Review article

Conceptualization social influence from the need to belong perspective on psychological needs' satisfaction to share knowledge

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A B S T R A C T

Purpose: Aiming to comprehend the function of social influence as an extrinsic motive influencing individuals' psychological needs satisfaction to share knowledge in higher educational institutions, the study will profile prior literature on how social influence affects knowledge sharing and conceptualize a suggested framework.

Design/methodology/approach: The research thoroughly examined the literature for the previous ten years using a comprehensive evaluation, mapping and analyzes research networks of the literature on relational social influence factors through bibliometric analysis. It offers a conceptual framework that explains extrinsic social factors and their effects on the psychological needs satisfaction to share knowledge among people from the viewpoint of a need to belong.

Findings: The study concluded a unique a conceptual framework that provides a solid understanding for the relational social influence phenomenon in the perspective of the need to belong, which satisfy the psychological needs to share knowledge. This will contribute to further investigations in the research area.

Research limitations: The study is a qualitative study and is limited in its generalizability as it needs further investigations to overcome the bias on the part of the researcher.

Practical implications: Adopting the proposed conceptual framework serves as a diagnostic tool for researchers to address the social influence that is likely to boost individuals' satisfaction to share knowledge.

Originality/value: This research presents a novel understanding of social influence as an extrinsic motivator arising from a sense of belonging that affects individuals' needs satisfaction to share knowledge.

Social implications: Increasing the awareness of how social influence is likely to motivate individuals to connect with one another, interact socially, and work together collaboratively to fulfil their satisfaction of psychological needs to share knowledge.

1. Introduction

It is well known that knowledge sharing must contribute to proper growth in developing operations and raising profit margins. Kharabsheh, et al. [1] revealed that knowledge sharing strategies in some organizations fail to deliver on this promise as organizations

lose billions of American Dollars each year due to failing to share knowledge. The variety of skills and capabilities of individuals in the context of knowledge sharing are the key elements in creating, modifying, and utilizing the knowledge. On the other hand, refining and developing knowledge-sharing processes lead to higher individual and organizational performance. Therefore, it is important to understand that communities members often seek to develop their core competencies and willingness to master competence and be autonomous or independent [2]. The importance of knowledge arises from being one of most leading resources of competitive advantages in organizations through effective utilization of the knowledge [3]. This has caused a considerable amount of interest within the research community to investigate the role of motivations and factors affecting knowledge sharing behaviour [4].

Recently, the huge interest in publishing theoretical and empirical research in the field of knowledge sharing has rapidly become a highly important subject area. However, the small number of conceptual articles on social factors have been narrow in focus. This, in principle, can give rise to the importance of understanding the knowledge-sharing behaviour related to psychological needs' satisfaction and the role of social influence within organizations that have different characteristics based on the need to belong theory. This paper contributes to this trend by showing how social factors, based on sense of belonging can enhance individuals' satisfaction of their psychological needs to share knowledge. Furthermore, the study outcomes will provide new insights into improving knowledge sharing behaviour in terms of the need to belong theory and self-determination theory. This conceptual paper was guided by the question, what are potential extrinsic social motivations that influence individuals' satisfaction of their psychological needs to share knowledge in higher education institutions? To identify the extrinsic social antecedents affecting knowledge-sharing behaviour, this research suggests adopting two approaches: the first is social conditions with a feeling of belonging and the second is feeling to fulfil the satisfaction of psychological needs to share knowledge.

2. Literature review

2.1. Extrinsic motivations

The motivations to share knowledge diminish when individuals are given tasks individually, contrary to collective-based knowledge that offers people interaction that could support knowledge sharing behaviour [5]. Thus, one of the factors encouraging individuals to share their knowledge is their social interactions, which reduce the feeling of loneliness that might be a barrier to a desired knowledge sharing behaviour. A study [6] made the assumption that any interaction actually that occurs among two or more individuals while communicating or talking reduces the status differentials between them and, consciously or unconsciously, enhances knowledge sharing. However, knowledge sharing could be restricted by some factors associated socially with the community members [7]. Kim, et al. [8] demonstrated that social factors refer to the internalization of community culture where people have had interpersonal harmony while individuals comply with subjective and personal norms to be accepted by the community members. Such norms have a positive relationship with individuals' behaviour to share knowledge. According to Chen, et al. [9], socializing and knowledge-seeking are driving forces associated with individuals' interactions in a certain community that favorably influence their sharing behaviour.

Since individuals often participate in knowledge sharing and engage in meaningful activities, Wang & Hung [10] demonstrated that intensive interactions among individuals contribute to the understanding and reconciliation of individuals' differences and accordingly encourage and maintain the cohesion of group members as a result of the sense of belonging and emotional attachment to the team or the organization. According to The Need Belonging Theory and the sense of belonging to be a member of a group, Baumeister & Leary [11] indicated that people innate motivation is naturally driven to create and sustain bonds. The need to belong drives individuals to always seek out stable, long-lasting relationships with others, and this was described in Maslow's hierarchy of needs'
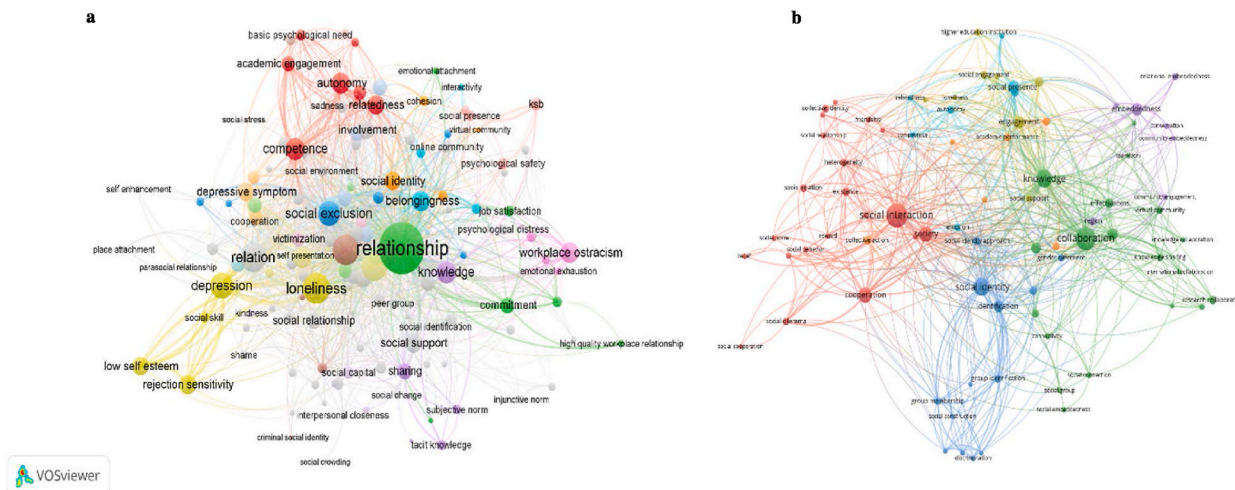

Fig. 1. (a-b) A bibliometric analysis with Co-occurrence maps.

belongingness that motivates human behaviour.

In addressing the social factors, the authors used a theoretical basis to explain how extrinsic social factors boost psychological needs satisfaction to share knowledge in light of the literature shortage on social influence from the perspective of the need to belong. Therefore, the study used a systematic review to identify the social influence related factors before building the conceptual model. The following paragraphs express the use of search and selection strategies for identified articles and the data extraction process and analysis:

2.1.1. Search, selection, and data extraction strategy

To ensure a thorough study procedure, this conceptual paper follows and adheres to the PRISMA criteria [12]. Based on the eligibility criteria, there were three stages to the overall selection process (Fig. 2). However, the search was limited to peer-reviewed English articles and reviews during 2014–2023. And to secure the high quality of selected articles, the search that was conducted in September 2022 covered two pertinent online databases, namely Scopus and ScienceDirect. The search procedure was conducted on two stages.

In the first stage, the search used different keywords, using the Boolean OR operator to connect keywords alternatives and the AND operator to connect the research keywords' together. In this regard, to decrease the likelihood of missing any pertinent articles, the keywords that can express the terms "social influence" were added, particularly those that are frequently used synonymously with social sciences and psychology research. While social influence factors have a wide range of applications, this review focuses solely on studies that identified relational social influence factors that support the need to belong theory. The keywords that were used in the search were "social influence", "social impact", "social effect", "social factor", "societal influence", "societal impact", "societal effect", or "societal factor", and "need to belong" or "need-to-belong".

The total of 1426 records from the search were uploaded into Mendeley references management software to delete any duplicate records, but there were not any duplicate records. To reduce the possibility of selection bias, a screening, constructing, and visualizing bibliometric networks were conducted to identify the association between studies, highlighting the main social influence factors that underpinned by the need to belong theory. However, the combined selected studies for review were uploaded to the free VOSviewer software, version 1.6.18, which builds co-occurrence maps in various areas [13]. The maps were created based on text data with 10 occurrences of terms, from which the authors deselected irrelevant terms before the final outputs. The research results of automated terms identification and the construction of bibliometric maps based on the network revealed an association between the outcomes and highlighted descriptively the relational social influence factors underpinned by the need to belong theory, as shown in Fig. 1a. All related social factors were compiled into a form to create textual descriptions for the social factors based on their similarities in a methodical manner. However, social-related factors in literature, from the perspective of the need to belong, have been identified and
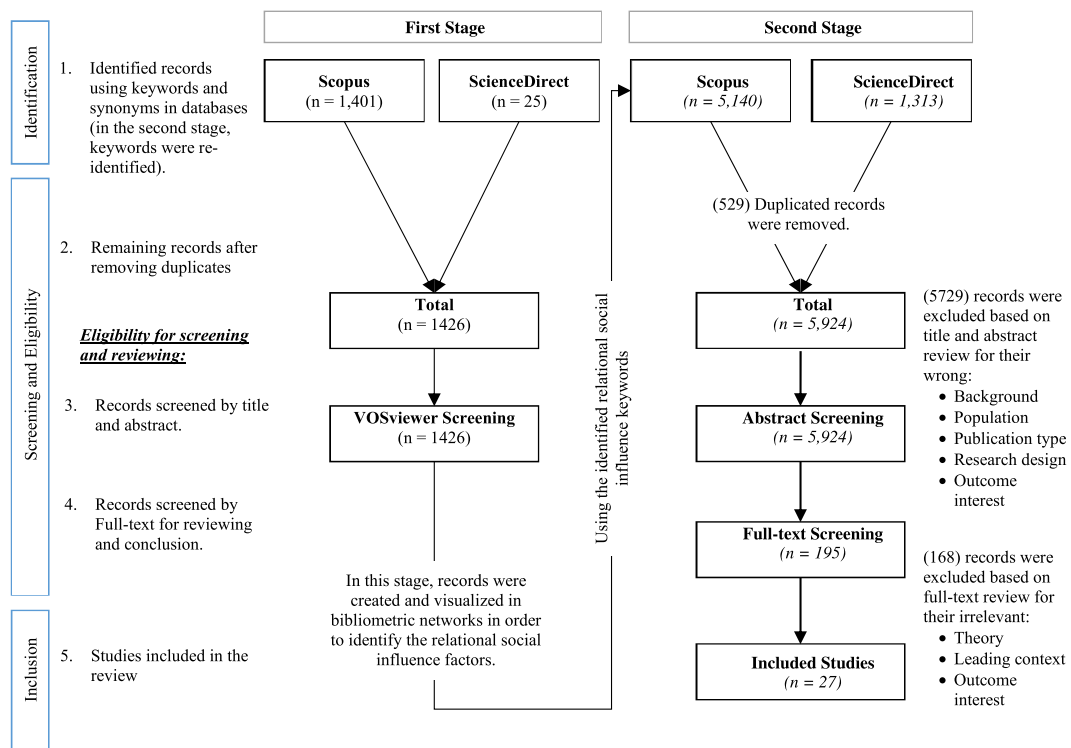

Figure 2. Search strategy and study selection process (PRISMA).

Table 1
Summary of the reviewed studies.

Study	Authors/ Date	Variables Context	Aim of study	Main findings	Deduction
1	[22]	Identity compatibility	To determine how identity compatibility is related to social background and university identities comparing to continuing-generation students experience.	Low identity compatibility was directly related to lower academic achievement, and this relationship was mediated by lower social integration.	Social identity and compatibility have been identified as social factors underpinned by the need to belong, positively impacting group work activities. This encourages attitudes, feelings, and emotions to be frequently shared and supports social cooperative behaviour in learning.
2	[23]	Social interaction	This highlights the aspects of social interaction that impact group work for involvement in corporal expression activities favorably or unfavorably.	(a) Social interaction helps the processes involved in group work activities. (b) Consensus, familiarity, and general agreement were the most often reported factors that positively impacted group work activities.	
3	[24]	Social identification	Investigating the links between social identity, and emotional and cognitive anxiety symptoms.	It has been demonstrated that social identity serves as a protective factor for mental health.	
4	[25]	Social identity	Examining how self-categorization and depersonalization; as social identity processes, create a shared identity and a sense of shared reality.	The internal states of group members including attitudes, feelings, and emotions are frequently shared. While self-uncertainty drives individuals to create shared realities through group identification, frequently with highly entitative groups which are associated with a self-saturating reality.	
5	[26]	Social identity and engagement	To investigate the connections between social identity, culture, and engagement practices.	Knowledge behaviour, participation behaviour, and influencer behaviour are all significantly influenced by the social identity and gender differences.	
6	[27]	Social identities and cooperative behaviour	The impact of heterogeneity in social identities and resources disparity on social cooperative behaviour.	Both heterogeneity and inequality in resources in social identities hinder cooperation.	
7	[28]	Entrepreneurial identity	To investigate the variables underlying the development of identity.	A tolerant atmosphere, integrating identity issues into education, and providing support are factors encourage the desired identity formation.	

Study	Authors/ Date	Variables Context	Aim of study	Main findings	Deduction
8	[29]	Social interaction frequencies among social network	To compare the factors that affect the frequency of social interactions among members of social networks who use various communication forms.	The very consistent associations existence within social interaction frequency and network characteristics including the size, ego-alter distance, and emotional closeness have been demonstrated.	Social interactivity with a sense of belonging especially in extraverted and amiable people encourage their social presence and information sharing behaviour and maximizing the networks cooperation. This is likely to demonstrates learning engagement effectiveness through social interaction ties, trust, and psychological needs satisfaction.
9	[30]	Theory of cooperation in social interactions	Expanding the theory of cooperation in social interactions through describing how cooperation emerges in human societies.	Despite the fact that unidirectional interactions eliminate the possibility of reciprocity, directed social networks can nonetheless encourage collaboration. And this cooperation is demonstrably maximized for networks with an intermediate fraction of unidirectional interactions.	
10	[31]	Social interactions in social activities	To identify whether individuals are part of a group is essential for them to understand social activities interactions.	While social interaction field model could explain social interactions and provides insight into how people observers perceive others'	

Table 1 (*continued*)

Study	Authors/ Date	Variables Context	Aim of study	Main findings	Deduction
				interactions, and enabling social groups identification, a group would be considered interactive increased with decreasing interpersonal distances, increasing direct interpersonal angles, and increasing open avatar postures.	
11	[32]	Social interaction, and the sense of belonging	Identifying how a sense of identity, social interaction, and networks contribute to the sense of belonging.	Using thorough examination and mixed methods approach to illustrate how social interaction and a sense of belonging contribute to identity, extended explanation was provided.	
12	[33]	Social interaction and personality traits	Addressing dispositional factors such as personality traits in observed inter individual variations with their potential role on social interaction.	People who are extraverted and amiable have a higher tendency to integrate the action representations of others, or self-other integration. Additionally, the level of self-other integration in social interaction circumstances might be mediated by personality factors.	
13	[34]	Psychological safety and social presence on knowledge sharing behaviour	To investigate how members of online learning communities share information in relation to their feelings of psychological safety and social presence.	Social presence and information sharing behaviour were favorably impacted by psychological safety. Social presence had a favorable effect on KSB promotion and completely mediated the link between KSB and psychological safety.	
14	[35]	Social interaction shapes learning engagement through psychological needs satisfaction	Proposing a model to show the fundamental mechanism by which social interaction affects learning engagement	Psychological needs satisfaction demonstrates different levels of effectiveness on learning engagement.	
15	[36]	Social interactions, trust, business network, external knowledge access and performance	Examining the role of social interaction ties, trust, and business networks in the acquisition of knowledge.	Social interaction ties, trust and business networks have a significant effect on the acquisition knowledge.	
Study	Authors/ Date	Variables Context	Aim of study	Main findings	Deduction
16	[37]	Relational Embeddedness	To figure out how relationships are changing and how that relates to educational efficiency, with the idea that student institutional embeddedness is a necessary condition for educational effectiveness.	Whereas the relationships deteriorating are in direct correlation to persistence; participation; and institutional trust and satisfaction, the reduction of embeddedness had a negative impact on performance.	Social embeddedness with factors contributing to it; including trust, close personal ties, engagement, persistence, participation, emotional bond, respect for a partner, social support, willingness to assist, and reciprocity are likely to encourage educational efficiency. Considering that a crucial criterion for defining embeddedness was the need to belong.
17	[38]	Embeddedness, social support, and community engagement	Determining how embeddedness relates to social support and community engagement.	Embeddedness and involvement are important factors that influence people's readiness to provide a hand to others and to the community. Engagement is strongly and favorably impacted by embeddedness. And social support influences community identification and embedding in a favorable way.	
18	[39]	Need to belong, and embeddedness.	Assessing the psychological safety and the impact of need to belong.	Resources for social support were positively correlated with psychological safety and embeddedness. Additionally, a crucial criterion for defining embeddedness was the need to belong.	
19	[40]	Social embeddedness	To identify the sources and components of social embeddedness	The factors that contribute to social embeddedness (trust, close personal ties, emotional bond,	

Table 1 (*continued*)

Study	Authors/Date	Variables Context	Aim of study	Main findings	Deduction
				respect for a partner, willingness to assist, and reciprocity) as well as the sources are (family, friends, previous work, neighborhood, religion, and municipality origin)	
20	[41]	Social trust	Exploring the mixing patterns in social trust networks from the standpoint of social identity theory.	The mixing patterns in homogeneous trust networks tend toward assortative mixing, and those in heterogeneous trust networks tend toward disassortative mixing.	
21	[42]	Collaboration	To propose a hybrid collaboration recommendation method that considers prior networks of research cooperation and related areas of research.	Knowledge-based, acquaintance-based, and benefit-based collaboration were found significantly affect collaboration	The collaboration associated with Knowledge, acquaintance and benefit along with social inclusion, Reputation effects, social rewarding is likely to promote people' performance and alleviate societal problems; as a result of satisfying their psychological needs and the feeling to belong.
22	[43]	Cooperation in the face of social exclusion	To what extent socially excluded individuals are willing to collaborate with others	Participants were less cooperative when they were paired with the individual who previously excluded them according to: (1) the need-threat and social rejection could lead to withdraw from cooperative interaction, or (2) cooperate more in general when reconnection, or (3) The excluded people' performance in cooperative activities can deteriorate due to a decreased ability to deliberate, or (4) excluded individuals are likely to cooperate less with those who rejected them.	
23	[44]	Cooperation and social rewarding	To investigate how prosocial behaviors be incentivized through cooperation	Reputation effects, which systematically promote cooperation and social rewarding, can provide rewards and incentives for social activities.	
24	[45]	Cooperation in social learning	To analyze how emergence of cooperation is related to social learning.	An increase in social learners encourages collaboration, which alleviate societal problems.	
25	[46]	Collaboration patterns	To identify learning-based social networks and defines their collaboration patterns.	The study generalized three types of collaboration, including project-based collaboration, learning-based collaboration, and institution-based collaboration; nevertheless, the mechanisms of cooperation include team composition, motivation, connection, measurement, and benefit-cost,	
26	[47]	Relationships between teacher autonomy	Examining the role of teachers' autonomy in teaching practices in making teaching decision and their collaboration	Results revealed that Low autonomy could increase collaboration whereas high autonomy could lead to high autonomy	
27	[48]	Collaboration and research productivity	Providing an in-depth analysis of the relation between the different types of collaboration and research productivity.	All the forms of collaboration including the collaboration at intramural and domestic level has a positive effect on research productivity.	

compiled into several groups, as shown in Table 1. The social factors were collective identity, social identities, and collective need for inclusion were compiled under the collective identity concept, which represents the same phenomenon of the sense of belongingness to an identified group. And similarly, relationships strength, social embeddedness, and trust are considered social factors compiled under the concept of social embeddedness, which increase the opportunities to build personal ties and connections that are reflected through the strength of relationships determined by time, emotional intensity, trust, and reciprocity. Additionally, social interactivity, interactions, social presence, and engagement demonstrate the same meaning of social interactivity, in which they are grouped. Finally,

collaboration and support variables were addressed as collaborative factors that contribute to the collaboration's term. Collective identity, social embeddedness, social interactivity, and collaboration between individuals at different levels have all been part of the output connected to relational social influence factors. The most popular search terms show potential paths for representing relational social influence, which serve as a conceptualized research model that contributes to adopt an interdisciplinary approach. Overall, the identified social factors were found to be associated with the psychological needs' satisfaction and knowledge sharing, which is an addressed gap that has not been investigated yet to the best of the authors' knowledge. Such a gap is a great opportunity for scholars to investigate the social factors affecting individuals'' satisfaction of their psychological needs to share knowledge.

The second stage of the search was repeated with the re-identified new search keywords that are related to the findings of the first stage, as shown in Fig. 1b. And the search was limited to the article's title only. The keywords were (1) "collective identity", "collective identities", "social identity", or "social identities", (2) "social embeddedness", "social relations", (3) "social interactivity", "interactions", "social presence", or "social engagement", and (4) "collaboration", or "cooperation", and "social". Each of search (1–4) were conducted separately before compiling. That results 5924 records after removing 529 duplicate records. Articles screening was implemented through Rayyansoftware [14] to identify the included studies to be reviewed by screening the titles and abstracts in which the authors deselected 5729 records. Deselection was a result of the wrong background article, the wrong population, the wrong publication type, the wrong research design, or the wrong outcome interest. Furthermore, the remaining records underwent full-text reading, and the analysis considered 195 articles published in 30 journals by 100 authors before removing 168 articles for the wrong theory, misleading context, and wrong outcome interest. The remaining 27 articles were evaluated and reviewed in the final step to create a brief synopsis of the related articles. The review summary is shown in Table 1.

2.2. Psychological needs satisfaction to share knowledge

Research has shown that knowledge sharing is positively associated with managerial behaviours, support, and affect-based trust, which closely resemble autonomy support [15]. Whereas deepening of the social exchange relationship is promoted by feeling obligated and feeling autonomous [16], social environments have been posited to play an important role in influencing individuals' psychological needs' satisfaction of the innate psychological needs for autonomy (volition), competence (efficacy), and relatedness (belonging). Xiang, et al. [17] stated that satisfaction of individuals' autonomy needs is likely enhanced when involving them in setting goals, finding solutions independently, and thinking about learning opportunities. While encouraging individuals to make decisions and empower behaviour to communicate with others could enhance the satisfaction of relatedness needs. Whereas individuals often identify strongly with their team or organization when relatedness needs are met. The study indicated that when the needs satisfaction is met, this leads to promoting knowledge sharing behaviour among people. Prosocial tendencies and interaction, on the other hand, are likely to be social environments' support of basic needs satisfaction, which contributes to psychological well-being and social development [18]. This could be confidently speculated that positive and supportive interactions and relationships are linked to increased levels of prosocial behaviour, and in particular, in knowledge sharing behaviour [19]. Moreover, individuals' feelings of failure and doubt about their efficacies push them to fulfil and meet competence's satisfaction to feel effective and capable of achieving desired outcomes. Besides, people tend to have more satisfying relationships to feel satisfied with their need for relatedness [20]. Since the three basic psychological needs, which are prominently in self-determination theory, are working together and positively influenced by each other [21], therefore, lack of autonomy influences negatively the relatedness and competence. As a result, considering the social factors as external factors that influence the individuals' psychological needs satisfaction are substantial to be investigated to address their role on the needs satisfaction to share knowledge.

2.3. Extrinsic social influence factors

2.3.1. Collective identity

According to several studies, individuals are more likely to contribute exceedingly to a group's or organization's knowledge for the overall benefit of the group or organization as a whole if they feel that they are a member of the group, team, or organization [10,49]. In social psychology, social identity is basically an association between personal and social identities [50]. Furthermore, the need to belong theory has been applied to various groups such as professional groups, religious groups, friend groups, and social groups. This phenomenon is likely to contribute to teamwork willingness to seek and share knowledge based on their self-satisfaction. Additionally, according to Wang & Hung [10], individuals who have a strong level of sense of community are likely to participate in altruistic or reciprocal activities, commit, and ideally perform to achieve individual and organizational goals. Consequently, that leads to a better-shared sense of individuals' moral responsibilities to their community, which motivates the psychological needs' satisfaction to effectively share knowledge.

It has been explicitly stated that the collective identity could be constructed either by the group members themselves or imposed by an outside entity [51]. While the collective need for inclusion was distinctively related to collective and group-level outcomes of self, such as social trust and collective self-esteem. Valcke, et al. [52] revealed that the relational need for inclusion positively contributes to psychological well-being. Overall, individuals' abilities to interact and participate with others are enhanced by their enjoyment and interest in being a part of a group or organization, as well as their desire to gain potential benefits and soaking needs. This motivates the engagement of sharing knowledge. Moreover, it was pointed out some time ago by Liu-Lastres & Cahyanto [53] that individuals' knowledge-sharing behaviour was affected by social identity and practising knowledge sharing. Accordingly, it is suggested that people tend to make common communities and always pursue to satisfy their innate needs, which fundamentally inspire their behaviours to act and gratify these needs. Hence, they intrinsically motivate the behaviour as inherently enjoyable and gratified due to

tangible and intangible benefits [54]. On the other hand, when people have a high degree of belonging sense among a group or organization's members, it reflects individuals' willingness and interest to prolong satisfying relationships with each other, which encourages their intensive knowledge sharing behaviour. In other words, collective identity form is likely to fluctuate based on social cohesion and how a community's shared values and activities, in addition to how shared identity are, which, could restrict or balance individual behaviour to share knowledge based on prosaic collective identity.

2.3.2. Social interactivity

Knowledge sharing occurs through communication and networking with other experts to solve problems, assist, learn, and build and develop capabilities [55]. This phenomenon can explain the motivations of the social behaviour and the participation level of community members in common activities based on their psychological needs' satisfaction. Whereas individuals' knowledge is shared through social relations and communication [56], the degree of awareness of the interaction and the interpersonal relationships refers to the affective and cognitive social presence of individuals [57], which motivates the contribution perspective of individuals. Looking into the relational dimension as an important dimension that motivates the behaviour in performing knowledge sharing, scanty relationships and interactions lead to a decrease in the interest in exchanging knowledge and result in less supportive collaboration [58]. Interpersonal relationships and social interactions of team and organization's members significantly affect knowledge sharing behaviour within the team or organization [59].

Individuals are anticipated to voluntarily share their knowledge with other community members, which is not often the case. The members' interactions and cohesiveness is dynamic process reflected in the personal tendency to the team or the organization as a relational and cognitive dimension [60]. This in turn increases the willingness to interact and share collaboratively the own knowledge to another. The individuals' sense of belonging to the community and the sense that they matter to each other and their organization are likely to cultivate positive relationships [61]. Such feelings positively energize interactions and knowledge sharing among people, as they feel to belong to one or more communities. The core of the relationships is about how strong or weak it is as well as how it lasts. Therefore, the relationships and interactions within social entities can be illuminated by the density, centralization, and reciprocity [62]. Therefore, this study assumes that encouraging positive connections and relationships at work could have significant implications for promoting satisfaction of individuals' psychological needs to share knowledge.

2.3.3. Social embeddedness

Singh, et al. [39] defined embeddedness as a generic type of attachment to a social entity. Scholars have distinguished between two forms of embeddedness: structural embeddedness, which refers to the connectivity and centrality of network ties, while the other is relational embeddedness, which refers to the quality of network relationships, interdependence, and trust [63]. Social embeddedness among people can be recognized as the quantity and quality of interpersonal direct relationships such as close friends and indirect relationships such as with friend's friends [64]. According to a study [65], individuals with strong social embeddedness believe that they tend to share volunteer benefits with their groups as they have more positive behaviour than others with lower social embeddedness.

Numerous studies have generally revealed that social embeddedness with strong ties and networks grounded on trust and obligation among community members leads to more engagement of knowledge sharing [61]. Hence, the sense of the need to belong and to share with others can be best specified through social embeddedness. Moreover, social embeddedness is favorable towards knowledge sharing behaviour among community members, as they prefer problem-solving and knowledge sharing collectively rather than doing it individually. Ortiz, et al. [66]; Youssef, et al. [67] confirmed that the strong bonds between individuals inspire a positive environment of cooperative assistance to learn and accordingly exchange knowledge through daily interactions. However, the positive and negative outcomes of social embeddedness often exist within one community, and that rely on the strength of relationships, which could be changed over time and determined by emotional intensity, trust, and reciprocity besides network size, composition, and communications with others [68,69].

2.3.4. Mutual collaboration

The increasing value of knowledge, knowledge sharing, besides collaboration to improve people's performance has been acknowledged [70]. Enterprises and educational institutions seek to establish sustainable knowledge collaboration through knowledge-sharing practices that are positively correlated with individuals and team's synergy [71]. Moreover, having a collaborative culture, including valuing others' work, have a significant influence on promoting collaboration. The collaboration function is described as the extent to which individuals form or incorporate into groups or communities and, eventually, communicate and interact immediately based on social or work needs [72]. This view is supported by Valaitis, et al. [73] who defined individuals' collaboration as the extent to which they actively contact, cooperate, or engage in group or community activities to exchange their knowledge and expertise. Therefore, the need to belong theory can express their collaboration through their need to belong. In a follow-up study, Lin & Huang [74] found that perceiving others' valuable contributions motivates knowledge-seeking and their interactions within a social context, which contribute in return with mutual benefit and ease the collaboration. On the other hand, excessive cooperation and relationships could instead produce a contradiction between individuals, which is not conducive to the occurrence of knowledge-sharing [72]. Experts and professionals with highly interdependent tasks need higher levels of interactions, knowledge absorption, members integration, and coordination besides teamwork configuration to be Achieved. Further analysis, Karamitri, et al. [75] showed that knowledge exchange through individuals' collaboration in any case of their ability to donate, receive, or absorb knowledge, considered as the knowledge sharing essentials. Hence, cooperation among individuals is highly helpful in fulfilling the psychological needs' satisfaction to share knowledge.

2.4. A theoretical perspective

A humanistic motivational theory named "Self-Determination Theory" (SDT) refers to the level of freedom and the experience of freedom in initiating one's behaviour. The importance of the SDT theory arises from the vast and expandable framework that demonstrates diverse theories of life aspirations, expectancies, rewards, efficacy, identity, culture, and individual behaviours [76]. Self-determination's extrinsic and intrinsic motivations influence the psychological mechanisms of individuals' behaviour and engagement [77]. These motivations were identified by Deci & Ryan [78] as three basic needs: autonomy, competence, and relatedness. While SDT demonstrates how social contexts influence self-motivation, this paper attempts to investigate the effects of social motivation on psychological needs' satisfaction to share knowledge. The need for autonomy was defined as individuals' need for control and autonomy over their own behaviours and choices, while the need for competence reflects individuals' need to proficiently master tasks, whereas the need for relatedness addresses individuals' feelings of being connected to and recognized by others [17,76]. The Self-Determination Theory [18] suggests that individuals internally have a particular orientation towards their satisfaction of basic psychological needs (autonomy, competence, and relatedness), which increases the likelihood that an individual will experience intrinsic motivation and internalized behavioural regulation, whereas extrinsic motivations can, to various degrees, externally support psychological needs' satisfaction. Therefore, the satisfaction of psychological needs can be promoted by extrinsic motivations according to different levels of self-determination, where the greatest self-determination level increases when motivation moves clockwise from external to integrated regulation [79], as described in Fig. 3 by extrinsic motivations levels in self-determination.

Research has recently situated prosocial motivation within the SDT with five regions that involve increasingly less self-determination and progressively more external control [80]. A religious with an ingrained belief is an example of intrinsic motivation, while enjoying or happiness to act in line with the actor's deep belief is an example for integrated regulation. Moreover, the task that is identified as being useful for the actor is considered as identified regulation, while the actor behaves in order to avoid psychological punishments considered as introjected regulation, which involves progressively less external control [80]. The final form of extrinsic motivation is external regulation, which reflects external rewards and punishments. Martin-Perez & Martin-Cruz [81] stated that reward systems act indirectly to improve knowledge sharing behaviour through the development of affective commitment. Overall, the extrinsic motivation varies between integrated regulation, identified regulation, introjected regulation, and external regulation, which is most likely to affect individuals' needs satisfaction and behaviour [18,82].

At this point, social influence phenomena that represent social influence factors, including collective identity, social embeddedness, social interactivity, and cooperation are likely to inspire people's relatedness, competence, and autonomy to feel satisfied and highly self-determined. The aforementioned influence on psychological need-satisfaction indicated above is likely to encourage knowledge sharing behaviour, especially in educational settings. However, conceptualizing the phenomenon was illustrated in Fig. 4 below:

3. Propositions

Based on the literature review in the previous section, the proposed conceptual framework in Fig. 4 describes how extrinsic social factors, including collective identity, social embeddedness, social interactivity, and mutual collaboration arising from a sense of belonging, influence individuals' satisfaction of psychological needs to share their knowledge with others. This paper suggests two propositions:
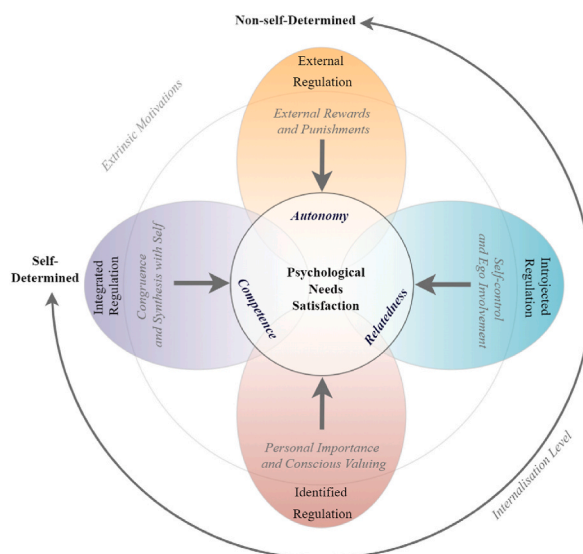

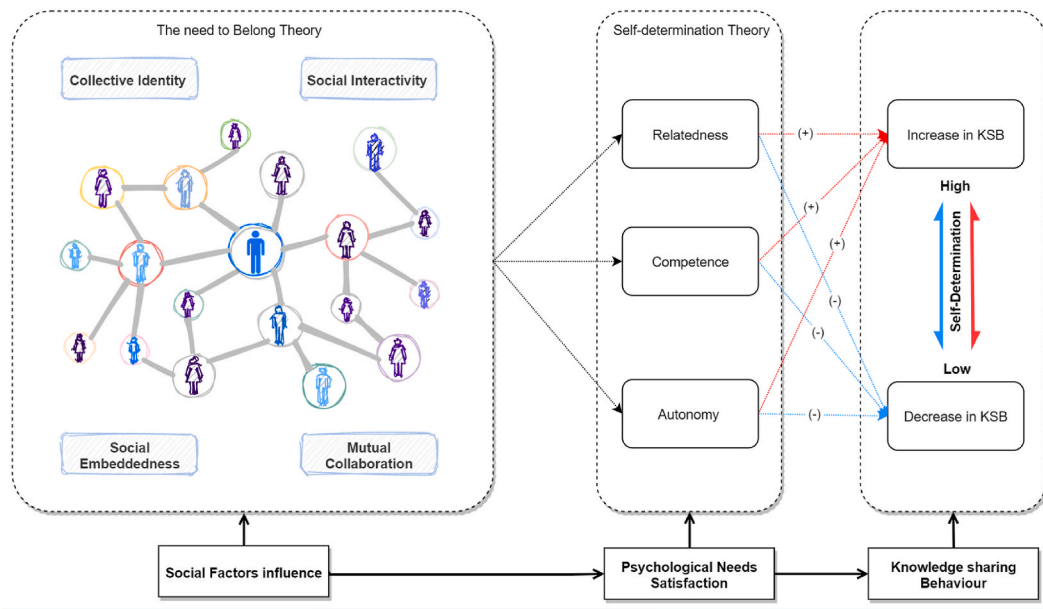**Fig. 3.** Extrinsic motivations and internalization levels in self-determination.

Fig. 4. Social impact phenomena on the psychological needs' satisfaction.

Proposition 1. *Extrinsic social influence could fulfil individuals' satisfaction of psychological needs associated with satisfaction of autonomy, competence, and relatedness that subsequently instigates their knowledge sharing behaviour.*

Proposition 2. *Extrinsic social influence could fail to fulfil individuals' satisfaction of psychological needs associated with satisfaction of autonomy, competence, and relatedness that subsequently instigates their knowledge sharing behaviour.*

4. Conclusion and expected implications

The main objective of this paper is to develop a new conceptual framework on the relationships between extrinsic social factors and psychological needs' satisfaction to share knowledge among individuals, in the perspective of the need to belong. Investigating and reviewing the literature published last 10 years specialized in knowledge sharing factors were carefully explored using the suitable key terms. The social factors have been addressed in the previous articles linked to knowledge sharing. Overall, the concept of extrinsic social factors has not been studied rigorously and thoroughly in the current literature. Therefore, future work is needed to validate the proposed framework through the following stages of research:

- Developing and validating a measurement tool to investigate the proposed concepts.
- Surveying appropriate respondents to test the proposed model.
- The main findings and conclusions of this investigation are needed to be drawn together and published.

The proposed conceptual framework can serve as a diagnostic tool to identify the appropriate social factors that influence individuals' satisfaction of their psychological needs and increase self-determination attitudes to share knowledge accordingly. Knowledge Management in this regard can adopt such a framework to investigate the role of the social factors. Such sociological phenomena can reveal key indicators for individuals' knowledge sharing and consequently, they can develop social strategies to improve individuals' knowledge sharing behaviour.

5. Limitation and future research

The aim of this paper is to investigate the social factors from the need to belong perspective that influence the psychological needs reflected by the satisfaction of individuals' autonomy, competence, and relatedness to share knowledge. The paper attempts to provide explanatory insights as a point of reference for further research, as it proposes a conceptual framework for the little-studied phenomenon in the knowledge sharing discipline. Since the study is a qualitative study and is limited in its generalizability as it needs further quantitative besides the qualitative investigations to overcome the bias on the part of the researcher, which could affect the methodological choices as well as the interpretation of findings of the phenomenon under study.

For the sake of widening the investigated social factors, the researcher endeavored to address the positive and negative factors that influence the needs satisfactions, but there was a lack of literature on social factors that are negatively linked to the psychological needs' satisfaction. Moreover, for a broader application of the findings, future research on social factors linked to the psychological

needs' satisfaction to share is highly suggested.

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Declaration of interest's statement

The authors declare no conflict of interest.

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