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IMPACT OF SOCIAL NETWORK SITES ON PSYCHOLOGICAL AND BEHAVIOURAL OUTCOMES IN THE WORK-PLACE: A SYSTEMATIC LITERATURE REVIEW

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IMPACT OF SOCIAL NETWORK SITES ON PSYCHOLOGICAL AND BEHAVIOURAL OUTCOMES IN THE WORK-PLACE: A SYSTEMATIC LITERATURE REVIEW

Research paper

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Abstract

This paper reports on a systematic review of the evidence into the impacts of social network site usage on individual workplace outcomes. Twenty-seven studies met the inclusion criteria. SNS use in the workplace has been found to be positively associated with job satisfaction, job performance, innovative behaviour, employee engagement, and knowledge sharing, with knowledge sharing the most supported workplace outcome. The evidence does not support SNS use as being associated with negative behaviour like absenteeism and turnover intentions. Evidence of effects on behavioural outcomes such as presenteeism, organisational citizenship behaviour, and psychological outcomes such as employee involvement were limited. Results have implications for SNS usage policies in the workplace. Avenues for future work are provided.

Keywords: Social network sites, workplace outcomes, employees, systematic literature review

1 Background

Social network sites (SNS) are web based platforms used to build social networks and relations among individuals who share similar interests, activities, backgrounds, or real-life connections (Ellison, 2007). Among the most popular are Facebook, Twitter, LinkedIn and Instagram. These SNS typically allow participants to communicate, share media such as videos and photos, and share knowledge. SNS can be accessed from mobile devices such as smartphones and tablets thus providing users with the opportunity to interact with their social network irrespective of the time and place (Powell, 2009). SNS content is largely user generated (Soliman, 2012), social and professional community orientated (Ellison, 2007), and relationship-based (Buettner, 2015). The number of SNS users increased from an estimated 1 billion in 2010 to 3 billion by 2015 (Digital Statshot Report, 2015; The Statistics Portal, 2015; Zolkepli and Kamarulzaman, 2015). Enterprises social networks sites are a subset of SNS used within organisations and provide foundational features similar to public SNS, but can be restricted to interaction between members of a specific enterprise (Ellison, Gibbs and Weber, 2015).

The impact of social network sites (SNS) on individuals' social lives has received significant research attention (e.g. Greenhow and Burton, 2011; Ito, Horst, Bittanti, Boyd, Herr-Stephenson and Lange et al., 2008; Livingstone, 2009; Selwyn, 2007). However, SNS use may also have impacts for individuals in the workplace. Some past studies have attributed positive outcomes to the use of SNS at work. For example, employees who use SNS frequently have been found to be more productive and more satisfied with their work environment than the average employee (Elvolv, 2015), and others report improved job performance and improved communication (Bennett, Owers, Pitt and Tucker, 2010; Leidner, Koch, Gonzalez and Leidner, 2012; Patel and Jasani, 2010; Zhang, Gao, Chen, Sun and de Pablos, 2015).

Yet, SNS use may also have created problems in the workplace. For example, some have argued that employee engagement and productivity may be lost through SNS use (Clark and Roberts, 2010), and that the boundaries between personal and professional spaces may blur (Dutta, 2010). Information overload, time wastage, role conflict, lack of privacy, lack of productivity and low performance are

other potentially negative outcomes (D'Abate and Eddy 2007; Nucleus 2009; O'Murchu, Breslin and Decker, 2004; Rooksby, Kahn, Keen and Sommerville, 2009; Shepherd, 2011). These negative outcomes may result from addictive usage behaviours (Griffiths, 2000; Ryan, Chester, Reece and Xenos, 2014; Rooksby et al., 2009).

Thus the impacts of SNS use on individuals' work outcomes remains an open and debatable question (Aguenza and Som, 2012; Bennett et al., 2010; Charoensukmongkol 2014; Moqbel, 2014; Moqbel, 2012). To contribute to clarifying the nature of these impacts, the research question examined in this paper is: What is the impact of SNS use on behavioural and psychological outcomes in the workplace?

In answering the research question, this paper presents results from a systematic review of extant quantitative and qualitative evidence on the impacts of SNS use on employees in the workplace. Novel insights to be generated include classification of work outcomes, and identifying negative and positive impacts of SNS usage in the workplace. Work outcomes are known to include both behavioural and psychological outcomes. Extending beyond a focus on job performance this study includes other factors such as absenteeism, turnover intention amongst others. The review draws on literature in the field of information systems, and related fields including psychology and management, and synthesizes the available evidence to reach a conclusion as to what types of outcomes are most supported by past studies. Results provide insights for future research in this area.

2 Conceptual Background

Our work was largely informed by Rhoads, Singh and Goodell (1994) who classified individual workplace outcomes into two dimensions, namely psychological outcomes and behavioural outcomes. Psychological outcomes include job satisfaction, organisational commitment, employee involvement, employee engagement and burnout, while behavioural outcomes include job performance, turnover intention, innovative behaviour, presenteeism, absenteeism, organisational citizenship and knowledge sharing and learning. Additionally, the framework was extended by considering the Organizational Commitment Model of Meyer, Stanley, Herscovitch and Topolnytsky (2002), the Knowledge sharing framework by Wang and Noe (2010), the Innovation and organization framework by Zaltman, Duncan and Holbek (1973), as well as Ployhart and Bliese's (2006) adaptability theory. These models are most popular and highly cited in SNS literature (e.g. Ooms, Bell and Kok, 2015; Zhang, Gao, Chen, Sun and de Pablos, 2015). Figure 1 identifies the relevant workplace outcomes derived from these frameworks, and Table 1 and 2 define them.

Psychological Outcome	Definition	Original Framework
Job satisfaction	Employees' affective reactions to their job experience (Locke, 1976; Hackman and Oldham, 1975), including pleasurable or positive emotional state resulting from the appraisal of one's job or job experience (Locke, 1976).	Meyer et al. (2002)
Organisational commitment	The relative strength of an individual's identification, emotional attachment with and involvement in a particular organisation (Allen and Meyer, 1990; Porter, Steers, Mowday and Boulian, 1974).	Meyer et al. (2002)
Burnout	Employee's prolonged response to chronic emotional and interpersonal stressors on the job, including exhaustion, cynicism, and inefficacy (Maslach, Schaufeli and Leiter, 2001). Burnout might include dimensions such as emotional exhaustion, depersonalization and lack of personal commitment (Charoensukmongkol, 2015).	Meyer et al. (2002)
Employee	Harnessing of an employee's self to his/her work role and is expressed phys-	Meyer et al.

engagement	ically, cognitively, or emotionally during role performances (Kahn, 1990).	(2002)
Employee involvement	The exercise, by employees of influence over how their work is organized and carried out (Fenton-O’Creevy, 2001).	Meyer et al. (2002)
Work-life balance	Degree to which an employee’s social life interferes with work or work interferes with social life. (Greenhaus and Beutell, 1985).	Meyer et al. (2002)

Table 1. Psychological outcomes

Behavioural Outcome	Definition	Original Framework
Job performance	Actions that are relevant to the goals of the organisation or self-reported work performance including productivity, quality, or effort in carrying out work (McCloy, Campbell and Cudeck, 1994).	Meyer et al. (2002)
Turnover intentions	Employee’s intent, desire and plan to leave the organisation and including actively looking for another job (Igbaria and Greenhaus, 1992).	Meyer et al. (2002)
Innovative behaviour	Individual actions directed at the generation, introduction and/or application beneficial novelty at any organisation (Kleysen and Street, 2001) and it may include new product, technology or change in procedures.	Zaltman et al. (1973)
Presenteeism	Situations where employees come to work but underperform such as producing lower quantity or quality of work, making mistakes, and repeating tasks and often engage in non-work-related activities such as personal business for a portion of the workday (Simpson, 1998).	Meyer et al. (2002)
Absenteeism	Any failure of an employee to report for or to remain at work as scheduled, it may be due to stress or medical illness (Cascio, 2010).	Meyer et al. (2002)
Organisational citizen behaviour	Employees' voluntary commitment within an organization or company that is not part of his or her contractual tasks (Farh, Zhong and Organ, 2004).	Meyer et al. (2002)
Knowledge sharing and learning	Employees’ exchange of knowledge and experiences with colleagues or helping others to solve problems (Cummings, 2004).	Wang and Noe (2010)
Adaptability	Employees’ ability to cope with change in their work (Ployhart and Bliese, 2006). Possible measures reflect that a respondent finds it easy to adjust to doing new tasks or finds it very encouraging when the work they do in their job changes (O’Connell, McNeely and Hall, 2008; Ployhart and Bliese, 2006).	Ployhart and Bliese’s (2006)

Table 2. Behavioural outcomes

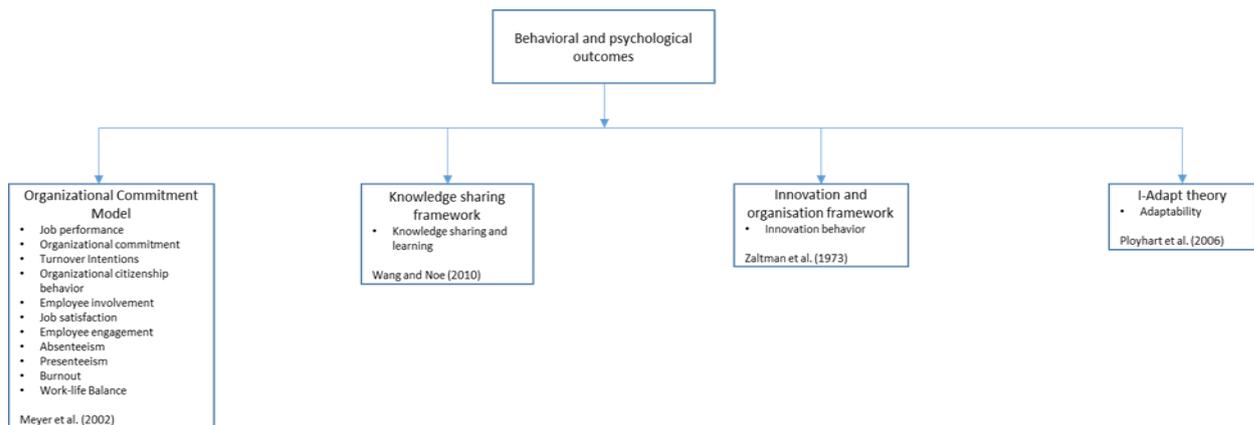


Figure 1. Workplace outcomes framework

3 Review Conceptual Background

We followed the steps for a systematic literature review as defined by Webster and Watson (2002). The steps are literature search, study selection, coding, results and discussion.

3.1 Literature search strategy

The systematic search of literature covered all articles published from January 2003 up to August 2016. The decision to include literature from 2003 onward was because Friendster, MySpace, and LinkedIn were among the first examples of SNS that started in 2003 prior to Facebook in 2004 (Boyd and Ellison, 2007). A search for literature was conducted in the following online databases: ACM, Jstor, Emerald, ABI/INFORM Global, ProQuest, Web of Science, EBSCO and Science Direct. These databases have been considered appropriate in past systematic literature reviews and meta-analysis for their amount of quality academic content relevant to information systems and management (Mou, Shin and Cohen, (in press); Schepers and Wetzels, 2007). In addition to the databases searched, the following top information systems journals were also individually searched just to ensure no omissions. The journals include MIS Quarterly, Information Systems Research, Journal of Information Systems, Journal of Management Information Systems, Journal of Strategic Information Systems, Journal of Association of Information Systems, European Journal of Information Systems, and Journal of Information Technology.

Having identified the data sources, the next step for the systematic review was to define the search terms. The search string was constructed around this study’s focus on employees as the population of interest, SNS as the technological intervention, and individual outcomes in the workplace as criterion variables of interest.

Search terms for SNS included: “social network sites” or “social media” or “social network service” or “social networking sites”, or “Facebook” or “Twitter”. Facebook and Twitter were included in the search as they are common SNS platforms and there was a high likelihood that they would be referenced in relevant papers (Ahmad, Mustafa, and Ullah, 2016; Kim, Sohn and Choi, 2011).

The search terms also included the behavioural and psychological outcomes of SNS use for individuals in the workplace. The search terms for outcomes were based on outcomes identified in Tables 1 and 2.

Because the study was interested in both quantitative and qualitative evidence, search terms were not used to restrict the results based on methodological consideration. The search yielded 171 results after removal of duplicates as shown Figure 2.

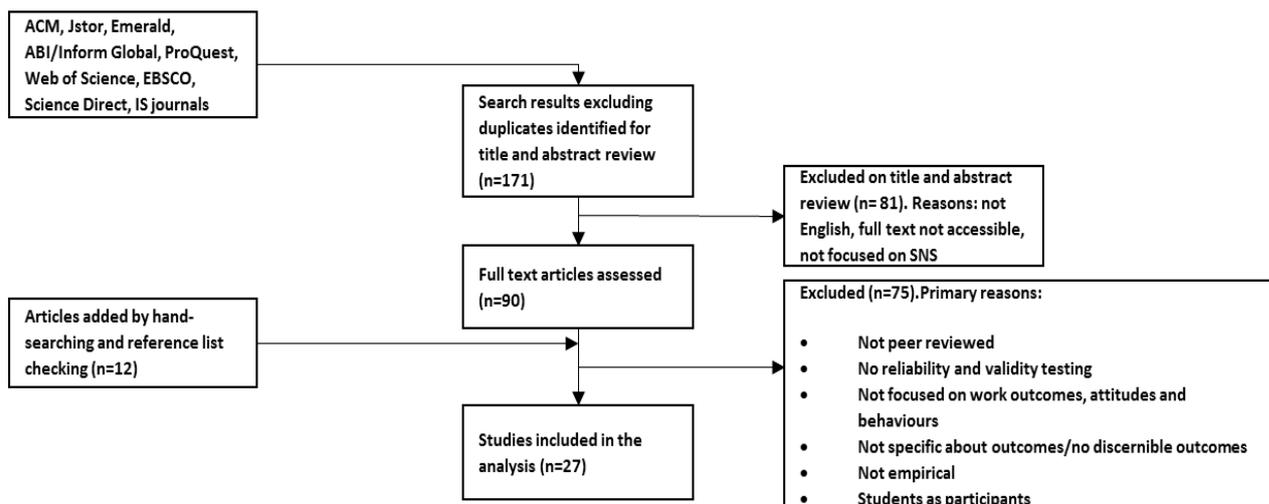


Figure 2. Selection process

3.2 Study selection

One author carried out a review of titles and abstracts. At this point, non-empirical studies, those not focused on SNS or did not study employees, those where full text was not accessible, and which were not in English were excluded (English is researchers' home language), but none were excluded based on the quality of English. Next, the full-text of remaining articles was reviewed. Articles were excluded if they did not meet the following criteria:

- Did not meet study definition of SNS or enterprise platforms used to build social interactions and relations;
- Had no empirical focus on work outcomes;
- Lacked peer review or poor methodological quality e.g. quantitative papers which did not present tests for reliability and validity;
- Did not examine employees as respondents such as using a student sample.

At this point, a number of additional articles were identified for inclusion in the review by examining the reference lists of the extracted papers. Peer reviewed conferences and completed dissertations were included because they may capture emergent findings not yet appearing in journals. Twenty-seven studies met criteria for inclusion. Included studies are profiled in Table 3. Sixteen journals articles, four conference proceeding papers and four dissertations were identified from the selected databases.

3.3 Coding

In order to code the various workplace outcomes identified in Figure 1, the conceptual and/or operational definitions of the studies' constructs were examined to confirm their consistency with our definition of each of the outcomes (see Table 1). This is considered a relevant approach by Webster and Watson (2002), who proposed that coding should start with articulation of definitions drawn from the literature done before search and engagement with the literature.

Year of publication	2008 (2); 2009 (2); 2010 (1); 2011 (3); 2012 (3); 2013 (5); 2014 (9); 2015 (2).
Country	UK (1); China (3); Germany (1); Europe (across different countries) (1); Greece (1); Netherlands (1); Norway (1); Spain (1); South Africa (1); Taiwan (1); Thailand (2); Turkey (1); USA (3); Across the World (different continents) (2); Yemen (1); Not stated (6).
Type of SNS	General (SNS/Social media) (19); Facebook (1); Facebook/Twitter (Mixed) (1); Enterprise Social Network (6).
Type of publication	Journals (19); Conferences (4); dissertations (4).
Workplace Outcomes	Job satisfaction (3); Job performance (10); Organizational commitment (4); Innovative behavior (1); Turnover intention (1); Absenteeism (1); Employee involvement (0); Employee engagement (2); Organizational citizenship behavior (1); Work-life balance (1); Presenteeism (0); Knowledge sharing and learning (12); Burnout (2); Adaptability (1).
Study Methods	Case study (7); Surveys (16); Survey and Interview (1); Interviews (3). Mixed (1); Qualitative (10); Quantitative (16).

Table 3. Summary of included papers

3.3.1 Overview of the included studies

The 27 articles which met the inclusion criteria were published between 2008 and 2015, see Table 3. Earlier research was focusing on understanding SNS fundamentals, including definitions and the differences between SNS and traditional media. This was followed by exploratory studies, and it is only more recent research that has examined the relationship between SNS and other concepts such as employee behaviours and performance outcomes. More than half of the studies were carried out in the last three years, this shows that the relationship under examination is only gaining ground recently. Majority of the studies were in the western countries, and seventeen studies were conducted in other parts of the world. Very few studies examined enterprise social network sites as platform of interest, majority of the studies which were analysed were not platform specific. Majority of the studies were from journals, and most were from top quality 50 information systems journals and conferences. Conferences and thesis were include because they may capture emergent findings not yet appearing in journals.

Out of 27 studies, 8 were examined technology companies, one from banking and hospitality industry, two from services industry and 15 were cross-sector. Different types of SNS were found in different papers, majority discussed general and six examined enterprise social network sites (ESN).

3.3.2 Methodological review

Table 3 also summarizes the research designs used by the articles. Classification of articles was adopted from Ouiridi, Ouiridi, Segers and Hendrickx (2015). Qualitative methods were used in 37 % of the articles (n=10), of which seven were case studies and three using interviews and quantitative methods were used in 60 % of the articles (n=16). Only one article (3 %) included survey and interview. All the quantitative articles (n=16) used survey method.

4 Results

A total of fourteen (14) outcomes were identified from the framework in Figure 1. The systematic review revealed that only ten (10) outcomes had been the focus of the papers, as shown Table 3. Although work involvement and presentism were discussed in the literature review in some of the papers (e.g. Moqbel et al., 2013), none of the papers examined them.

Articles often examined more than one outcome, and from the 27 articles, knowledge sharing and learning was found to be the most studied outcome. This outcome appeared in 12 articles, followed by performance with 10 articles, organisational commitment with 4 articles, job satisfaction with 3 articles, work engagement and burnout with 2 articles each, work-life balance, innovative behaviour, turnover intention and absenteeism with 1 article each. Adaptability, presenteeism, organisational citizenship behaviour and employee involvement were not examined as outcomes of SNS in the included articles.

The impacts of SNS use on the psychological workplace outcomes as evidenced in the reviewed papers are discussed next.

4.1 Psychological workplace outcomes

Three quantitative studies but no qualitative studies examined the link between SNS use and *job satisfaction* as a psychological outcome. In a study of 426 respondents conducted in both Yemen and USA by Moqbel (2012), the reported direct effect between SNS use and job satisfaction were positive and significant in both samples. Both countries were using Facebook more than other SNS platforms, although intensity of use was lower in the US. Similarly, Charoensukmongkol (2014) in a study of 170 employees in Thailand found that intensity of SNS use has a direct effect on job satisfaction ($\beta=0.144$, $p<0.05$). This is despite only 13% reporting that social media use related to work. The third study by Moqbel et al. (2013) found similar positive effects. Taken together, all reviewed studies found SNS use and job satisfaction to be directly positively related based largely on the social support, social resources and social ties provided by SNS (Moqbel, 2012).

Three (3) quantitative studies identified a positive relationship between SNS use and *organisational commitment* as a psychological outcome (Eren and Vardarlier, 2013; Moqbel, 2012; Moqbel et al., 2013). However, results in Moqbel et al. (2013) and Moqbel (2012) were not statistically significant and only a small percentage of respondents indicated using SNS for work related purposes. One qualitative study found that employees demonstrated higher organisational commitment such as identifying with and being more attached to their organisation when they had an opportunity to communicate with other employees using the social-media-internal-communication-platform (Papageorgiou, 2015). From these findings, it can be inferred that employees can use SNS to take part in decisions and come up with solutions, where they have a voice, or are supported by others at work through an SNS platform, they may be more likely to see themselves as part of the organisation and interested in the future success of that organisation.

Two (2) quantitative studies reported contradictory findings on the association between *burnout* as a psychological outcome and SNS use (Bucher, 2013; Charoensukmongkol, 2015). One study found that SNS use is directly associated with emotional exhaustion as a dimension of burnout in the workplace (Charoensukmongkol, 2015). In contrast, Bucher (2013) found a negative effect i.e. SNS use was associated with less burnout. This is explained by the job-demand-resources model which argues that employees who experience unfavourable work conditions need to rely on some sort of support to buffer themselves from stress (Demerouti and Bakker, 2011; Ren et al., 2013). Employees who experience high job demand may perceive SNS to be important in helping to relax and take breaks from their stressful work (Charoensukmongkol, 2015).

One qualitative study (Trimi and Galanxhi, 2014) and one mixed methods (Swartz, 2010) study found an association between SNS use and *employee engagement* as a psychological outcome. In the first study, the enterprise social network site was found to have created new possibilities for engagement

and participation as it engaged and immersed employees in their work (Trimi and Galanxhi, 2014). In the second study, SNS use was found to have resulted in employees feeling more engrossed in their work, and feeling stronger and more vigorous in their job (Swartz, 2010). Notably, the type of use in both these studies was focused on work or utilitarian use of the SNS rather than social or personal use. Based on the findings, it may be concluded that the observed relationship may be influenced by the type of use.

One psychological outcome that was not examined or discussed in any of the identified studies was *employee involvement*. Employee involvement occurs when employees have a say and influence in their jobs. Trimi and Galanxhi (2014) referred to employees using SNS to take part in decisions, but the direct effect of SNS use on employees' feelings of involvement have not yet been tested, and is an identified gap for future research.

Two (2) qualitative studies were found that supported a link between SNS use and *work-life balance* such that SNS use has been found in one case to blur the boundary between work life and social life (Koch et al., 2012; Skeel and Gurdin, 2009). While another concluded that work is interfering with social life and social life is interfering with work (Skeel and Gurdin, 2009). However, the studies provided no insights into the nature of SNS use, e.g. whether social or hedonic in nature versus more work-oriented or utilitarian. Thus it is not yet clear whether the observed relations may be explained by how the SNS were being used in the workplace context. Also, no quantitative studies were included that had examined the relationship between SNS use and work-life balance.

4.2 Behavioural work outcomes

Nine quantitative studies but no qualitative studies examined the link between SNS use and *job performance* as a behavioural work outcome. A study surveying 174 employees in Germany found that employees who use SNS at work are more likely to perform better at work (Kugler et al., 2015). Another survey of 1799 employees in Greece found SNS use to be positively and significant related to job performance ($F(2, 1796) = 6.08, p < 0.005$) (Leftheriotis and Giannakos, 2014). One third (33%) of employees indicated that they do not use SNS for their work at all. Other studies (Leidner et al., 2010; North, 2010; Moqbel, 2012; Shami et al., 2014; and Charoensukmongkol, 2014) found similar positive effects between SNS use and job performance. This is both directly and also indirectly through job satisfaction as a mediator. An explanation for this positive effect is that SNS provide for social capital. Social capital can have a positive impact on work performance since it makes it more convenient and easier for employees to obtain and share information with colleagues and friends. SNS use also facilitates exchange of knowledge, provides employees with social interactions for task advice and strategic information (McQuail, 2010; Cao et al., 2012). All of which can be performance enhancing.

Yet, some reviewed studies (Andreassen and Pallesen, 2014; Moqbel et al. 2013) have found negative or non-significant relationships between SNS use and job performance. A survey of 11 018 employees across different sectors in Norway asking about SNS use for personal purposes during working hours revealed that employees who use SNS for personal purposes during working hours exhibited lower job performance but the relationship was not statistically significant (Andreassen and Pallesen, 2014). While Moqbel et al. (2013) found that the SNS intensity lowers job performance. In both these studies the type of use was focused more on social and less on business-related relationships. Thus it appears that positive effect on job performance can occur in those settings where SNS use is focused on developing work-related social capital, communicating with colleagues and customers, watching market competition, and obtaining work-related resources and task advice (Andreassen and Pallesen, 2014; Leftheriotis and Giannakos, 2014; Moqbel et al. 2013) whilst negative effect might be more likely to occur when the use is related to or predominantly for personal or social reasons. Future research should directly test the moderating effect of the purposes of SNS use.

Only one article discussed SNS use and its relation to *turnover intention*. Moqbel (2012) provides only weak support for the hypothesis that SNS use may increase turnover intentions. The results in Yemen were not significant but were significant in the USA sample ($\beta = 0.14, p < 0.05$). Employees who use

SNS at work have access to a large social network, which might provide them with better opportunities for finding jobs (Moynihan and Pandey, 2008; Moqbel, 2012). The relationship between SNS use and turnover is likely to be subject to a number of additional factors and it would be premature to draw any conclusions from the available evidence.

SNS can provide a platform for employees to explore, develop, and adopt new ideas. One empirical study was found supporting this link between SNS use and *innovative behavior* (Moqbel, 2012). The results from both Yemen ($\beta = 0.18$) and USA ($\beta = 0.23$) samples in the study were significant. The explanation for this effect is based on social capital theory, where the exchange of ideas, knowledge and resources may help or improve creativity of employees (Coleman, 1988). Workers who use SNS may be experiencing this increased social support and thus be more motivated to explore, and develop or adopt new ideas. SNS can be used for product development and are a source of innovation in the product development process, and businesses are using their SNS community for market research to get feedback on products and features (Bughin, 2009; Moqbel, 2012; Parameswaran and Whinston, 2009). Examining the effects of SNS use on innovative behavior of employees across different industry contexts is thus a promising area for future research.

Unlike absenteeism, *presenteeism* as a workplace behaviour occurs when employees are physically present at work but are not performing to the best of their ability due to lack of concentration and absentmindedness (D'Abate and Eddy, 2007). SNS use might contribute to employees' lack of concentration and absentmindedness and may result in higher levels of presenteeism. Certain companies like those which fall under the essential services (e.g. hospitals) may introduce restrictions with regards to accessing SNS in the workplace in order to curtail presenteeism. No studies were found that examined the association of SNS use and presenteeism. Future work might consider presenteeism as a possible intermediate mechanism linking SNS use to other outcomes.

Moqbel (2012) examined whether SNS use has an influence on *absenteeism*. SNS use can help reduce the causes of absenteeism by providing social support. Potential pathological influences of stressful events that could cause absenteeism can be mitigated or curbed by social support provided by SNS use (Moqbel, 2012). The results however showed that reduced absenteeism is not an established outcome of SNS use as statistically significant relationships could not be found in Moqbel's Yemen or US sample. SNS usage may actually contribute to absenteeism directly by advertising or make employees aware of events (e.g. funeral, concert) or indirectly by triggering other outcomes which may lead to absenteeism such as depression or burnout (Pranjic and Males-Bilic, 2014; Welthagen and Els, 2012). This effect of SNS use on absenteeism behaviours requires additional research in order to better understand whether certain contexts of use and certain types of use are more or less associated with potential for absenteeism.

Five (5) quantitative empirical studies were found that supported the link between SNS use and *knowledge sharing* (Ali-Hassan et al., 2011; Cao et al., 2012; Chow and Chan, 2008; Tormo-Carbo et al., 2014; Van Puijenbroek et al., 2014). In one study of 307 participants drawn from 150 countries (Ali-Hassan et al., 2011), it was found that SNS use has a significant relationship with knowledge sharing ($r=0.308$, $p<0.01$). In a study of 485 participants in Spain employees were similarly found more likely to share knowledge when using SNS ($r=0.178$, $p<0.01$) (Tormo-Carbo et al., 2014). Three more quantitative studies found similar effects (Cao et al., 2012; Chow and Chan, 2008; Van Puijenbroek et al., 2014). Knowledge sharing through the use of SNS is observed both in public (Cao et al., 2012; Chow and Chan, 2008; Van Puijenbroek et al., 2014) and enterprises network sites (Ali-Hassan et al., 2011). In both cases, the use of the SNS is for expertise location, collaboration, and information access and social interaction with colleagues at work.

Qualitative studies similarly supported this association that SNS use is positively associated with knowledge sharing. Five studies were case studies (Denyer et al., 2011; Kline and Alex-Brown, 2013; Paraoutis and Saleh, 2009; Ryberg and Christiansen, 2008; Trimi and Galanhi, 2014) and two additional studies were qualitative studies based on interviews (Jarrahi and Sawyer, 2013; Swartz, 2010). In one case study, ESN was used to share knowledge across teams, such as market positioning, busi-

ness development and to drive improvements in product and service delivery (Denyer et al., 2011). In another case company, ESN was used as a potential to innovate or solve problems using the available knowledge resources wherever present in the local or global organization (Kline and Alex-Brown, 2013). A third case organisation encouraged employees to share information and collaborate amongst teams. These included discussion forums and other community facilities (Paraoutis and Saleh, 2009). A fourth case company initiative ESN to foster knowledge sharing amongst academic and industry practitioners (Kline and Alex-Brown, 2013). Taken together, the evidence suggest that ENS use and knowledge sharing are positively related. Networks and ties created by using SNS can provide employees with various sources of knowledge and foster a new form of information exchange (Cao et al., 2015). Therefore, SNS use can be a useful tool that supports knowledge sharing and reaching out. Employees who use SNS at work, especially ESN are more likely to share and receive information or be exposed to learning opportunities that arise from social networks than those who do not use SNS at work.

Closely related to learning and knowledge sharing is the concept of *adaptability* i.e. employees' ability to adapt to changes at work. The explanation of the association between SNS use and the employees' ability to adapt is based on adaptability theory. SNS use may influence employee adaptability by increasing communication and information sharing. Also, SNS use facilitates employees' learning to deal with dramatic, unpredicted, and unexpected environmental changes (Almahamid et al. 2010). Therefore an employee who uses SNS is likely to adapt better. No studies explicitly examined adaptability as a workplace outcome.

None of the studies examine or mention the relationship between SNS use and *organisational citizenship behaviour*. Social exchange theory (Blau, 1964) suggests that employees tend to respond in kind to their co-workers and organisation when treated favourably by their organisation (Moqbel et al. 2013). The use of SNS may help employees to voluntarily commit within an organisation in ways that are not part of their contractual tasks, a link that future research should look to explore.

5 Discussion

The purpose of the SLR was to review the state of the existing evidence regarding the impact of SNS use on individuals' outcomes in the workplace. Twenty-seven (27) articles were reviewed to provide the theoretical rationale and evidence regarding the impact of SNS on individuals' outcomes in the workplace.

Ten (10) workplace outcomes were identified from the reviewed literature. Of these, knowledge sharing and job performance are two outcomes that have been examined most often. On the other hand, less attention has been paid to study of outcomes such as adaptability, presenteeism, employee involvement and organisational citizenship behaviour. There is still work to be done to understand the relationship between SNS usage and a comprehensive set of workplace outcomes.

The review revealed that social support theory has most often been drawn upon to explain the links between SNS use and workplace outcomes (Charoensukmongkol, 2014; Charoensukmongkol, 2015; Moqbel, 2012). The theory postulates that an individual who belongs to a community or social group will be cared by the members of the group (Glanz et al, 2002), and will receive assistance and be part of a supportive social network. Social support can be emotional, tangible, informational or companionship and intangible (House, 1981). Support can be from work or family, friends and organisations. Social support may influence workplace outcomes such as burnout, job satisfaction, employee involvement, employee engagement and job performance. SNS facilitate interaction amongst communities, and users through SNS can receive or give support within these communities. Support may include emotional support and instrumental support amongst others. For example, if colleagues offer emotional support such as posting supporting words or words of encouragement on SNS during tough times, then that may result into improved levels of employees' job satisfaction. With that emotional support, the employees may feel valued at work.

Social capital theory has also been drawn upon. This theory provides a similar argument to social support theory, i.e. that social support provides resources to people through social interactions (Lin, 2001 and Putman, 2004). These resources can in turn influence outcomes such as performance. It was drawn on in Moqbel et al. (2013) and Moqbel (2012) and used to support hypotheses linking SNS use to job performance, job satisfaction and organisational commitment. Other theories underpinning the past studies are media synchronicity theory and social exchange theory. Media synchronicity theory was drawn upon to explain why SNS use influence job performance (Cao et al., 2013). It suggests that SNS provide the employees with a communication medium which enables employees to achieve synchronicity in their work. Social exchange theory postulates that if employees perceive their organizational environment as supportive then they will feel obligated to reciprocate with beneficial behaviours (Zhang and Jia, 2010). It was used to explain the links between SNS use and job satisfaction and other work outcomes such as organisational commitment (Moqbel et al., 2013).

Workplace Outcomes	Number of Qualitative Studies	Number of Quantitative Studies	Overall Evidence of Direction of Effect
Job satisfaction	-	3	+
Organizational commitment	1	3	+
Burnout	-	2	contingent
Employee engagement	1	1	+
Employee involvement	-	-	no evidence
Work-life balance	2	0	inconclusive
Job performance	-	8	+
Turnover intentions	-	1	inconclusive
Innovative behavior	-	1	+
Presenteeism	-	-	no evidence
Absenteeism	-	1	inconclusive
Organizational citizen behavior	-	-	no evidence
Knowledge sharing	5	5	+
Adaptability	-	-	no evidence

Table 4. Summary of effects

A summary of the evidence is presented in Table 4. SNS use at work has been found to positively impact psychological work outcomes of job satisfaction, employee engagement and organisational commitment, and behavioural work outcomes of job performance, knowledge sharing and innovative behaviour. SNS use thus appears to result in increased ‘positive’ work outcomes. If these levels are increased, the organisation will benefit because these individual outcomes contribute to the organisation’s success (Engelbrecht, Heine and Mahembe, 2014). Employees who use SNS at work may thus be better placed to contribute positively to the success of the organisation. This might occur through mechanisms such as sharing of valuable information with colleagues, and this information may empower employees to propose innovative solutions which may contribute to the organisation’s performance. The positive impacts of ESN use may be attributed also to increased managerial support and permission to use ESN (Ellison et al. 2015).

Outcomes such as burnout, turnover intentions, absenteeism and presenteeism might be considered ‘negative’ work outcomes, which may detract from individual and organisational performance. Evidence linking SNS use to these outcomes is however inconclusive. Although some evidence suggests that SNS use seems to fuel absenteeism (Moqbel, 2012), other evidence does not support this link (Hausknecht, Hiller, and Vance, 2008). The negative impacts may be due to employees being regular-

ly informed by SNS communities and colleagues. For example, other users may post about vacancies and this may influence an employee to think about quitting their job.

There is similar contradictory evidence on burnout (Charoensukmongkol, 2015). The type of SNS, whether general or ESN may also explain the differences in observations. For all studies examining ESN, the relationships between ESN usage, and knowledge sharing and organisational commitment were positive. However, the influence of ESN usage on other outcomes is less studied. From a methodological perspective, majority of the qualitative studies reported a positive relationship between SNS usage and outcomes. This review did not identify any experimental and longitudinal designs. Future research should consider these research designs to improve our understanding of SNS use and work related outcomes.

The studies that examined usage mostly relied on a unidimensional construct e.g. frequency of use. Future studies may consider a multi-dimensional SNS usage construct comprising hedonic deep usage, utilitarian deep usage and cognitive absorption (see Burton-Jones and Straub, 2006). These dimensions are context based and consider the varied functions and nature of SNS as hedonic and utilitarian systems.

In particular, studies have used social support theory as an underpinning theory linking SNS usage and work outcomes. However, no study has explicitly examined the link between SNS usage and social support constructs such as esteem and belonging. It is also not clear whether culture influences the relationships. In the future, with the increase in the number of studies examining these relationships, conclusions regarding the influence of culture can be made.

In addition to the outcomes identified in the frameworks, intermediary outcomes such as information overload, cognitive absorption, role conflict and social capital were identified in the literature. These intermediary outcomes may also be considered in future. Theories such as social capital theory, social exchange theory (Blau, 1964), perceived organisational support (Rhoades and Eisenberger, 2002), the norm reciprocity (Gouldner, 1960), job-demands model (Hausser, Mojzisch, Niesel and Schulz-Hardt, 2010) and media synchronicity theory (Cao et al. 2012) can be considered in future to link SNS use and outcomes.

Future research is also needed to improve our understanding of the contexts and mechanisms through which SNS use might influence outcomes. The existing evidence is largely supportive of SNS use impacting three psychological and three behavioural outcomes in a positive manner. In some studies SNS usage impacts outcomes such as job performance indirectly through job satisfaction. The role of job satisfaction in translating SNS usage into other work outcomes can be examined further.

5.1 Limitations

Despite all the efforts to undertake a comprehensive search and review of the articles, a few limitations are noted. Some of the articles were excluded due to the language barrier. They were not in English and this may have resulted in the authors omitting important papers. The articles which met the inclusion criteria were all published papers and other papers which were not published may have been left out. This may result in missing of important studies due to the problem of publication bias. A framework of workplace outcomes was developed for the purpose of the review and other potentially relevant workplace outcomes may have been omitted.

Despite these limitations, the review provided important insights into the use of SNS and work related outcomes. It included different studies which were based on different research methods, covered all the articles since the inception of SNS, examined different work related outcomes, and different types of SNS across various contexts of use.

6 Conclusion

The use of SNS in the workplace has been met with scepticism. A number of organisations have implemented policies aimed to curb SNS use under the assumption that SNS use is largely associated with negative outcomes such as poor job performance and presenteeism. The study reported on the relationship between SNS use and workplace outcomes. A number of workplace outcomes were identified and coded, and a framework which can be used to understand the impacts of SNS on outcomes was developed. Other researchers can draw from these outcomes and examine them in future studies of SNS use. In particular, researchers can undertake studies which are focused more on the less discussed or examined work related outcomes. Researchers may want to explore these further and provide a more inclusive picture of the outcomes. In future, work-related outcomes may be examined by comparing the degree to which SNS use was work-related.

Results show that SNS use is not primarily associated with absenteeism, turnover intentions, and work-life balance, however SNS use is associated with knowledge sharing, job satisfaction and job performance, and that knowledge sharing is one of the most supported workplace outcomes. In addition, the evidence indicate that SNS use does not always have to be work-related for positive results such as for job satisfaction, knowledge sharing, employee engagement, organisational commitment, job performance and innovative behaviour. Novel insights generated include classification of outcomes into behavioural and psychological work outcomes, and identifying negative and positive impacts of SNS usage on these outcomes in the workplace. It has been found that SNS usage can have positive and negative results depending on how it is used. If used mainly for positive work related tasks, the organisation stands to gain more from its usage. Organisations looking to improve knowledge sharing, job satisfaction and innovative behaviour outcomes, among others, might consider encouraging as opposed to inhibiting use of SNS at work. The results show that ESN are highly associated with utilitarian usage, and to improve their adoption and usage in the workplace maybe hedonic usage such as social interaction may be incorporated in their design. Managers will need to consider how to achieve work-related use of public SNS platforms without regulating against their use entirely.

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