

Workplace Loneliness: A Systematic Review Integrating PRISMA and ADO Methodologies

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The prevalence of studies on workplace loneliness in the literature has been increased even further in recent years as a result of changes in work patterns. This paper argues that the current moment is a favorable opportunity to assess the existing body of information in order to inform future research on workplace loneliness. Hence, the objective of this research is to perform a systematic literature review on workplace loneliness. This research presents a structured and comprehensive analysis of the antecedents, decision, and outcomes (ADO) of workplace loneliness using a framework-based systematic review. A total of 400 articles have been identified from Scopus and Web of Science, of which only 33 research papers were included in this study. We used PRISMA guidelines for the selection of studies. The previous systematic reviews on workplace loneliness had a limited scope. They had just examined a few structures pertaining to the topic. Nevertheless, this research has a broad range of coverage as it aims to encompass all the concepts examined in previous studies related to workplace loneliness. Moreover, the incorporation of a framework in this study might prompt future systematic reviews that utilize frameworks to consider integrating many frameworks in order to provide full insights regarding the topic.

Keywords: workplace loneliness, PRISMA, ADO model, framework-based systematic review

The rapid fluctuations in work schedules have engendered concerns regarding the potential health and general well-being. These changes in societal and economic development bring many variations to the workplace (Weiss, 1973). Changes in the work schedule or style of work, like shifting from team work to working independently (Yengin Sarpkaya, 2014) and any other changes lead to both positive and negative outcomes. These fluctuations at the workplace resulted in experiencing the profound and terrible emotions associated with workplace loneliness, which is a widespread negative sentiment and cannot be avoided.

When one fails to adequately attend to intimate and social requirements, loneliness emerges as a highly complex and demanding element. Loneliness may be characterized by a feeling of detachment or isolation from

others, indicative of an unfavourable psychological state (Rook, 1984). As per Cacioppo et al., (2006), Loneliness is “a complex set of emotions that result from unfulfilled intimate and social needs”. Loneliness is a condition that can affect almost anyone, including professionals and toddlers. The notion of workplace loneliness has received limited attention and discourse, despite the fact that the majority of employees currently experience it. Workplace loneliness is defined as an employee’s perception of their professional relationships as insufficient (Wright et al., 2006).

Despite being extensively researched in older adults and students and being a risk factor for negative health and socioeconomic outcomes, loneliness among workers has received scant attention in the literature. Despite the fact that studies indicate that

issues associated with loneliness in the workplace are on the rise, very few reviews have been conducted on this topic. As a result, it is necessary to conduct a systematic literature review on workplace loneliness in order to provide direction for future research on this subject.

Need of this systematic review

First of all, very less research has been done on reviewing the studies on workplace loneliness systematically. As there are few studies available, which review the studies on workplace loneliness. Moreover, the existing review studies available on workplace loneliness are insufficient to provide an in-depth understanding. They are useful to gain basic understanding. Such as research carried out by Xuan Zhou, 2018, in which the researcher had provided simple review on the researches conducted on workplace loneliness. Researcher mentioned the dimensions of workplace loneliness, variables related to it, however not review the studies systematically.

Secondly, a study conducted by Bryan et al., 2013, had reviewed the concept of workplace loneliness systematically but researchers had only considered personal and health related factors associated with loneliness at workplace. Their study lacks in providing full insight of the variables associated with workplace loneliness.

Hence, there is need to conduct systematic review on this emerging topic which can provide in-depth knowledge about the topic and variables related to it.

Originality of the study

This paper is different from the existing researches of systematic reviews in major two ways: Firstly, the existing paper of systematic review on workplace loneliness was narrow focused. As they had only taken two or three constructs related with the topic (Bryan et al., 2023). However, this paper has wide scope

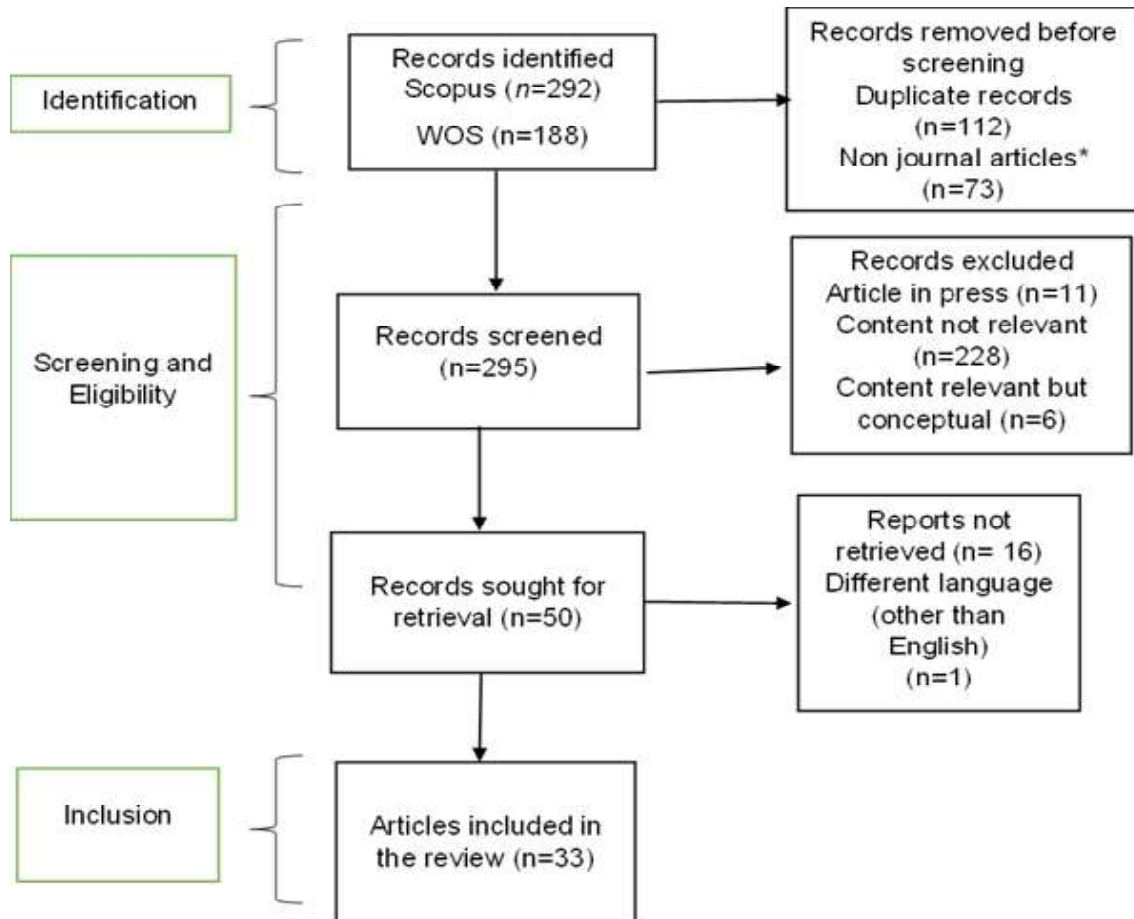
as this paper endeavours to take all the constructs taken in the past studies associated with workplace loneliness. Secondly, unlike the semi structured approach used by past researchers on workplace loneliness, this paper uses the framework based systematic review where insights from the existing studies structured to communicate through Antecedents, Decision and Outcomes (ADO) framework.

Method

The primary goal of any systematic literature review is to provide answers to the three main questions of “what do we know,” “how do we know,” and “where are we heading?” This is accomplished by combining a lot of data and processing it further to create comprehensive information, which is then highlighted by emphasizing research gaps and potential future directions in organizational settings (Paul & Criado, 2020). To conduct the review, studies need to be selected. This study evaluated publications from SCOPUS and Web of Science (WOS) to perform a systematic review on workplace loneliness. Total 480 records are identified till 15th April, 2024. Selection of studies were done according to PRISMA guidelines (Matthew et al., 2021). The PRISMA protocol consists of four stages- identification, screening, eligibility and inclusion. This protocol was chosen because it provides simple and clear guidance for reviewing the articles and inclusion criteria. A total of 292 records were retrieved from SCOPUS, while 188 articles were obtained from WOS. Among these, 112 items were found to be duplicates, while 73 records were classified as non-journal articles (book, book chapter, editorial, notes, letter, short survey, conference paper, review articles) were removed. After removing 185 records, 295 records were screened. After screening, it was found that 11 articles were still in press, not published yet, content of 228 articles was not relevant and six articles were relevant but study type was

conceptual. So, all these articles were also removed. After excluding the articles, 50 articles were sought for retrieval. Then, it was found that one article was in different language (other than English) and 16 articles

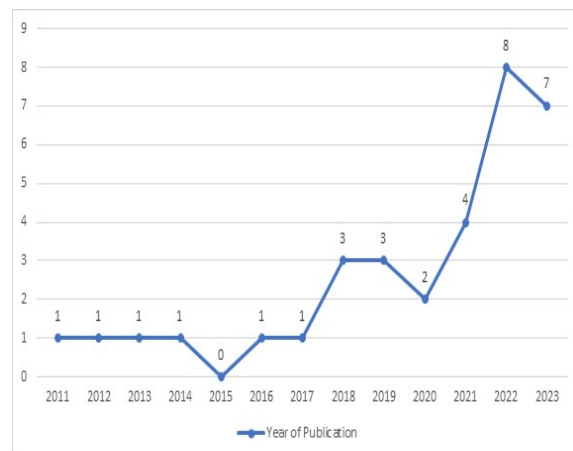
could not be retrieved because these articles could not be accessed by authors. At the end, only 33 articles were included in this review study.



Classification and Analysis of Literature

Year of publication

Out of the 33 papers included, the first paper on workplace loneliness was published in 2011. And this year had only one publication on this topic. It can be clearly seen from the graph (Figure 2) that publications on workplace loneliness gain more popularity in the past 3 years. As the count of publications was increasing from 2021.



Classification of the 33 included research articles

Table 1 shows the summary of included research papers in this study.

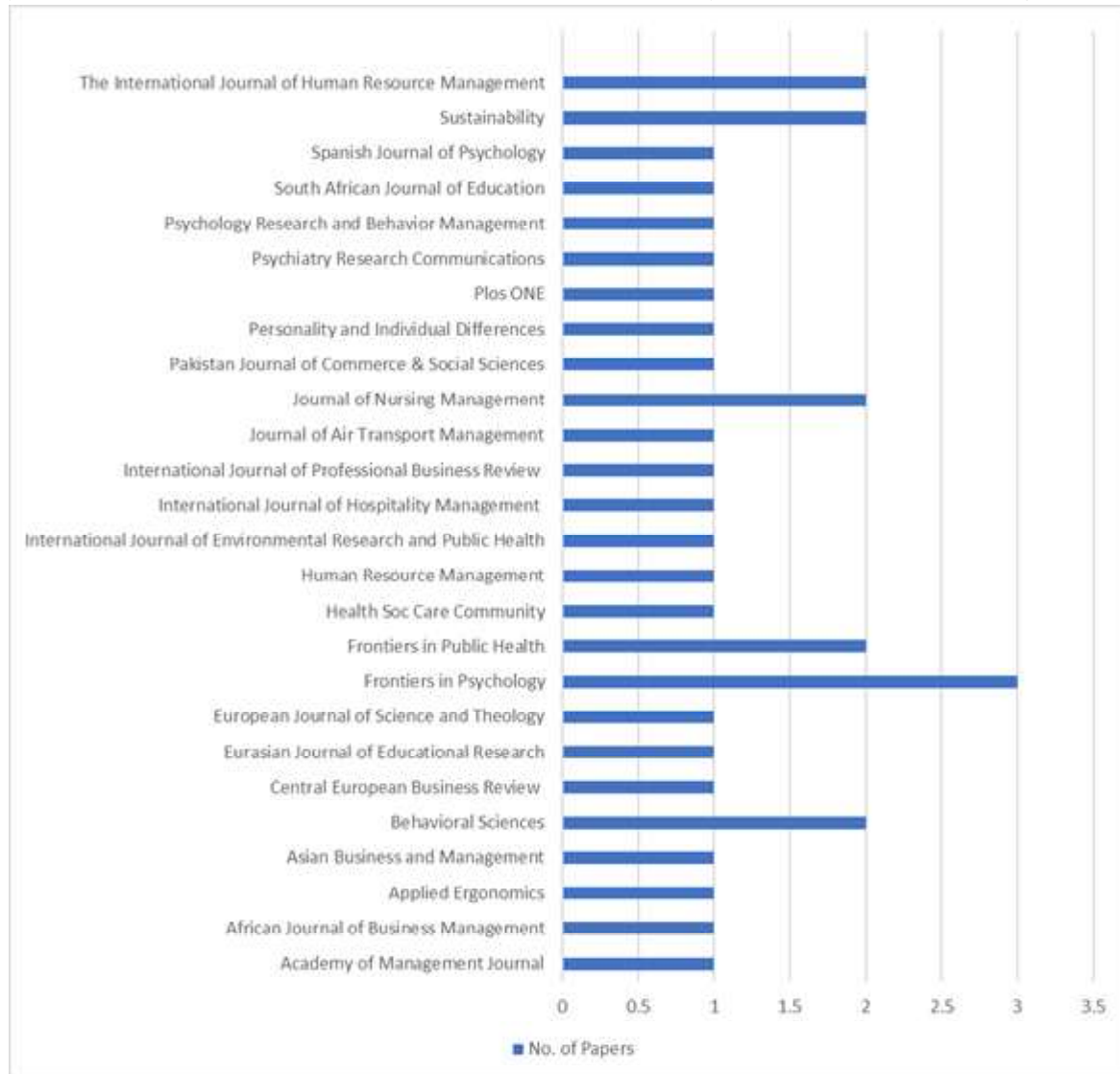
Table 1. Classification of the included Research Papers

Author(s)	Year	Journal	Research Design	Sample Size	Context	Country
Rizki Febriani et al. Indonesia	2023	International Journal of Professional Business Review	Survey	300	Manufacturing	
Guomei Tian et al.	2023	Frontiers in Psychology	Survey	332	Enterprises	China
Oliveira & Persico	2023	Applied Ergonomics	Survey	137	Various Industries	UK
Jin & Ikeda	2023	Behavioral Sciences	Survey	267	Different Companies	China
Basit & Nauman	2023	Frontiers in Psychology	Survey	274	Domestic and Multinational Organizations	Pakistan
Jin Cheng et al.	2023	Behavioral Sciences	A web-based questionnaire study (Study 1) and A multi-wave field study (Study 2)	314 (Study 1) 343 (Study 2)	Different Industries (Study 1) Information Technology (Study 2)	China
Ferda & Emre	2023	South African Journal of Education	Survey	369	Music Teachers	Turkey
Chen Hao et al.	2022	Frontiers in Public Health	Survey	459	Clothing Brands	China
Shuyun Du et al.	2022	Sustainability	Survey	639	Different Industries	China
Panagiotis V. Kloutsiniotis et al.	2022	International Journal of Hospitality Management	Survey	459	Hotel Industry	Greece
Chi Chiao et al.	2022	Frontiers in Psychology	Experimental	2520	Junior High school students	China
William J. Becker et al.	2022	Human Resource Management	Survey	239	Different Industries	USA
Stubbs & Achat	2022	Psychiatry Research Communications	Survey	330	Hospital	Australia
Amy wax et al.	2022	Frontiers in Public Health	Survey	391	Different industries	USA
Yoon Jung et al.	2022	International Journal of Environmental Research and Public Health	Survey	300	Hotel Industry	Korea

Moens Eline et al.	2021	Plos One	Survey	1358	Private sector	Belgium
Osman Uslu	2021	Central European Business Review	Survey	349	Various sectors	Turkey
Guomei Tian et al.	2021	Psychology Research and Behavior Management	Survey	290	Enterprises	China
Hyo Sun Jung et al.	2021	Sustainability	Survey	292	Hotel Industry	Korea
Aykut Arslan et al.	2020	Journal of Nursing Management	Survey	864	Nurses	Turkey
Cabello Maria et al.	2020	Health Soc Care Community	Survey	1421	Health or Social Care sector	Spain
Anand & Mishra	2019	The International Journal of Human Resource Management	Survey	1247	Nursing & Call Centre	India
X. Chen et al.	2019	Asian Business & Management	Survey	133	Different companies	China
Hafiz Ghufuran Ali Khan et al.	2019	Pakistan Journal of Commerce and Social Sciences	Survey	325	Textile Industry	Pakistan
Ozcelik & Barsade	2018	Academy of Management Journal	Survey	672	Public Municipality & Private Company	USA
Ercan Öge et al.	2018	Journal of Air Transport Management	Survey	106	Air Traffic Controllers	Turkey
Mustafa Amarat et al.	2018	Journal of Nursing Management	Survey	138	Nurses	Turkey
Jian Peng et al.	2017	Personality and Individual Differences	Survey	261 (subordinates) 67 (leaders)	Private Companies	China
Erkan Tabancali	2016	Eurasian Journal of Educational Research	Survey	369	Teaching	Turkey
Mihaela Stoica et al.	2014	European Journal of Science and Theology	Survey	138	Medical Unit	Romania
Silaman & Dogan	2013	Spanish Journal of Psychology	Survey	326	Academics	Turkey
Lam & Lau	2012	The International Journal of Human Resource Management	Survey	532	School Teachers	Macao
Ercan Yilmaz	2011	African Journal of Business Management	Survey	472	Primary Teachers	Turkey

Distribution of included research papers across journals

A total of 33 selected research papers for this study were published in various academic journals. The distribution of these papers across different journals is illustrated in Figure 3.



ADO Framework

This part includes information gathered by doing a systematic literature review of workplace loneliness associated with difference factors like personality, organizational, job structure, and many more which leads to difference consequences by using Antecedents, Decisions and Outcomes of Workplace Loneliness (ADO) model. The

ADO framework is a great tool for systematically assembling the results (i.e., constructs and the relationships that follow) of earlier studies (Paul & Benito, 2018). The included papers in the process of review reveal five categories of antecedents with one category of decision and three categories of outcomes, depicted in figure 4.

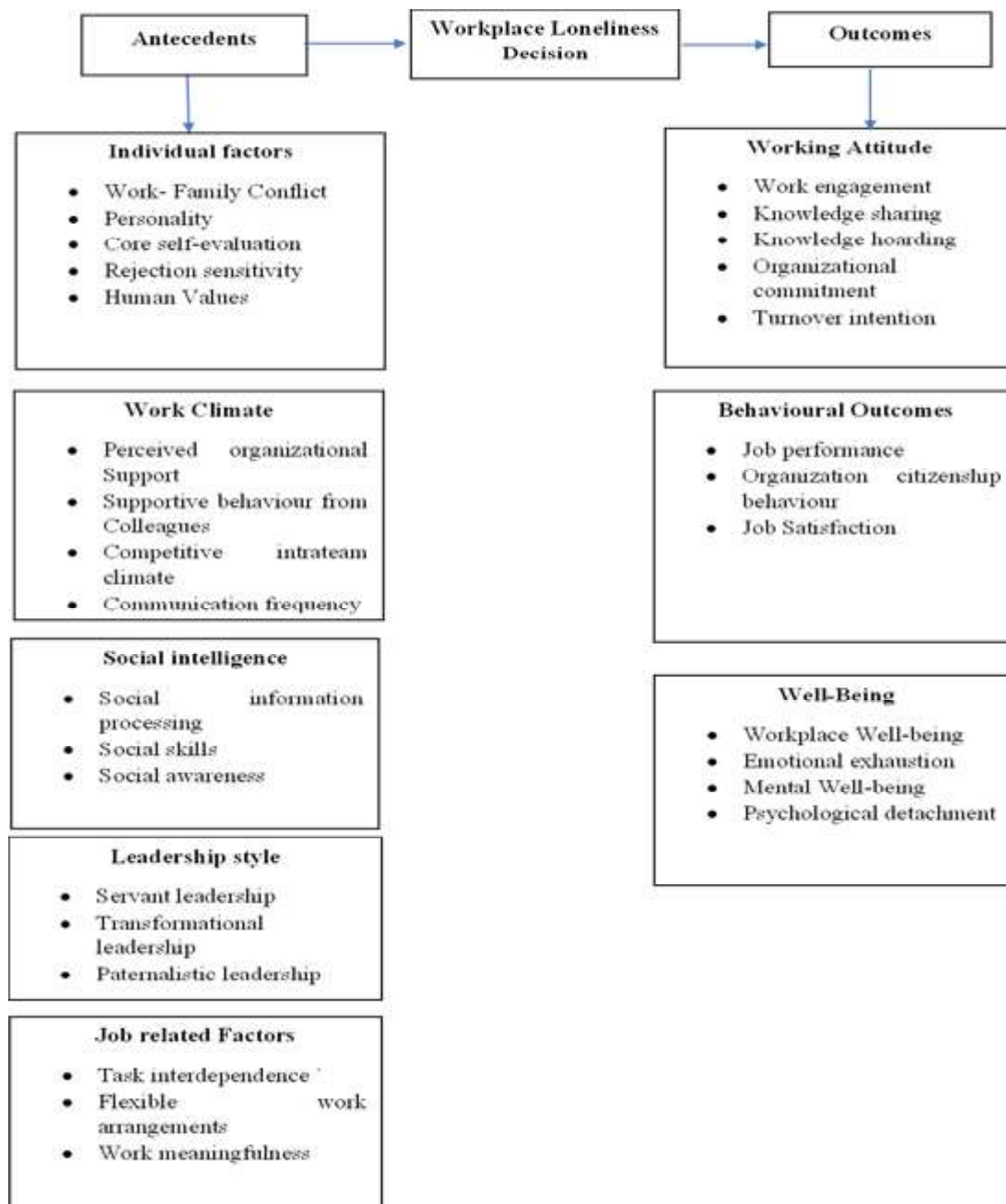


Fig 4: Overview of Antecedents, Decision and Outcomes of Workplace Loneliness

Antecedents

Antecedents refers to the reason for engaging or not engaging in a particular behaviour, which may lead to have direct influence on decision and indirect influence

on outcomes (Paul & Benito, 2018). Antecedents have five categories with 19 constructs, shown in figure 4.

Individual factors

There are various distinct attributes which contribute to the experience of loneliness in both personal and professional domains of individuals' life. This component encompasses various factors such as work-family conflict, trust concerns, personality traits, core self-evaluation, rejection sensitivity, and human values. When the needs of work and family collide with one another, there is a work-family conflict (Aboobaker et al., 2020). From an alternative angle, conflict arises when issues from the home are subtly brought up at work (Panatik et al., 2011; Obrenovic et al., 2020;). So, work family conflict has an effect on the professional life of a person and the behaviour of a person at workplace. A study by Rizki Febriani et al., 2023 also found that work family conflict has a positive relation with loneliness at work, that is, work family conflict has an effect on the workplace loneliness.

Personality has a major influence on the perception about lonely feeling and overcoming those feelings. Researchers in the five personality types have validated the impact of extraversion and emotional stability, shyness, social avoidance, and competitive attitude on workplace loneliness (Wright, 2005a). However, extraversion and emotional stability are specifically found to have negative correlation with workplace loneliness (Zhou, 2018). Core Self Evaluation (CSE) is also a personality trait that describes the fundamental assessments a person makes about their environment and sets them apart from others (Judge et al., 1997). People who have high CSE, are perceived to have more positive attitude, confidence and motivation (Judge, Erez, Bono, & Thoresen, 2002). Persons having high CSE view their workplaces more positively (Judge & Kammeyer-Mueller, 2011), whereas, persons with low CSE have more negative attitude in their life as well towards their workplaces. They find it more difficult to cope and can

experience workplace loneliness (Judge, Bono, Erez, & Locke, 2005). Hence, Core-Self Evaluation has an effect on the workplace loneliness. It was shown in a study that Core self-evaluation is negatively related to the workplace loneliness (Anand & Mishra, 2019).

The sensitivity to rejection results in loneliness, anxiety, and despair, as well as detrimental impacts on one's physical and mental well-being. Rejection from peers and superiors is a social phenomenon that affects those who experience it severely, particularly workers in an organization (Baumeister and Leary, 1995). Rejection sensitivity can be a reason of loneliness (Zhou et al., 2018). A study also shows that rejection sensitivity has a positive effect on workplace loneliness (Hafiz Ali Khan et al., 2019). Also, Yilmaz, 2011, shows in their study that persons who prefer human values, they do not face the problem of loneliness at workplace. He included Power, Achievement, Hedonism, Stimulation, Self-direction, universalism, Benevolence, Tradition, Conformity and Security as dimensions of human values (Ercaan Yilmaz, 2011).

Work Climate

The term "work climate" pertains to the internal atmosphere or ambiance of a corporation. A setting that fosters employee interactions and shapes their behaviour. This factor encompasses Perceived organizational support refers to the perception of employees regarding the level of support they receive from their organization. Supportive behaviour from colleagues refers to the actions and attitudes of coworkers that create a supportive work environment. Competitive intrateam climate refers to the competitive atmosphere inside a team. Communication frequency refers to the pace at which communication occurs. Perceived organizational support refers to the extent to which employees' efforts are valued or their

well-being is taken into consideration by the organization, which they work and they are being provided with the equipment, financial and physical assistance (Eisenberger et al., 1986, 1997; Rhoades and Eisenberger, 2002). Perceived organizational support tend to have positive impact on organizational outcomes such as, more work engagement (Xu et al., 2022), affective commitment (Nazir et al., 2019) and better job performance (Guan et al., 2014). However, lower organizational support can have negative impact on employees' behaviour and lead to the workplace loneliness among them. It was found that perceived organizational support negatively related to workplace loneliness (Tian et al., 2023).

Employees of an organization can perform better when there is a supportive behaviour of colleagues at the workplace. Supportive behaviour from colleagues includes physical and emotional help of each other. Oliveira and Persico, 2023 supported that supportive behaviour of colleagues has a negative effect on workplace loneliness, as if employees do not support each other, then there are more chances that employees of that organization can experience workplace loneliness. Moreover, employees are more likely to feel alone when there is competitive intrateam climate instead of collaborative intrateam climate. Collaborative intrateam climate is when employees help each other, understand others' emotions whereas competitive intrateam climate is when employees try to compete with their colleagues and try to be ahead of them and do not help each other. Du et al., 2022 stated that collaborative intrateam climate is negatively related to workplace loneliness whereas, competitive intrateam climate is positively related to workplace loneliness.

The frequency of communication has the ability to increase feelings of positivity that are triggered by interactions between managers and staff (Day et al., 2014). An

improvement in the communication in an organization will improve the trust among managers and employees and reduces the negative workplace consequences such as workplace loneliness. More communication at organization means less workplace loneliness among employees (Aykut Arslan et al., 2020).

Social Intelligence

Social intelligence encompasses social information processing refers to the cognitive processes involved in seeing, interpreting, and understanding social information. Social skills, Awareness of societal issues. The conceptual definition of social intelligence is the ability to comprehend other people and act in a way that is appropriate for them. People having high social intelligence level, more likely to have satisfied relationship. Social intelligence has many sub dimensions like, social awareness, social skills and social information processing. People who have high social awareness know how to act or react and impact others (Silvera et al., 2001). However, people with low social awareness level are bad at having contended relationships and can feel lonely. So, it was accepted that social awareness negatively predicted loneliness in the workplace (Silman & Dogan, 2013). Social skills refer to people's ability to act adequately in relationships. People having high social skills can easily make friends (Silvera et al., 2001) and less likely to be alone. So, social skills also negatively related to workplace loneliness (Silman & Dogan, 2013). Social information processing includes persons' skills to understand feelings, ideas and body language of others (Silvera et al., 2001). It was found that social information processing positively related to emotional deprivation at work but did not significantly relate to social companionship at work, which are dimensions of workplace loneliness (Silman & Dogan, 2013).

Leadership Style

Leadership is a process which involves influencing a team to fulfill the set goals or objectives (De Jong & Den Hartog, 2007). The factors encompass servant leadership, transformational leadership, and paternalistic leadership. Enhancing employee development, process orientation, commitment based on “trust” and “expectations,” and a focus on attending to the higher-order intrinsic needs of their followers are characteristics of transformational leadership (TFL) (Wen et al., 2019). It was predicted that TFL helps to reduce the workplace loneliness among employees (Kloutsiniotis et al., 2022). Whereas, in servant leadership, the main focus is on the fulfilment of the followers’ needs rather than organizations (Sendjaya, 2015). It was also found that people with servant leadership are prone to experience less loneliness. So, servant leadership negatively related to workplace loneliness (Jin and Ikeda, 2024). Moving to the paternalistic leadership (PL), the paternalistic leader’s nurturing care and benevolent assistance are the primary causes of the strong bonds and cohesiveness among staff members. So, due to this type of leadership, more social relationships can be established at work. Which reduces the chances of loneliness among them. It was shown that PL has a negative relationship with workplace loneliness (Oge et al., 2018).

Job related factors

Job-related elements encompass any aspects of job design or management that can have either a beneficial or detrimental effect on an employee’s behaviour. This element is comprised of task interdependence, Flexible work schedule and work meaningfulness. Task interdependence refers to situation when behaviour of a team member can affect the behaviour of another and when team members need to work

together to accomplish a task (Thompson, 1967). High task interdependence refers to more team cooperation, communication and coordination. When there is a lower task interdependence among team members, it leads to many disadvantages and can result into workplace isolation and workplace loneliness. So, task interdependence has a negative effect on workplace loneliness (Oliveira and Persico, 2023). Due to certain emergencies like COVID-19, flexible work arrangements have been introduced by companies. Flexible work arrangements include flexi time and flexi location for doing job. Employees use virtual tools to establish contact with their colleagues and supervisors instead to face to face communication (Becker et al., 2022). Due to flexi- time, frequency of employee communication reduced, which hinder the development of social relationships at work. Due to the absence of social relationships, employees can feel lonely at work. Hence, flexible work arrangements have a positive relationship with workplace loneliness (Cheng et al., 2023). Work meaningfulness seems to be an important factor for employees (Bailey & Madden, 2016). When employees look their work as meaningful, they feel more contented and motivated. When employees are motivated, they are less prone to experience workplace loneliness. Hence, work meaningfulness has a negative relation with loneliness (Aykut Arslan et al., 2020).

Outcomes

Outcomes refer to results or consequences from any decision. Outcomes have 12 constructs with three main categories, which are working attitude, behavioural outcomes and well-being. Working attitude consisted of Work engagement, Knowledge sharing, Knowledge hoarding, Organizational commitment and Turnover intention. Whereas, behavioural outcomes include Job performance, Organization citizenship behaviour and Job

Satisfaction. Workplace Well-being, Emotional exhaustion, Mental Well-being and Psychological detachment are the factors included in the well-being outcome.

Working Attitude

The term “work engagement” describes a happy and satisfying mental state associated with one’s job that is characterized by vitality, dedication, and absorption in one’s work (Schaufeli et al., 2002). A study showed that workplace loneliness is negatively related to work engagement (Basit & Nauman, 2023). Knowledge hoarding is when employees do not want to lose the ownership of any information or where the source’s intent and the environment around the source or situation impede the transfer of knowledge (Szulanski and Cappetta, 2003). When there is a competitive team environment in an organization, there are more cases of knowledge hoarding. Du et al., 2022 emphasized that workplace loneliness is positively related to knowledge hoarding. Whereas, knowledge sharing is when employees are ready to lose the ownership of knowledge or information and share with other employees. Workplace loneliness has a negative effect on knowledge sharing (Cheng et al., 2023).

When an employee feels a sense of warmth, belonging, and affection—feelings that contribute to a fulfilling work experience—they are exhibiting affective commitment, which is defined as identification, affiliation, and emotional attachment to one’s employer (Meyer & Allen, 1997). Some studies found that workplace loneliness has a positive effect on affective commitment of employees as if employees feel loneliness at work, their commitment towards the organization reduced (Ozcelik & Barsade, 2018; Amy Wax et al., 2022). Cao et al., 2019 also observed that when a worker felt highly engaged and committed to a company, that worker also formed a strong

belief in the company’s objectives and core values and made a significant effort and voluntarily gave up things for the organization. Hyo Sun Jung et al., 2021 also asserted that workplace loneliness is positively related to organizational commitment. According to Wahyuni & Muafi’s (2021) research, workers who have poor social ties at work are more likely to want to leave, which lowers their intention to stay. Febriani et al., 2013 also showed that workplace loneliness has a negative effect on employees’ Turnover Intention.

Behavioural Outcomes

The definition of job performance is a person’s productivity at work, including the precision and effectiveness with which People complete the jobs that they are assigned (Borman, 1997). Some studies researched that workplace loneliness negatively predict Job performance (Amy Wax et al., 2022; Ozcelik & Barsade, 2018; Uslu, 2021; Tian et al., 2023). Organizational citizenship behaviours are essential for any workplace or firm due to the potential effects they may have on output; studies have indicated that higher levels of these behaviours frequently lead to higher output volumes and quality (Deniz, 2019). Few studies found that Workplace Loneliness reduces Organization Citizenship Behaviour among employees (Amy Wax et al., 2022; Tian et al., 2021; Lam & Lau, 2012). Job Satisfaction refers to the extent to which person is satisfied with his job and have positive feelings at work (Basaran, 2000). Workplace loneliness reduces job satisfaction among employees (Erkan Tabancali, 2016; Basit & Nauman, 2023).

Well- Being

Arousal and valence together provide a two-dimensional picture of affective well-being that encompasses all human feeling. Warr, 1990 considered affective well-being as a main constituent of mental health at

work. D'Oliveira and Persico, 2023 asserted that workplace loneliness affected the workplace well-being of workers negatively. Emotional exhaustion refers to the reduction in the physical and mental energy of employees (Wright & Cropanzano, 1998). From the past researches, findings revealed that workplace loneliness increased emotional exhaustion among employees (Becker et al., 2022; Anand & Mishra, 2019; Yoon Jung et al., 2022). Firoz and Chaudhary, 2022, asserted that employees who experience loneliness at work, they make distance themselves from their co-workers emotionally as well as psychologically. It was found that workplace loneliness has a positive relation with psychological detachment of employees (Jung et al., 2022). Loneliness at workplace also affected mental health of employees (Stubbs & Achat, 2022).

Limitations and Scope of Future Research

This study has identified multiple factors that occur before and multiple results that come after workplace loneliness, but no connection has been found between these factors and results. Therefore, researchers in advanced studies can investigate the correlation between several factors that come before and after a certain event, and can also examine the role of mediators and moderators. This study exclusively utilized publications from the SCOPUS database. Therefore, it is recommended that researchers employ additional databases to provide more dependable outcomes. One disadvantage of the current study is that it only considers journal articles. However, further investigation can be conducted by incorporating books, dissertations, conference papers, and book reviews.

Implications

The ADO framework, developed by Paul and Benito in 2018, is the organizational structure that our framework-based study is

employing for the first time in the specific context of workplace loneliness. The utilization of a framework should promote the integration of several frameworks in future systematic reviews, in order to obtain a thorough understanding of the topic being examined. In this particular example, it is important to consider the research background and subject matter of earlier studies on workplace loneliness.

Additionally, the suggested ADO model presents several prospects for future researchers to conduct cross-cultural comparisons, such as empirical study across different time periods to examine the influence of various background conditions on organizational and individual performance.

Conclusion

This evaluation on workplace loneliness includes 33 papers sourced from the Scopus database, in accordance with the PRISMA principles. This research suggests that there are five primary aspects that influence loneliness in the workplace among employees. These factors include individual elements such as work-family conflict, trust, core-self-evaluation, personality, and rejection sensitivity. The work climate encompasses factors such as perceived organizational support, supportive behaviour from coworkers, a competitive intrateam climate, and communication frequency. Social intelligence is a contributing factor to loneliness among employees, as it encompasses abilities related to maintaining social relationships, such as social information processing, social skills, and social awareness. Furthermore, workplace loneliness can also be influenced by leadership style and job-related elements such as task interdependence, work flexible arrangement, and work meaningfulness. Regarding the consequences, workplace loneliness has an impact on various aspects,

including the employees' work engagement, organizational commitment, and turnover intention. It also affects their behavioural outcomes, such as organizational citizenship behaviour, job performance, and job satisfaction. Additionally, workplace loneliness has implications for the general well-being of employees.

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