

A Systematic Literature Review on the Impact of Leader-Member Exchange (LMX) and Work Engagement

Nur Tasha Idayu Binti Yusoff*., Halimah Binti Mohd Yusof

School of Human Resource Development and Psychology, Faculty of Social Sciences and Humanities,
Universiti Teknologi Malaysia, Johor, Malaysia

DOI: <https://dx.doi.org/10.47772/IJRISS.2026.10200586>

Received: 24 February 2026; Accepted: 05 March 2026; Published: 21 March 2026

ABSTRACT

This systematic literature review aims to provide a comprehensive review of empirical studies on the relationship between Leader-Member Exchange (LMX) and work engagement with organizational insights. LMX describes the quality of the relationship between leaders and their subordinates and has been widely recognized as a key antecedent of work engagement that is considered as a vital factor influencing employee performance and overall organizational success. Drawing on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, two major electronic databases, Scopus and Web of Sciences (WoS) were used to identify relevant studies. The articles were screened and selected according to predetermined inclusion and exclusion criteria, resulting in a total of 17 studies being reviewed. From the findings, it shows that LMX plays a crucial role in enhancing employees' work engagement, although the strength or how it affects this relationship differs across sectors and cultural contexts.

Keywords: Leader-Member Exchange (LMX), Work Engagement, Systematic Literature Review (SLR).

INTRODUCTION

The concepts of supervisor-subordinate relationship like Leader-Member Exchange (LMX) and work engagement have been extensively explored from both scholars and practitioners in organizational and leadership studies. In the current era of organizational transformation, work engagement has been a critical factor influencing employees' and organizational outcomes such as performance, motivation, and employees' well-being (Ibrahim and Hussein, 2024; Su et al., 2024). Work engagement can be defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002). Work engagement has emerged as a crucial construct in organizational research, especially its influence in organizational culture, employees' turnover rate, and increasing employees' performance in the organization (Aggarwal and Stanley, 2024). In contrast, while engagement play a crucial role in increasing employees' performance and well-being, the absence of work engagement may resulted in a variety of negative outcomes such as the increased turnover rate, decreased motivation, and also may reducing organization performance and financial losses to the companies (Dahalan et al., 2024). Given its strong association with it benefits, understanding the antecedents of work engagement has become a major concern for both scholars and practitioners.

The quality of the relationships between supervisors and subordinates has been identified in recent research as one of the key drivers of work engagement among employees in organization (Dahalan et al., 2024; Mao and Tian, 2022; Zega and Palupiningtyas, 2025). One of the widely used constructs representing the supervisors and subordinates relationship is known as Leader-Member Exchange (LMX) that provides a basic framework for understanding the how and why the quality of the relationship between leaders and employees can influence various work outcomes (Altinay et al., 2019; Insan and R Masmarulan, 2020). A high quality LMX is defined as a mutual trust, respect and obligation between two parties of leaders and subordinates in the organization (Graen and Uhl-Bien, 1995). Employees in such relationships is also known as "in-group" where both parties have closer collaboration and communication with each other that may help to motivate employees to perform better in organization (Aggarwal et al., 2020; Andersen et al., 2020). On the other hand, a low quality LMX or "out-

group” shows that the relationship between supervisors and subordinates are only based on formal obligations which involved minimal emotional or trust that may resulting in disengagement among employees (Andersen et al., 2020). Moreover, while several frameworks like the Job Demands-Resources (JD-R) model (Demerouti et al., 2001) and Social Exchange Theory (Blau, 1964) usually support the theoretical relationship between LMX and work engagement, empirical findings from past studies still shows inconsistent results across organizational context.

However, despite the growing interest in LMX and work engagement among empirical research, a comprehensive synthesis of how and when LMX influences work engagement across organizational contexts is still lacking in some parts. Prior reviews have either examined LMX broadly across various outcomes like performance (Bagyo and Ratnasari, 2023; Martin et al., 2016) or focused on engagement purportedly (Kossyva et al., 2023; Schaufeli, 2012; Simpson, 2009), but few have systematically reviewed past studies specifically examining the LMX and work engagement linkage. Thus, this systematic literature review (SLR) focuses on the need to address the gap by synthesizing empirical research that investigates the relationship between LMX and work engagement across organizational contexts. By combining this body of literature, the review focus in contributing to both academic and practical understanding of how superior-subordinate relationship dynamics like LMX foster work engagement in industrial environments. Thus, this review aims to address the question on how does the quality of LMX shape employees’ work engagement across various organizational settings?

METHODOLOGY

This systematic literature review followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure it can contribute to the quality assurance of the review processes. PRISMA guideline helps to provide a comprehensive framework to ensure transparency, replicability, and methodological rigor. According to Tedja et al. (2024), the review process involved in this review are: (1) Determining the sources of the information and search strategies, (2) selection of studies, (3) applying eligibility criteria, and (4) extracting the key data items.

Sources of information and search strategies

There are several strategies that were applied to gather the most related research studies for this review. This systematic literature review included two major academic databases which are Elsevier’s Scopus and Clarivate Analytics’ Web of Science (WoS). Both databases offer extensive citation tracking features and are able to help researcher to access the influence of their publications (Caputo and Kargina, 2022; Nirosha and Mansingh, 2025). There are multiple search strings that were used in Scopus and WoS to ensure that the researcher may capture a broad range of studies relevant to LMX and work engagement in organizational settings. Strategies like Boolean operators and synonyms were applied to ensure that the articles retrieved is the most suitable and appropriate context for this review. Moreover, to enhance the sensitivity and comprehensiveness of the search strategy, a combination of synonyms, closely related terms, and commonly used dimensions of key variables were applied. For example, the term “Leader-Member Exchange” was supplemented with alternatives such as “LMX”, “supervisory support”, and “leader subordinate”. Similarly, for “work engagement”, search terms included “employee engagement”, or the core of dimensions of engagement proposed by Schaufeli et al. (2002) such as “vigor”, “dedication”, and “absorption”. The use of engagement core dimension proposed by Schaufeli et al. (2002) were used because these terms are usually been used as part of the Utrecht Work Engagement Scale (UWES) by the majority of studies to understand work engagement. Thus, this approach aligns with the best practices in systematic reviews, which recommend the use of synonyms and related terms to reduce the risk of missing relevant studies (Brunton et al., 2012; Page et al., 2021). Then, the filters used for the review include English, articles, and 2019 – 2025 publication dates were used to make sure that the research retrieved is recent and up to date in understanding the relationship between LMX and work engagement. The final search was completed in June 2025. The query strings used in Scopus and WoS is shown in Table 1:

Table 1: The Search Strings Used in Scopus and WoS.

Databases	Search strings
Scopus	Title-Abstract-Keywords ("Leader-Member Exchange" OR lmx) AND ("Work Engagement" OR "Employee Engagement")
Scopus	Article Title ("Leader-Member Exchange" OR "LMX" OR "supervisory support" OR "leader subordinate" OR "LMX quality") AND ("Work Engagement" OR "Employee Engagement" OR "job involvement" OR "vigor" OR "dedication" OR "absorption")
Web of Science	All Fields ("Leader-Member Exchange" OR lmx) AND ("Work Engagement" OR "Employee Engagement")
Web of Science	Article Title ("Leader-Member Exchange" OR "LMX" OR "supervisory support" OR "leader subordinate" OR "LMX quality") AND ("Work Engagement" OR "Employee Engagement" OR "job involvement" OR "vigor" OR "dedication" OR "absorption")

Inclusion Criteria and Exclusion Criteria

For this review, a strict set of inclusion and exclusion criteria has been applied to reflect the methodological rigor in retrieving only relevant and recent empirical evidence related to the LMX and work engagement relationships. The criteria sets are as shown in Table 2:

Table 2: Criteria Sets (Inclusion and Exclusion)

No.	Criteria	Inclusion	Exclusion
1	Independent Variable (IV)	Studies where Leader-Member Exchange (LMX) is clearly defined as the independent variable .	Studies where LMX is used as mediator, moderator , or not explicitly the IV.
2	Dependent Variable (DV)	Studies where Work Engagement (WE) (or its dimensions: vigor, dedication, absorption) is the dependent variable .	Studies where WE are solely used as mediator, moderator , or not the final DV.
3	Study Type	Empirical studies (quantitative, qualitative, or mixed method).	Theoretical, conceptual, or review articles.
4	Context	Studies conducted in organizational settings .	Studies involving students, interns, or non-working populations .
5	Publication Type	Published in peer-reviewed journals .	Conference abstracts, dissertations, non-peer-reviewed sources.
6	Language	Written in English .	Written in languages other than English .
7	Publication Date	Published between 2019 and 2025 .	Published before 2019 .
8	Access	Full text available .	No access to full text .
9	Sector Relevance	Sector clearly stated or identifiable .	Sector is not mentioned .

Selection of studies

For the selection of studies process, the step by step screening process has been applied according to the PRISMA guidelines (Page et al., 2021). Firstly, articles were retrieved from the databases and went through the duplicate removal process. Then, all retrieved records were screened in two phases. In the first phase, titles and abstracts were reviewed based on the inclusion and exclusion criteria to ensure that only relevant articles will be screened in the next phase. Next, in the second phase, full texts were retrieved and assessed to determine whether the articles are clearly examined the relationship between LMX and work engagement according to the inclusion and exclusion criteria listed in Table 2. The screening was conducted independently by the researcher. A total of 469 articles were initially retrieved, 113 articles duplicated performed by Endnote software were removed while 35 articles were manually removed due to remaining duplicate entries that were not detected, and 39 full text articles were reviewed. Articles that did not meet the inclusion and falls under any exclusion were excluded from the review. The full screening process and excluded reasons are illustrated in the PRISMA flow diagram (Figure 1).

Applying Eligibility Criteria

The researcher applied consistent inclusion and exclusion criteria to ensure consistency and rigor for this review. The criteria were focused on only empirical, relevant and high-quality studies being synthesized in examining the direct or indirect influence of LMX on work engagement. The inclusion highlights that empirical studies need to investigate LMX as an independent variable and work engagement as the outcome to ensure a consistent clarity and focus of the study. This review also limits only empirical studies which involved quantitative, qualitative, or mixed method conducted in organizational settings to ensure the review was related to the organizational contexts. Next, only peer-reviewed journal articles published in English between 2019-2025 were included to ensure the studies remained highly relevance and up to date.

Conversely, any studies who does not meet with any inclusion were excluded from the review immediately. For instance, studies were excluded if LMX or work engagement functioned only as mediators or moderators, involved non-working populations or lacking full text access to ensure the consistency of methodological rigor. The details of inclusion and exclusion criteria can be referred to Table 2 above. After all titles and abstracts were screened accordingly (n=321), only 40 articles were considered as potentially relevant to contribute to the relationship of LMX and work engagement in organizational contexts. A total of 281 studies were excluded during the initial screening phase because their titles and abstracts show no clear relevance to the relationship between LMX and work engagement, one or both variables were used only as mediators or moderators, or the records were theses or review articles rather than empirical studies. Due to the inaccessibility of one article, only 39 articles were considered eligible for inclusion in the final screening. Then, after vigorously and consistently applying inclusion and exclusion according to the full text, a total of 17 articles were selected for this review.

Extracting the Key Data Items

In the last stage, data from all eligible and selected studies were manually extracted using a sheet in Microsoft Excel which include the key information like title, research objective, country, sector, sample and size, theories or models, study design, LMX and work engagement tools, key findings, mediators or moderators, analysis method, practical implications, limitations and future recommendation. Lastly, the PRISMA flowchart showing steps for the review process are presented in Figure 1 below.

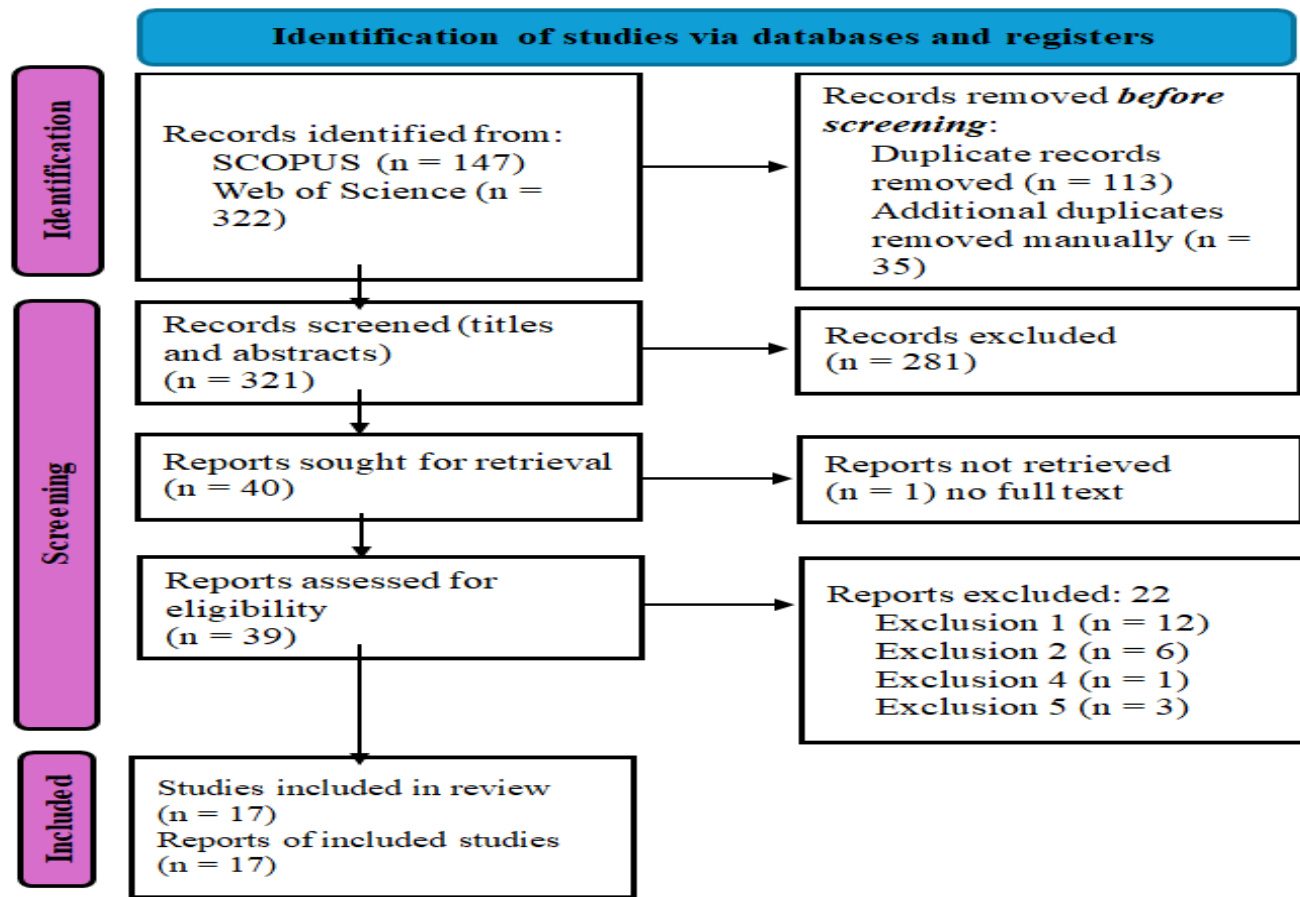


Figure 1: PRISMA Flow Diagram for Studies Selection

Quality Assessment

The quality of included studies was assessed using the Mixed Methods Appraisal Tool (MMAT) developed by Quan Hong et al. (2018). The MMAT is commonly used in SLR to evaluate methodological quality of qualitative, quantitative, and mixed-method studies. The tool begins with two screening questions that apply to all study categories. All articles included in this review passed the screening questions. There are five categories in this appraisal tool which are qualitative, quantitative randomized controlled trials, quantitative non-randomized, quantitative descriptive and mixed methods. Each category contains five specific criteria for methodological assessment (Hong et al., 2018). In this study, three categories were represented which are quantitative non-randomized (Brennan et al., 2024; Tóth-Király et al., 2023; Zeng et al., 2022), quantitative descriptive (Tanskanen et al., 2025; Liu et al., 2023; Mao and Tian., 2022; O'Donnell et al., 2019; Gim et al., 2022; Akgunduz et al., 2023; Altinay et al., 2019; Patience et al., 2020; Monica., 2019; Permatasari and Suhariadi., 2019; Sunaryo et al., 2024; Aggarwal et al., 2020; Santalla-Banderalli and Alvarado., 2022) and mixed methods (Wagner and Koob., 2022). Each selected article was assessed based on the MMAT criteria, which evaluate methodological rigor and the quality of analysis used in the studies. The assessment process involved examining each article against the MMAT criteria and recording the responses as “Yes,” “No,” or “Cannot tell,” following the guidelines provided by Hong et al. (2018). According to the quality assessment results, all included studies met the minimum methodological quality required for this review, with each study meeting at least four out of five of the MMAT criteria.

RESULTS

Descriptive Analysis

In this section, a descriptive analysis was applied on the included studies to summarize the collected data by grouping general characteristics of the publications (Haneem et al., 2017). The descriptive analysis includes frequency distributions to quantify the frequency of studies across multiple categories such as publication year,

country, sector, and methodological design. The analysis summary of the article can be referred to Appendix 1 (Table 3).

Year of Publication

A total of 17 selected articles focused on the relationship of LMX, and work engagement and the analysis showed that majority of the studies (n=5) were published in 2022, followed by studies in 2019 (=4). Studies from 2023 comes third (n=3) followed by 2020 and 2024 which published 2 studies for each year. According to the trend, it reflects a steady academic interest in the relationship between LMX and work engagement during the post pandemic period, with a peak in 2022. However, in 2021, there was not any studies recorded relating to this relationship. The presence of studies as recent as 2025 (n=1) up to June indicates the ongoing relevance of this research area.

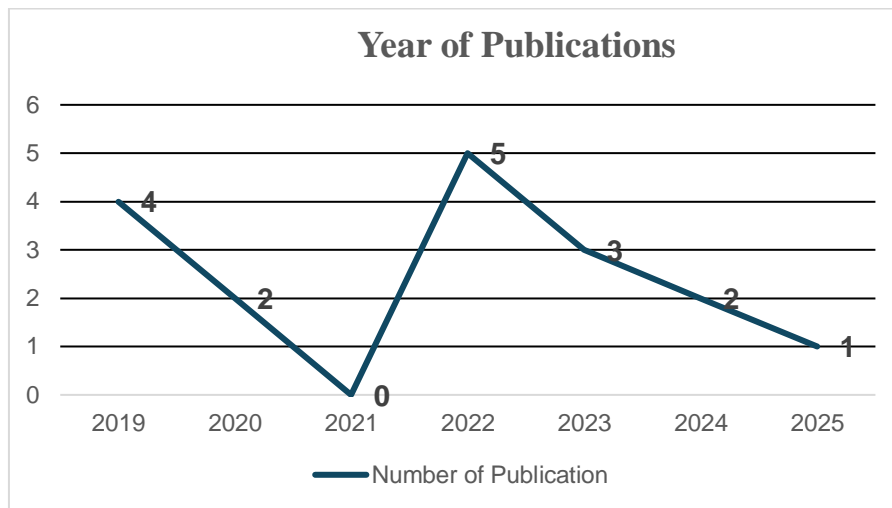


Figure 2: The year of publication of articles on the effect of Leader-Member Exchange (LMX) on work engagement from year 2019-2025

Context for investigating LMX and work engagement

To ensure a good understanding of the contexts of LMX and work engagement research, this review also analyze the diverse range of countries and sectors. The distribution of the included studies shows a strong presence of studies from Asia regions such as China (n=4), India (n=2), Indonesia (2), Turkey (n=1), and Malaysia (n=1) with China being the biggest contributor of four studies. This reflects a growing scholarly interest in LMX and work engagement in Asian context. On the other hand, the includes studies also conducted across several global regions including Northern and Western Europe (Finland, Ireland, Germany), North America (United states, Canda), Sub-Saharan Africa, and South America. All of these global studies were represented by one study each reflects a wide geographical distribution of research on the LMX and work engagement relationship.

Moreover, the 17 included studies covered multiple sectors that are relevant to examining the LMX and work engagement relationship in the organizational context. The sectors can be divided by three groups, which are the services sector, industrial sectors, and mixed sectors which involve both sectors in one study. The majority of the studies (59%) were conducted in service sectors, reflecting their dynamic organizational settings and people focused nature. In contrast, only a few studies (18%) exclusively targeted industrial or manufacturing sectors, while the remaining (23%) involved mixed sectoral contexts which helped in increasing the generalizability of findings.

Methodological Design

A descriptive analysis of the methodological design among 17 studies included revealed that the majority of the included studies (n=13) employed a cross-sectional quantitative approach while one study utilized a mixed method design, incorporating both quantitative and qualitative elements. On the other hand, another two studies

adopted a longitudinal design to examine the relationship between LMX and work engagement over time, providing stronger evidence. Additionally, there was one study conducted with two researches from two different populations which are the first population employed three wave longitudinal survey design while the second population used cross-sectional design.

Direct Effects of LMX on Work Engagement

The systematic review revealed that out of the 17 studies included, the majority (n=15) reported a statistically significant and positive relationship between LMX and work engagement. Across sectors such as healthcare, education, IT, and manufacturing, LMX emerged as a critical predictor of work engagement among employees in the organization. For instance, a study by Altinay et al. (2019) reported a positive direct relationship between LMX and work engagement ($\beta = 0.23$, $p < 0.001$) which highlighted the importance of high quality leader-member interactions in promoting work engagement among employees. Moreover, in the other study by Tanskanen (2025), the study indicate that all LMX significantly predicted all three dimensions of work engagement proposed by Schaufeli et al. (2002) which vigor ($\beta = 0.16$), dedication ($\beta = 0.15$), and absorption ($\beta = 0.16$). Consistent with these findings, empirical study by Monica (2019) which involved population from IT sector found that LMX had the strongest positive influence on work engagement among other predictors (core self-evaluations and proactive personality) with a path coefficient of $\beta = 0.38$ ($p < 0.01$) and a large effect size ($f^2 = 0.284$). The result highlights the important role of high quality LMX in dynamic work environments. Interestingly, a study by Patience et al. (2020) showed that although LMX positively predicted work engagement in a study of a private sector nurses, it contributed the least variance among other job resources included in the study ($\beta = 0.13$, $p < 0.001$).

Despite the consistent positive results from 15 empirical studies, two studies reported non-significant direct relationships between LMX and work engagement. Liu et al. (2023) found no significant direct relationship between LMX and work engagement ($p = 0.849$) which indicates that employees who experience high quality exchanges with their leaders does not necessarily feel more energetic or engaged in their work. Similarly, a study by Wagner and Koob (2022) also reported that LMX was not significantly related to work engagement ($r = .15$, $p = .34$). Overall, the observation from the selected studies suggested that high quality LMX relationships among leaders and employees may generally foster greater work engagement (n=15) although there were few studies who found contrast result (n=2). The key findings of all 17 articles can be referred to Appendix I – Table 3.

Mediating and Moderating Mechanisms in the LMX-Work Engagement Relationship

Mediators

According to the analysis of 17 studies included in this review, 11 studies employed a mediation model, and 2 studies include both mediating and moderating mechanisms in examining the LMX and work engagement relationship. On the other hand. the other four studies do not include any moderating or mediating mechanism as the studies examined the direct effect of LMX on work engagement. Although only 17 studies were included, several studies examined multiple mediating variables simultaneously, resulting in a total of 21 mediators identified across the reviewed literature. These mediators were categorized into four key themes based on their characteristics which are psychological states, work or job factors, relational or social dynamics and adjustment resources according to their characteristics.

The first category is psychological states which involve inner emotions or mental conditions of the employees that may influence behavior. In this category, psychological safety is the most frequent mediator used by two studies (Brennan et al., 2024; Mao and Tian, 2022) followed by psychological well-being (Permatasari and Suhariadi, 2019) and psychological empowerment (Aggarwal et al., 2020). The studies showed that a high quality LMX may enhanced employees' psychological resources which can lead to higher engagement levels.

The second category is work or job factors which is more focused on the outcome of work or task-related feature of the job. These factors includes effort and reward (Tanskanen, 2025), role overload and job security (Altinay et al., 2019), HRM performance attributions (Gim et al., 2022), and work control (Wagner and Koob, 2022). All of these mediators shows that work or job factors may contribute into the relationship of LMX and work

engagement as the results were shown to partially explain the relationship. From the studies, it shows that when leaders can communicate their performance expectations and have a fair reward clearly (Tanskanen, 2025), employees will have more motivation and engagement in the company.

The third category focused more on the relational or social dynamics of the employees, which involved more group-level or interpersonal relationship. Five studies examined these mediators including employee advocacy (Akgunduz et al., 2023), communication satisfaction (Santalla-Banderali and Alvarado, 2022), Doctor-Patient Relationship (Zeng et al., 2022), Glass ceiling (Sunaryo et al., 2024) and team atmosphere (Wagner and Koob, 2022) to examine the mechanisms of linking the LMX and work engagement relationship. All five studies believed that positive leader-employee and peer relationships may help to foster a stronger emotional connection to their work and lead to greater engagement.

The last category has the highest variables of mediators (n=7) which focused on the adjustment resources. Specifically, one study by Liu et al. (2023) has focused on six adjustment resources which include task mastery, fitting in, standing out, role negotiation membership identification and interpersonal relationship which it believed that it can help to act as a bridge between the LMX and work engagement. Similarly, a study by Brennan et al. (2024) also believed that adjustment resources like job crafting can be contributor to this relationship. These studies proved that LMX may influence employees' sense of identity and control at work which help to boost their engagement.

However, across the included studies, the mediating role between LMX and work engagement demonstrated mixed outcomes such as full mediation, partial mediation and no mediation at all. For instance, several mediators demonstrated partial mediation (n=12) indicate that while they help to contribute to the indirect effect, the direct effect of LMX on work engagement remained significant. These mediators include psychological safety for both psychological safety, effort, reward, job crafting, HRM performance attributions, employee advocacy, role overload, job security, psychological well-being, psychological empowerment, communication satisfaction and DP-R. On the other hand, glass ceiling, standing out, role negotiation, membership identification, interpersonal relationships and work control emerged as a full mediator (n=6) which shows that LMX influences work engagement entirely through this mechanism. Interestingly, task mastery, fitting in and team atmosphere demonstrated no mediation (n=3) effect between the LMX and work engagement which stated that it did not transmit the influence of LMX to work engagement. Out of 21 mediators included, only 6 mediators show full mediation in this relationship. These findings highlight the complexity of mediation mechanisms in the LMX and work engagement relationship.

Table 4: Summary of Mediators

Mediator Category	Examples	Studies
Psychological States	Psychological Safety, Psychological Well-Being, Psychological Empowerment	Brennan et al. (2024); Mao and Tian (2022); Permatasari and Suhariadi (2019); Aggarwal et al. (2020).
Work/Job Factors	Effort, Reward, Role Overload, Job Security, HRM Performance Attributions, Work Control	Tanskanen (2025); Altinay et al. (2019); Gim et al. (2022); Wagner and Koob (2022).
Relational/Social Dynamics	Employee Advocacy, Communication Satisfaction, Doctor-Patient Relationship (DPR), Glass ceiling, Team Atmosphere	Akgunduz et al. (2023); Santalla-Banderali and Alvarado (2022); Zeng et al. (2022); Sunaryo et al. (2024); Wagner and Koob (2022).
Adjustment Resources	Task Mastery, Fitting In, Standing Out, Role negotiation, Membership Identification, Interpersonal Relationship, Job Crafting	Liu et al. (2023); Brennan et al. (2024).

Moderators

In this review, two studies investigate the moderate variables in the relationship between LMX and work engagement. In study by Brennan et al. (2024) it showed that optimism significantly strengthened this relationship by stating that a higher optimism level may enhance the impact of LMX to work engagement. In contrast, reward did not moderate the indirect effect of LMX on three dimensions of work engagement which are vigor, dedication or absorption through effort as all 95% confidence intervals included zero. Thus, these findings suggests that individual traits like optimism may strengthen the LMX-WE link compared to reward.

Commonly Used Measurement Tools for LMX and Work Engagement

According to the reviewed studies, the LMX-7 scale by Graen and Uhl-Bien (1995) emerged as the most widely used instruments to assess the quality of leader-member relationships (n=8). From the analysis, it appeared in multiple studies reflecting a strong reliability (Aggarwal et al., 2020; Liu et al., 2023; Mao and Tian, 2022; Monica, 2019; Patience et al., 2020; Sunaryo et al., 2024; Wagner and Koob, 2022; Zeng et al., 2022). Other commonly used LMX instruments included the LMX-MDM scale (n=6) by Liden and Maslyn (1998) which assesses four dimensions which are affect, loyalty, contribution and professional respect (Brennan et al., 2024; Gim et al., 2022; O'Donnell et al., 2019; Permatasari and Suhariadi, 2019; Santalla-Banderali and Alvarado, 2022; Tóth-Király et al., 2023). However, out of six studies, only two studies (Gim et al., 2022; Tóth-Király et al., 2023) used this scale as multidimensional which discusses four dimensions of LMX. On the other hand, a study by Tanskanen et al. (2025) used LMX UVA scale. Lastly, another two studies by Altinay et al. (2019) and Akgunduz et al. (2023) employed LMX-7 scale by Scandura and Graen (1984) to measure the level of LMX.

For work engagement, the most commonly used scale is Utrecht Work Engagement Scale (UWES) by Schaufeli, Bakker and Salanova particularly the 9-item (UWES-9) and 17-item (UWES-17) versions (n=13). Specifically a total of 11 studies employed the UWES-9 (Altinay et al., 2019; Brennan et al., 2024; Gim et al., 2022; Mao and Tian, 2022; Monica, 2019; O'Donnell et al., 2019; Patience et al., 2020; Santalla-Banderali and Alvarado, 2022; Tanskanen, 2025; Wagner and Koob, 2022; Zeng et al., 2022) while another two studies employed the UWES-17 (Aggarwal et al., 2020; Permatasari and Suhariadi, 2019) These tools measure the three core dimensions of work engagement which includes vigor, dedication and absorption. The majority of the studies reported Cronbach's alpha values ranged from 0.85 to 0.94 indicating a high internal consistency. However, out of 13 studies, only one study considered UWES as multidimensional while 12 studies considered it as a single construct. On the other hand, there are few studies employed alternative instruments such as the Job Engagement Scale by Rich et al. (2010) – Tóth-Király et al. (2023), Employee Job Dedication Scale by Lee et al. (2016) – Akgunduz et al. (2023), work engagement scale based on Rothbard (2001) that has validated by Song et al. (2015) – Liu et al. (2023), and the last one is work engagement scale by Balducci et al. (2010) – Sunaryo et al. (2024). Nonetheless, as it stated, UWES remained as a dominant tool due to its dimensional variety and global validation.

Conceptual Framework Diagram

Figure 3 presents the conceptual framework of this study that illustrates the pathways through which Leader-Member Exchange (LMX) influences work engagement. This framework highlights that the LMX and work engagement relationship is primarily indirect including the mediating and moderating variables. The mediators are grouped into four categories which are psychological states, work or job factors, relational or social dynamics and adjustment resources. On the other hand, optimism and reward are included as moderators influencing the LMX-work engagement relationship.

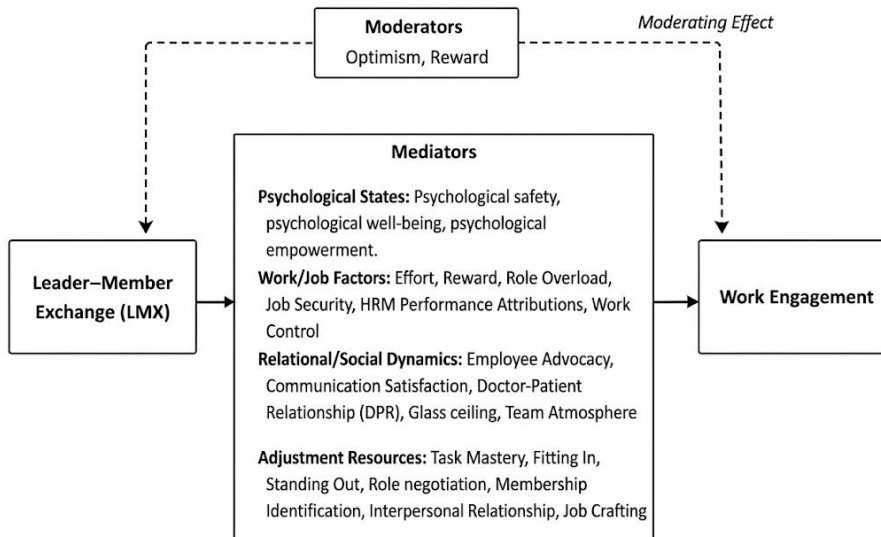


Figure 3: Conceptual Framework of the LMX and Work Engagement Relationship

DISCUSSION

The Impact of Leader-Member Exchange (LMX) on Work Engagement.

This systematic literature review examined the relationship between Leader-Member Exchange (LMX) and work engagement across multiple sectors. Across the reviewed studies, prior research consistently highlights the beneficial role of high-quality LMX in fostering work engagement, reinforcing the view that leaders play a vital role in shaping employees' behaviors as influential models in the workplace (Monica, 2019; Santalla-Banderali and Alvarado, 2022). From a social exchange perspective, employees who receive variety of resources and rewards from their supervisors or leaders will tend to reciprocate by investing more energy and enthusiasm in their work which will resulting in a higher work engagement level (Santalla-Banderali and Alvarado, 2022; Tanskanen, 2025). Several studies also emphasize that the supervisor-employee relationship represents as one of the most critical social resources influencing employee well-being and performance (Tóth-Király et al., 2023). This is because, through effective LMX, it may allow employees to gain access to resources and support that may contribute to their engagement level at work (Brennan et al., 2024; Liu et al., 2023; Mao and Tian, 2022). In high-quality LMX relationships, the exchange of resources tends to be richer, providing employees with greater access to guidance, opportunities, and emotional support (Tanskanen, 2025). This reciprocal exchange strengthens the relational bond between leaders and employees, which may further encourage employees to remain committed and actively engaged in their work (Brennan et al., 2024; Santalla-Banderali and Alvarado, 2022; Sunaryo et al., 2024; Tóth-Király et al., 2023).

Effective LMX act as a booster that enhance employees' motivation and satisfaction which then will encourages greater engagement in their tasks and responsibilities (O'Donnell et al., 2019). Moreover, several studies suggest that high-quality leader-member relationships would usually increase the likelihood that engaged employees perceive their work as meaningful thereby strengthening their organizational commitment and contributing to overall organizational performance (Altinay et al., 2019; Patience et al., 2020). In addition, employees in this surrounding often experience a supportive work environment where well-being, positive emotions, and a sense of pride will be consistently reinforced to help them reduce negative emotions toward their job (Permatasari and Suhariadi, 2019). Such supportive relationship may reduce negative work attitudes and help employees feel more valued and respected, which in turn strengthen their attachment to their jobs (Aggarwal et al., 2020; Permatasari and Suhariadi, 2019). These positive relational experiences are also associated with favorable outcomes such as lower stress, reduced turnover intentions, and decreased presenteeism (Wagner and Koob, 2022). Generally, LMX will improve how employees view their work environment by fulfilling their basic psychological needs for autonomy and competence which are essential drivers of greater work engagement (Tóth-Király et al., 2023). Overall, the reviewed studies suggest that LMX serves as an important relational foundation for fostering an

engaged workforce. However, the findings also indicate that the strength of this relationship may vary across context, highlighting the need to consider factors such as cultural and sectoral differences when interpreting the impact of LMX on work engagement.

Contextual variations in the LMX-Work Engagement Relationship

In this section, it explains how contextual variations like cultural and sectoral differences may influence the relationship between LMX and work engagement. By highlighting these contextual differences, this review provides a broader understanding of how LMX may function across diverse organizational settings. Generally, although LMX is usually identified as a driver of work engagement, this relationship may function differently according to the nature of the work itself that may strengthen or amplify this relationship. In people based industry like hospitality, where employees usually face intense emotional labor, irregular schedules, and high role overload that caused stress, it will make them rely on supervisory support or relational resources like leader-member relationship as a critical job resource to stay engaged at their work (Altinay et al., 2019; Liu et al., 2023). Under these stressful and emotional environment, a high quality LMX help to provide trust and resources access that help to sustain engagement whereas a low-quality exchange will translate into dissatisfaction and disengagement among hospitality's workers (Akgunduz et al., 2023). From here, it suggest that in hospitality industry, LMX may be seen as a fragile or might be a barren passageway (Liu et al., 2023) yet essential channel to ensure the resources continue to flow to the employees as its impact on engagement can be shaped by the demanding and the nature of the hotels' work.

In contrast with hospitality industry that focuses more on services to guests, LMX plays a different role in social work where their working environment is usually marked by heavily workloads, conflicting roles, limited rewards, and support. In social work, a high quality LMX relationships did not necessarily encourage engagement directly but instead act as an enabler in creating more resourceful work environments that help to sustain their engagement level through a better team atmosphere (Wagner and Koob, 2022). Interestingly, for working environment that prioritizes more on a resource-rich surrounding, a social job resources like team atmosphere proved to be a stronger driver of engagement than structural resources like work control whose contribute sometimes weak or even negative results (Wagner and Koob, 2022). In contrast from social work that focuses on the resource rich working environment, LMX in the public sector shows a much stronger direct influence on employees' engagement when organizational resources are limited or when they are in a resource poor environment. For instance, in underfunded institution like teaching industry where employees are involved in working environment that has limited financial resources and poor human resource supports will make them to rely more heavily on their relationship with direct supervisors (Brennan et al., 2024). Naturally, in industry that lack of resources, employees will see LMX as an adaptive response or "compensatory mechanisms" that neutralized or fulfill the lack of resources by seeking relational support with their supervisors. From here, the function of LMX may plays a different role depending on the nature of the work itself in encouraging work engagement, whether act as enabler of rich resources (Wagner and Koob, 2022) or as a strategy replacement for the limited resources (Brennan et al., 2024).

However, the nature of work or sectoral differences does not fully determine how LMX influence employees' work engagement, but broader cultural context also plays role in shaping how employees develop and respond to leader-member relationship. A cultural context or tradition of certain country will determine this relationship because norms of collectivism or Western culture may determine how employees see supervisory support. In collectivist and high-power distance such as India, China, and Malaysia, interpersonal harmony and respect for hierarchy usually form the basis of workplace interactions especially with their leaders (Altinay et al., 2019; Gim et al., 2022; Monica, 2019). In such environments such as in India, employees tend to depend on supervisors as central figures to seek for guidance and protection where a high quality LMX relationships are likely to encourage engagement (Monica, 2019). On the other hand, in China culture, the influence of "guanxi" is highlighted where maintaining a harmonious relationship between the supervisor-subordinate may help in strengthening the positive effects of this relational support on motivation and engagement among employees (Mao and Tian, 2022). Nevertheless, employees in China tend to show deep respect toward their supervisor and careful not to challenge authority which may help in maintaining the harmony but also limit the open communication (Altinay et al., 2019). So, when these employees facing issues like job insecurity, they may hesitate to seek help from their leaders out of fear of appearing weak or disrespectful (Altinay et al., 2019).

Unlike in collectivism culture in these countries, individualistic culture such as in western countries where work relationships are generally shaped by individualism and low power distance are different compared to countries like China and Malaysia that more rely on their relational support from their supervisor (Monica, 2019). In Western workplaces, reciprocity in relationship is often more formal and limited to their roles, with less focus on personal obligations compared to collectivism employees that able to gain more benefits from their relationship with other people (Zeng et al., 2022).

Thus, these findings from the review suggest that both sectoral and cultural contexts may contribute to shape how LMX influences work engagement. This indicates that the quality of leader-member relationships cannot simply be understood independently but need to be viewed within the nature of the work and cultural environments in which they occur.

Limitations

This review is not without limitations. First, the analysis was based on only 17 articles, which may limit the scope of the findings. However, although only 17 studies were included, these studies were selected based on strict inclusion criteria, providing a focused and high-quality analysis of LMX and work engagement. Second, the timeframe for the review was restricted to studies published recently between 2019 to 2025, which may have excluded earlier articles that may serve as relevant evidence in understanding the LMX-work engagement relationship. In addition, the choice of search terms used could have overlooked some relevant studies as there are variations in terminology or use of different constructs that resulted in excluding potentially important information. Third, the review only includes peer-reviewed journal articles, thereby excluding grey literatures that might offer different valuable insights. Finally, majority of the included articles relied heavily on quantitative survey-based which may not fully capture the complexity of the LMX-work engagement relationship. Nevertheless, despite these limitations, this review lays important groundwork for future research that focuses on clarifying on how LMX fosters work engagement across varied organizational contexts.

Future Direction

Based on the outcomes and analysis of the 17 reviewed articles on the relationship between LMX and work engagement, this article investigates the state of research and acts as a guideline for future research work. The review suggests a strong and consistent relationship between LMX and work engagement. However, the distribution of the included studies shows a significant concentration in Asian regions especially China. Therefore, future cross-cultural studies on this relationship from other countries are needed to enhance the understanding of these concepts and determine if these findings are globally representative. Similarly, future studies also should consider exploring this relationship dynamic within more diverse organizational settings other than service sector to increase the generalizability of the findings across different labor context.

Next, regarding the methodology, the analysis revealed that majority of the included studies employed a cross-sectional quantitative approach. Therefore, future research should prioritize the selection of longitudinal research designs to provide stronger evidence of causality over time. Mixed-methods are also highly recommended because it can provide a deeper understanding of underlying psychological factors and complex relational dynamics that quantitative design might not fully capture (Atieno., 2009).

CONCLUSION

In sum, the evidence from this review highlights the crucial role of a high-quality relationship between leader and subordinate or also known as LMX in enhancing work engagement among employees across different organizations. Nowadays, work engagement has received growing attention given its critical role in shaping employees' positive well-being and organizational outcomes. Conducting a systematic review on this relationship can be considered important from both theoretical and managerial perspectives. Theoretically, since several recent studies have explored how LMX improves employees' engagement in various ways, this review helps to bring the findings together to explain the process in clearer understanding of the mechanisms involved and highlight areas for future research. On the other hand, from a managerial perspective, having engaged and committed employees are very important because they may act as creative ideas' contributors who always

encourage them to bring new ideas, work productively and does not hesitate to ensure the success of their organization. However, while a high-quality LMX relationship represent vital and crucial leadership resources that act as pillar in strengthening and supporting employees' engagement and motivation, it is also important to note that the relationship also may differ across sectors and countries depending on their contextual variations. Overall, this systematic literature review (SLR) not only captures the current state of knowledge on LMX and work engagement in various sectors but also offers valuable and meaningful insights for both scholars and practitioners to deepen understanding of this mechanism and improve practice in this area.

REFERENCES

1. Aggarwal, A., Chand, P. K., Jhamb, D., & Mittal, A. (2020). Leader–Member Exchange, Work Engagement, and Psychological Withdrawal Behavior: The Mediating Role of Psychological Empowerment [Article]. *Frontiers in Psychology*, 11, Article 423. <https://doi.org/10.3389/fpsyg.2020.00423>
2. Aggarwal, V., & Stanley, D. S. (2024). Relationship among E-HRM, workforce agility, technostress and work engagement: Techno HRM engagement model (THEM). *Psychological Studies*, 1-14.
3. Akgunduz, Y., Turksoy, S. S., & Nisari, M. A. (2023). How leader–member exchange affects job embeddedness and job dedication through employee advocacy [Article]. *Journal of Hospitality and Tourism Insights*, 6(2), 492-508. <https://doi.org/10.1108/JHTI-08-2021-0230>
4. Altinay, L., Dai, Y. D., Chang, J., Lee, C. H., Zhuang, W. L., & Liu, Y. C. (2019). How to facilitate hotel employees' work engagement: The roles of leader-member exchange, role overload and job security [Article]. *International Journal of Contemporary Hospitality Management*, 31(3), 1525-1542. <https://doi.org/10.1108/IJCHM-10-2017-0613>
5. Andersen, I., Buch, R., & Kuvaas, B. (2020). A literature review of social and economic leader–member exchange. *Frontiers in Psychology*, 11, 1474.
6. Atieno, O. P. (2009). An analysis of the strengths and limitation of qualitative and quantitative research paradigms. *Problems of Education in the 21st Century*, 13, 13–18
7. Bagyo, Y., & Ratnasari, S. D. (2023). The quality of leader-member exchange, engagement, and performance: A systematic literature review. *Journal of Economics, Finance and Management Studies*.
8. Balducci, C., Fraccaroli, F., & Schaufeli, W. B. (2010). Psychometric properties of the Italian version of the Utrecht Work Engagement Scale (UWES-9). *European Journal of Psychological Assessment*.
9. Blau, P. (1964). Exchange and power in social life.
10. Brennan, A., Garavan, T., Egan, T., O'Brien, F., & Ullah, I. (2024). A conservation of resources perspective on public sector employee work engagement [Article]. *European Management Review*, 21(2), 393-407. <https://doi.org/10.1111/emre.12594>
11. Brunton, G., Stansfield, C., & Thomas, J. (2012). Finding relevant studies. *An introduction to systematic reviews*, 2, 93-122.
12. Caputo, A., & Kargina, M. (2022). A user-friendly method to merge Scopus and Web of Science data during bibliometric analysis. *Journal of Marketing Analytics*, 10(1), 82-88.
13. Dahalan, N. A., Fauzi, M. W. M., Anuar, M. M., Omar, M. K., & Rahim, R. A. (2024). Work-Life Balance, Leader Member Exchange and Job Satisfaction Towards Employee Engagement Among Millennial in Manufacturing Industry. *South East Asia Journal of Contemporary Business, Economics and Law*, 32(1), 48-54.
14. Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of applied psychology*, 86(3), 499.
15. Gim, G. C. W., Ooi, S. K., Teoh, S. T., Lim, H. L., & Yeap, J. A. L. (2022). Green human resource management, leader–member exchange, core self-evaluations and work engagement: the mediating role of human resource management performance attributions [Article]. *International Journal of Manpower*, 43(3), 682-700. <https://doi.org/10.1108/IJM-05-2020-0255>
16. Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, 6(2), 219-247.

17. Haneem, F., Ali, R., Kama, N., & Basri, S. (2017). Descriptive analysis and text analysis in systematic literature review: a review of master data management. 2017 International Conference on Research and Innovation in Information Systems (ICRIIS),
18. Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., ... & Pluye, P. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for information*, 34(4), 285-291.
19. Ibrahim, B. A., & Hussein, S. M. (2024). Relationship between resilience at work, work engagement and job satisfaction among engineers: a cross-sectional study. *BMC Public Health*, 24(1), 1077.
20. Insan, A. N., & R Masmarulan, M. R. (2020). Effects of leader-member exchange and organizational culture on work engagement and employee performance. *Management Science Letters*.
21. Kossyva, D., Theriou, G., Aggelidis, V., & Sarigiannidis, L. (2023). Outcomes of engagement: A systematic literature review and future research directions. *Heliyon*, 9(6).
22. Lee, K.-H., Choo, S.-W., & Hyun, S. S. (2016). Effects of recovery experiences on hotel employees' subjective well-being. *International Journal of Hospitality Management*, 52, 1-12.
23. Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of management*, 24(1), 43-72.
24. Liu, H. F., Song, Z. B., Xu, Y. B., Xu, X. A., & Li, J. (2023). Exploring Explanatory Mechanisms of Adjustment-Specific Resources Underlying the Relationship between Leader-Member Exchange and Work Engagement: A Lens of Conservation of Resources Theory. *Sustainability*, 15(2), Article 1561. <https://doi.org/10.3390/su15021561>
25. Mao, J., & Tian, K. (2022). Psychological safety mediates the relationship between leader-member exchange and employees' work engagement. *Social Behavior and Personality: an international journal*, 50(3), 31-39.
26. Martin, R., Guillaume, Y., Thomas, G., Lee, A., & Epitropaki, O. (2016). Leader-member exchange (LMX) and performance: A meta-analytic review. *Personnel Psychology*, 69(1), 67-121.
27. Monica, R. (2019). Factors influencing work engagement and its impact on task performance [Article]. *International Journal of Business Excellence*, 17(1), 97-129. <https://doi.org/10.1504/IJBEX.2019.096913>
28. Nirosha, R., & Mansingh, J. P. (2025). Mapping the sustainability of geographical indication products: a systematic literature review. *Discover Sustainability*, 6(1), 549.
29. O'Donnell, M., Ruth-Sahd, L. A., & Mayfield, C. O. (2019). An expanded holistic model of healthy workplace practices [Article]. *International Journal of Organizational Analysis*, 27(5), 1542-1561. <https://doi.org/10.1108/IJOA-02-2019-1647>
30. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., & Brennan, S. E. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *bmj*, 372.
31. Patience, M. G., De Braine, R., & Dhanpat, N. (2020). Job demands, job resources, and work engagement among South African nurses [Article]. *Journal of Psychology in Africa*, 30(5), 408-416. <https://doi.org/10.1080/14330237.2020.1821315>
32. Permatasari, W. Y., & Suhariadi, F. (2019). Leader-member exchange affects work engagement: The role of psychological well-being mediation [Article]. *Psikohumaniora*, 4(1), 95-114. <https://doi.org/10.21580/pjpp.v4i1.3360>
33. Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of management journal*, 53(3), 617-635.
34. Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative science quarterly*, 46(4), 655-684.
35. Santalla-Banderali, Z., & Alvarado, J. M. (2022). Incidence of Leader-Member Exchange Quality, Communication Satisfaction, and Employee Work Engagement on Self-Evaluated Work Performance [Article]. *International Journal of Environmental Research and Public Health*, 19(14), Article 8761. <https://doi.org/10.3390/ijerph19148761>
36. Scandura, T. A., & Graen, G. B. (1984). Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of applied psychology*, 69(3), 428.
37. Schaufeli, W. (2012). Work engagement: What do we know and where do we go? *Romanian journal of applied psychology*, 14(1), 3-10.

38. Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3, 71-92.
39. Simpson, M. R. (2009). Engagement at work: A review of the literature. *International journal of nursing studies*, 46(7), 1012-1024.
40. Song, Z., Chon, K., Ding, G., & Gu, C. (2015). Impact of organizational socialization tactics on newcomer job satisfaction and engagement: Core self-evaluations as moderators. *International Journal of Hospitality Management*, 46, 180-189.
41. Su, J., Wei, C., Zhao, J., & Kong, F. (2024). Gratitude at work and work engagement: The mediating role of basic psychological needs satisfaction. *Current Psychology*, 43(24), 1-9.
42. Sunaryo, S., Rahardian, R., Suyono, J., & Ekowati, D. (2024). Leader-member exchange and glass ceiling: the effects on career satisfaction and work engagement [Article]. *Cogent Business and Management*, 11(1), Article 2336285. <https://doi.org/10.1080/23311975.2024.2336285>
43. Tanskanen, J. (2025). Effort and reward as a mechanism linking leader-member exchange with work engagement [Article]. *Cogent Business and Management*, 12(1), Article 2443807. <https://doi.org/10.1080/23311975.2024.2443807>
44. Tedja, B., Al Musadieg, M., Kusumawati, A., & Yulianto, E. (2024). Systematic literature review using PRISMA: exploring the influence of service quality and perceived value on satisfaction and intention to continue relationship. *Future Business Journal*, 10(1), 39.
45. Tóth-Király, I., Gillet, N., Inhaber, J., Houle, S. A., Vandenberghe, C., & Morin, A. J. S. (2023). Job engagement trajectories: Their associations with leader-member exchange and their implications for employees. *Journal of Occupational and Organizational Psychology*, 96(3), 545-574. <https://doi.org/10.1111/joop.12433>
46. Wagner, B., & Koob, C. (2022). The relationship between leader-member exchange and work engagement in social work: A mediation analysis of job resources [Article]. *Heliyon*, 8(1), Article e08793. <https://doi.org/10.1016/j.heliyon.2022.e08793>
47. Zega, Y., & Palupiningtyas, D. (2025). A Study on the Determinants of Employee Engagement Among Generation Z in the Manufacturing Sector of Semarang Regency. *International Journal of Economics and Management Research*, 4(2), 127-140.
48. Zeng, W., Ma, S., Callan, V. J., & Wu, L. (2022). Exploring the doctor-patient relationship as a challenge job demand: application of the job demands–resources model in a Chinese public hospital [Article]. *Psychology, Health and Medicine*, 27(8), 1661-1671. <https://doi.org/10.1080/13548506.2021.1916952>

APPENDIX 1

(Table 3: Summary Of Articles)

No.	Authors (Year)	Variables	Tools used	Research Design	Context	Theories/models	Key findings
1.	Tanskane n (2025)	IV (LMX) Mediators (Effort and reward) Moderator (Reward) DV (WE)	LMX UVA scale UWES – 9 (vigor, dedication, and absorption)	Cross sectional quantitative survey design	Finnish service sector in Finland.	SET Theory LMX Theory Effort-Reward Imbalance Theory	LMX had positive direct and indirect effects on WE dimension, partially mediated by reward and effort; moderation by reward was not supported.
2.	Brennan et al. (2024)	IV (LMX) Mediators (Psychological safety and job crafting) Moderator (Optimism) DV (WE)	LMX-MDM UWES-9	Study 1 (3 wave time lagged quantitative survey) Study 2 (Cross sectional quantitative survey design)	Public sector in Ireland.	Conservation of Resources (COR) Theory	LMX positively influenced WE; partially mediated by psychological safety & job crafting. LMX positively related to WE; optimism strengthened the relationship (moderator).
3.	Liu et al. (2023)	IV (LMX) Mediators (Task mastery, fitting in, standing out, role negotiation, membership)	LMX-7 WE scale by Rothbard (2001)	Cross sectional quantitative survey design	4 – 5 stars hotels in China.	COR Theory	No direct effect of LMX on WE; full mediation via four relational resources except for task

		identification). DV (WE)					mastery and fitting in.
4.	Mao and Tian (2022)	IV (LMX) Mediator (psychological safety) DV (WE)	LMX-7 UWES-9	Cross sectional quantitative survey design	Manufacturing sector in China.	Psychological safety theory	LMX positively related to WE; psychological safety partially mediated the relationship.
5.	O'Donnell et al. (2019)	IV (LMX) Mediator (None) DV (WE)	LMX-MDM (Single factor) UWES-9	Cross sectional quantitative survey design	Multi-sector in United States.	Model foundation: Grawitch et al.'s (2006) Healthy Workplace Practices Model	LMX is significantly predicts work engagement
6.	Gim et al. (2022)	IV (LMX) Mediator (HRM Performance Attributions) DV (WE)	LMX MDM UWES-9 (Unidimensional scale)	Cross sectional quantitative survey design	Manufacturing companies in Malaysia.	Attribution Theory Conversation of Resources Theory	The relationship between LMX and WE is significant; there is significant and positive indirect effect between LMX and WE through HRM performance attributions as mediator)
7.	Akgunduz et al. (2023)	IV (LMX) Mediator (Employee Advocacy) DV (WE)	LMX scale by Scandura and Graen (1984) Employee job dedication scale by Lee et al. (2016)	Cross sectional quantitative survey design	Hotels in Turkey.	LMX Theory Social Exchange Theory (SET)	LMX is significantly related to job dedication; employee advocacy partially mediated the direct effect of LMX on

							job dedication.
8.	Altinay et al. (2019)	IV (LMX) Mediators (role overload and job security) DV (WE)	LMX scale by Scandura and Graen (1984) UWES 9 by Schaufeli et al. (2006)	Cross sectional quantitative survey design	5-star hotels in China.	Affective Events Theory (AET)	The direct relationship between LMX and WE is significant; both mediators (role overload and job security) are significant partial mediators.
9.	Patience et al. (2020)	IV (LMX) Mediator (None) DV (WE)	LMX-7 scale by Graen and Uhl-Bien (1995) UWES-9 by Schaufeli et al. (2006)	Cross sectional quantitative survey design	Private and Public hospitals in Africa.	Job Demands-Resources (JD-R) Model by Bakker and Demerouti.	LMX was positively related to WE with a medium effect size in private sector.
10	Monica . (2019)	IV (LMX) Mediator (None) DV (WE)	LMX-7 scale by Graen and Uhl-Bien (1995) UWES-9 by Schaufeli et al. (2006)	Cross sectional quantitative survey design	IT analysts in India.	Conservation of Resources Theory (COR Theory)	LMX is the strongest positive influence on WE.
11.	Permatasari and Suhariadi (2019)	IV (LMX) Mediator (Psychological Well-Being) DV (WE)	LMX-MDM by Liden and Maslyn (1998) UWES-17 by Schaufeli et al. (2003)	Cross sectional quantitative survey design	Government civil in Indonesia.	Job Demands-Resources (JD-R) Model by Bakker and Demerouti.	LMX is significantly influence WE; Psychological Well-Being partially mediated the relationship of LMX on WE.
12	Sunaryo et al. (2024)	IV (LMX)	LMX-7 scale by Graen and Uhl-Bien (1995)	Cross sectional quantitative	Multi-sectors in Indonesia.	Social Role Theory	LMX was positively and significantly related to

		Mediator (Glass Ceiling) DV (WE)	WE scale by Balducci et al. (2010)	survey design		Role Congruity Theory Social Exchange Theory (SET) LMX Theory	WE; Perceived glass ceiling fully mediates the effect of LMX on WE.
13	Aggarwal et al. (2020)	IV (LMX) Mediator (Psychological Empowerment) DV (WE)	LMX-7 scale by Graen and Uhl-Bien (1995) UWES-17 by Schaufeli et al. (2003)	Cross sectional quantitative survey design	IT technology and Pharmaceutical sectors in India.	LMX Theory	LMX has a significant and positive relationship with WE; psychological empowerment partially mediates the relationship between LMX and WE.
14	Wagner and Koob (2022)	IV (LMX) Mediator (team atmosphere and work control) DV (WE)	LMX-7 scale by Graen and Uhl-Bien (1995) UWES-9 by Schaufeli et al. (2006)	Mixed method (Qualitative preparatory study and Quantitative survey)	Social work in Germany.	LMX Theory	LMX was not significantly related to WE; significant indirect effect of LMX on WE through team atmosphere but no significant indirect effect via work control.
15	Tóth-Király et al. (2023)	IV (LMX) Mediator (None) DV (WE)	LMX-MDM by Liden and Maslyn (1998) – with 4 dimensions Job Engagement Scale by Rich et al. (2010).	Longitudinal study with 3 waves of data collection. Data collection method: Online	Multi-sectors in Canada.	Conservation of Resources Theory (COR)	The results indicates that both global and specific LMX have a significant impact on work engagement.

				questionnaires			
16	Santalla-Banderali and Alvarado (2022)	IV (LMX quality) Mediator (Communication satisfaction) DV (WE)	LMX-MDM by Liden and Maslyn (1998) UWES-9 by Schaufeli et al. (2006)	Cross sectional quantitative survey design	Private and Public multi-sectors in America.	Theory of Demands and Labor Resources Healthy and Resilient Organizations (HERO) Model LMX Theory	Employees' work engagement was significantly predicted by LMX quality; communication satisfaction partially mediated the relationship of LMX-WE.
17	Zeng et al. (2022)	IV (LMX) Mediator (Doctor-Patient relationship – DPR) DV (WE)	LMX scale by Graen and Uhl-Bien (1995) UWES-9 by Schaufeli et al. (2006).	A two-wave, time-lagged longitudinal survey design.	Public hospital in China.	Job Demands-Resources (JD-R) model Conservation of Resources Theory (COR)	LMX has a significant and positive correlation with doctor's WE; DPR was partially mediated in the relationship of LMX-WE.