^2	S.E	β	t-value	Sig.
Social media addiction	0.02	0.031	0.27	9.45	<0.001	0.10	0.076	−0.31	9.13	<0.001
Task distraction (mediator)	–	–	–	–	–	0.11	0.023	−0.39	13.14	<0.001

Note(s): Summarized results of three separate regression tests

Table 4.
Regression analysis

	Model-I		Model-II		Model-III	
	β	SE	β	SE	β	SE
Independent variable						
SMA	−0.31**	(0.049)	−0.32**	(0.051)	−0.30	(0.049)
Control variables						
Librarian experience			0.07	(0.022)	0.03	(0.027)
Respondent age			0.09*	(0.073)	0.10	(0.067)
Respondent gender			0.08	(0.054)	0.07	(0.122)
Mediating variables						
Task distraction					−0.42**	(0.027)

Note(s): *p < 0.01; **p < 0.001

Table 5.
Summarized results of multiple regression analysis

confirmed the mediation effect of task distraction ($\beta = 0.43–0.11 = 0.32$). These results confirmed the H4 of the study.

7.2 Evaluating the moderation effect
The moderating role of effective self-control was tested using hierarchical regression, as shown in Table 7.

Steps 1 and 2 serve as foundation models, while step 3 discusses the moderation effect. The coefficient of the interaction term, which was created by multiplying SMA with effective self-control is shown in Table 7. Effective self-control was found to have a significant impact on the link between SMA and librarian performance ($\beta = -0.11$; $p < 0.001$). The value of the coefficient is negative because SMA has a strong but negative impact on librarians' performance, and effective self-control as a moderating variable mitigates this negative impact. Based on these findings, we can conclude that effective self-control moderates the link between SMA and librarian performance.

8. Discussion

A librarian is a profession that revolves around providing users with access to information (Burnett *et al.*, 2008) as well as social or technical programming and information literacy (Demasson *et al.*, 2019). The librarian's role has evolved significantly over time, and the emergence of many new types of media in the twentieth century has affected it intensively (Hennig-Thurau *et al.*, 2010). In today's world, a librarian has not only to deal with traditional heaps of hardbound books but also with the complexities of digital knowledge resources. They may work with electronic resources, books and e-books, audio and video recordings, periodicals, newspapers and online newspapers, manuscripts, photographs, graphic material, bibliographic databases, as well as internet-based and digital resources to provide and maintain information in a variety of ways (Lo *et al.*, 2017). Other information

Table 6. Summarized results of normal test theory approach

Mediation model	Indirect-effect (normal test approach)			Direct effect			Total effect		
	Beta	*T*-value	*P*-value	Beta	*T*-value	P-value	Beta	*T*-value	*P*-value
SMA→TD→LP	0.32	5.21	<0.00	0.11	0.21	0.41	0.43	4.41	*<0.00*
Note(s): SMA: Social Media Addiction; LP: Librarian Performance; TD: Task Distraction									

Table 7. Hierarchical regressions

	Step I	Step II	Step III
Self-management (moderating)			
Librarian experience	−0.027	−0.021	−0.014
Respondent age	−0.015	−0.019	−0.020
Respondent gender	−0.013	0.012	0.014
SMA		−0.19**	−0.17**
Self-management		0.27**	0.338**
SMA x Self-management (interaction term created)			−0.11**
R^2	0.011	0.131	0.191
Adjusted R^2	0.09	0.112	0.181
ΔR^2	0.008	0.099	0.018
Δ F	2.213	27.76	18.12
Note(s): SMA= Social media addiction; *p < 0.01; **p < 0.001			

services that a librarian may provide include information literacy instruction, computer provision, and training, cooperation with community groups to organize public programs, assistive technology for people with impairments, and help to access community resources (Julien and Hoffman, 2008). However, librarians are facing many problems including a constantly evolving environment (Markgren et al., 2007), lack of training and development to handle the everyday challenges (Idiegbeyan-Ose et al., 2016), decreasing library networks and government intervention (Lolade and Daramola, 2017) and family–work conflict (Adekanye and Nduka, 2017). All these factors negatively influence the librarian's performance. Furthermore, the introduction of IT and its applications particularly social media also negatively influences the librarians' performance. Librarians can access and use these applications from their cell phones; thus, they are ever-present on social media, and they can continuously monitor their social media applications. These applications have made librarians addicted to their use and instead of concentrating on their work; they are more inclined toward the use of such applications. This negative influence of social media on the performance of librarians is evidenced in this research.

The research tested five hypotheses. The first hypothesis tested the link of SMA with librarian performance. This hypothesis was affirmed by the data gathered for the study. Similar results for the different populations were also reported by Al-Menayes (2015), Javed et al. (2022), and Zivnuska et al. (2019). The second hypothesis of this research tested the relationship between SMA and task distraction. This association was also found to be significant and supported by data. Similar results for the different populations were also reported by Majid et al. (2020) and Swar and Hameed (2017). The third hypothesis tested the link between task distraction and librarian performance. This hypothesis was also accepted. Pluyter et al. (2010) and Hsu et al. (2008) also reported similar results. The fourth hypothesis tested whether task distraction plays a moderating role in the relationship between SMA and librarians' performance. This hypothesis was also accepted, and the findings of Majid et al. (2020) and Moqbel and Kock (2018) also supported the results. The last hypothesis tested the moderation of effective self-control and data revealed that the presence of effective self-control can minimize the impact of SMA. This result is also supported by the findings of Li and Ye (2022).

9. Implications of the study
The research has some important theoretical and practical implications, which are as follows.

9.1 Theoretical implications
There are five distinct theoretical contributions of this study. First, building on SCT, this study developed and tested a conceptual model on librarians by uniquely linking SMA, task distraction, librarian performance and effective self-control. Second, in most of the existing studies, social media sites are viewed as a way of communication, with their negative aspects being hardly studied. The study at hand addressed this gap by looking into the effects of SMA on the performance of librarians. Third, there is no research on the effects of SMA on librarians. This research examines librarians' perspectives on this critical issue closely related to their performance. The study's fourth theoretical implication is that data was collected from various countries around the world, making it a unique contributor and more reliable study on librarians. Lastly, the current study empirically proved that effective self-control could reduce the harmful effects of SMA, which was previously not evaluated for librarians.

9.2 Practical contributions of the study
This research has significant consequences for library administrators and librarians. To begin with, based on the results of the current study, the library administration should

not allow library staff to use social media sites frequently because it reduces their performance; instead, there should be an alternative method of using social media sites, such as specifying some time to use social media sites and making alternative staff arrangements during that time. Library management should devise strategic plans to deal with this issue as it is negatively influencing the librarian's performance. *Second*, the library administration should arrange effective self-control training for their staff, since this study found that effective self-control can reduce the negative influence of SMA on librarians' performance. *Third*, the current study indicates that task distraction causes low librarian performance and hence library management should give their staff an environment free of distractions, such as reduced or no stress, so that they may perform their responsibilities more effectively and with less distraction, thereby improving their performance. *Fourth*, this model can also be used by librarians to improve their self-performance at work by reducing their use of social media. They can also enlist the task distractions and seek management advice to eliminate them based on the findings of this study. Librarians can improve their self-controlling abilities by attending various seminars, workshops and on-the-job training sessions. This will help to mitigate the harmful effects of SMA and task distraction.

10. Limitations and future research

This study has some limitations, and these limitations can be utilized to guide research in the future. To begin with, the research relied on a self-reported questionnaire, which can lead to respondent bias. This challenge can be addressed by designing experimental research and gathering data at various points. The study's second limitation was that it only employed one independent/dependent, moderating and mediating variable. Adding more relevant independent/dependent, moderating and mediating variables can strengthen the study's theoretical foundations, and hence the research would be more generalizable. This research was cross-sectional, and data were collected one time only. In the future, a longitudinal research design can be developed for better investigations in the same area. *Finally,* this model can also be tested in other cultures with various other instruments.

11. Conclusion

This quantitative study developed and tested a model based on evaluating the impact of SMA on librarians' performance. Furthermore, the study also evaluated the moderating role of effective self-control and mediating role of task distraction. Data supported all the hypotheses, and it was revealed that SMA negatively influences the librarians' performance. Furthermore, this relationship is moderated by effective self-control and mediated by task distraction. The study has several implications for library management besides its contributions to existing knowledge. It is recommended based on the results of the study that the use of social media for librarians may be regulated. Furthermore, the study highlights that training on self-control can reduce the negative impacts of SMA on librarians. The study has some limitations which can be used to find directions for future studies.

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Further reading

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