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Research Article

**Extra-Role Behavior in Organizations: A Thematic Synthesis of the Most Cited
Studies**

Ayşegül Yalçın Özyurt ^a & Gülşah Karavardar^b

Abstract

Introduction: Although extra-role behavior is widely recognized as a decisive factor in organizational efficiency, current literature remains highly fragmented across disciplines. This fragmentation hinders a cohesive understanding of its antecedents and consequences. To address this gap, this study systematically examines the core themes, relational structures, and accompanying variables present in the foundational literature on extra-role behavior.

Method: Following PRISMA guidelines, a qualitative systematic review and thematic synthesis were conducted on the fifty-two most highly cited publications indexed in the Web of Science (WoS) Core Collection. Data collection was carried out between April-May 2026.

Results or Findings: Findings reveal that the antecedents and consequences of extra-role behavior cluster into four primary dimensions as leadership dynamics, individual psychological drivers, organizational climate and job design, and negative dynamics. While extra-role behavior flourishes under positive leadership paradigms, job autonomy, and intrinsic psychological states, the findings also reveals a critical dark side. Specifically, excessive formalization and perceived compulsory citizenship suppress voluntary behavioral tendencies and increase employee burnout.

Discussion or Conclusion: This research helps to better understand the concept of the extra role by bringing together fragmented findings in the literature. In doing so, it provides decision-makers with actionable strategic insights to encourage voluntary employee behavior.

Keywords: extra-role behavior, organizational citizenship, leadership dynamics, systematic review, web of science

JEL Codes: M1, M21, M120

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Araştırma Makalesi

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Öz

Giriş: Ekstra rol davranışı örgütsel verimlilik üzerinde belirleyici bir faktör olarak kabul edilmesine rağmen, mevcut alanyazın farklı disiplinler arasında oldukça parçalı bir yapıdadır. Bu durum, ekstra rol davranışının öncülleri ve ardıllarının bütüncül bir şekilde anlaşılmasını engellemektedir. Bu boşluğu gidermek amacıyla bu çalışma, ekstra rol davranışına ilişkin temel literatürde öne çıkan ana temaları, ilişkisel yapıları ve birlikte ele alınan değişkenleri sistematik olarak incelemektedir.

Yöntem: Çalışmada PRISMA yönergeleri izlenerek, Web of Science (WoS) Core Collection'da dizinlenen ve en çok atıf alan 52 yayın üzerinde nitel bir sistematik derleme ve tematik sentez gerçekleştirilmiştir. Veriler Nisan-Mayıs 2026 tarih aralığında toplanmıştır.

Sonuçlar ya da Bulgular: Bulgular ekstra rol davranışının öncüllerinin ve ardıllarının; liderlik dinamikleri, bireysel psikolojik itici güçler, örgüt iklimi ve iş tasarımı ile negatif dinamikler olmak üzere dört temel boyutta kümelendiğini ortaya koymaktadır. Ekstra rol davranışı pozitif liderlik paradigmaları, iş özerkliği ve içsel psikolojik güdüler altında gelişirken, bulgular aynı zamanda kritik bir "karanlık yüz" de ortaya koymaktadır. Buna göre özellikle aşırı formelleşme ve zorunlu vatandaşlık algısı gönüllü davranış eğilimlerini baskılamakta ve işgören tükenmişliğini artırmaktadır.

Tartışma ya da Yapılan Çıkarımlar: Bu araştırma, alanyazındaki parçalı bulguları bir araya getirerek ekstra rol kavramının daha iyi anlaşılmasına yardımcı olmaktadır. Böylece karar alıcılara, çalışanların gönüllü davranışlarını teşvik etmeleri için eyleme dönüştürülebilir stratejik bilgiler sağlamaktadır.

Anahtar Kelimeler: ekstra rol davranışı, örgütsel vatandaşlık, liderlik dinamikleri, sistematik inceleme, web of science

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Introduction

The modern organizational environment is characterized by constant change, rapid technological advancements, and intense global competition (Adobor, 2025). These ongoing dynamic environmental conditions compel organizations to be proactive, adaptive and flexible. In the modern era, organizations differ from the mass-production-oriented businesses of the past century, particularly in how they utilize their human capital (Wright, 2021). In this respect, the traditional hierarchical, static, and highly structured approach to managing employees is insufficient in today's rapidly changing business environment. Accordingly, human capital stands out as a critical driver for sustainable competitive advantage. Consequently, for organizations seeking to optimize efficacy, the study of employee behaviors in their workplace has become an important focus for both researchers and practitioners (Guo & Chen, 2022).

When analyzing employee conduct, organizational literature traditionally distinguishes between two primary categories: in-role behaviors, which encompass the formally mandated job requirements necessary to maintain baseline operations, and extra-role behaviors, which transcend official job descriptions to drive continuous improvement (Sulea et al., 2012). Extra-role behavior is defined as the voluntary undertaking of tasks that are not stipulated in formal employment contracts or compensation structures, yet are inherently expected to enhance organizational effectiveness. Today, as rapidly changing business environments demand greater flexibility from workforces, these contributions are increasingly regarded as a vital metric for evaluating holistic individual performance (Kundi et al., 2023). Because extra-role behavior is fundamentally rooted in voluntary, prosocial action, such as assisting overburdened colleagues, taking unprompted initiative, or defending the organization's reputation—it is neither formally expected of employees nor can it be reliably compelled through explicit organizational directives or traditional reward systems (Panaccio et al., 2015).

As organizations increasingly acknowledge extra-role behavior as a key determinant of organizational effectiveness and productivity, and employee performance, scholarly interest in this field has grown substantially (Demerouti et al., 2015; Yu et al., 2021; Liao, 2022; Liu et al., 2023; Kruesi et al., 2026). A plethora body of empirical research has investigated this construct from the perspectives of the organization, employees, and customers (Xia et al., 2025; Castro-Casal et al., 2025). Nevertheless, despite the expanding volume of research, the literature remains fragmented since it has been researched by different disciplines including management (Kruesi et al., 2026), psychology (Lv et al., 2026), marketing (Guttena et al., 2024), education (Shams, 2026), and public sector (Hansen, 2025). This fragmentation has limited the development of a comprehensive understanding of the field, making it difficult to trace its intellectual evolution, identify persistent research gaps, and determine future research priorities (Lim, 2022). While there are some systematic review studies (Sleman et al., 2026; Schepers & Van der Borgh, 2020; Srivastava & Shree, 2019) aimed at compiling and summarizing research findings in this field, it appears that these studies are limited to a specific research area in the field. In this respect, a holistic examination of this field is an important approach to better understanding the concept.

In response to this limitation, the present study seeks to systematically review and synthesize the most influential contributions to the extra-role behavior literature regardless of the discipline. Specifically, the study focuses on highly cited publications indexed in the Web of Science (WoS) database. From a methodological perspective, the examination of highly cited studies enables the identification and classification of the most influential scholarly contributions within a broad and complex body of literature (Rodríguez-Navarro & Brito, 2024). Although extra-role behavior has attracted substantial academic attention, no

comprehensive study has yet adopted this particular perspective to systematically map the intellectual structure of the field. By employing a rigorous systematic review approach, this study aims to consolidate fragmented findings, reveal the thematic development of literature, and provide an overview of the field's intellectual landscape. Ultimately, the research intends to offer scholars and practitioners a more structured, comprehensive, and objective understanding of the existing knowledge base, thereby contributing to the establishment of a stronger theoretical foundation for future studies and strategic insights for decision makers.

Literature Review

Behavior encompasses how individuals perceive, interpret, and respond to internal and external stimuli (Bandhu et al., 2024). Understanding human behavior, which is fundamentally a subject of psychology, is a key agenda item, especially for labor-intensive sectors that rely on human interaction. Employee behavior plays a decisive role in success and productivity in service sector. Furthermore, employee behavior in organizations directly impacts organizational culture, employee relations, and customer satisfaction. Therefore, understanding employee behavior, particularly in the workplace, has become a crucial research topic in social sciences (Wulani et al., 2022; Schnieder et al., 2022; Sidorenkov et al., 2023)

In the rapidly transforming and complex business environments of the modern era, adhering to formal job descriptions is rarely sufficient to achieve organizational success. In this respect, labor-intensive organizations, in particular, place greater emphasis on the voluntary extra-task efforts of their employees to maintain agility, encourage innovation, and sustain a competitive advantage (Haydaroglu, 2025). Since these voluntary extra contributions are crucial for overall operational efficiency, different disciplines are extensively researching this phenomenon (Kalmaz & Tozkoparan, 2020; Kottwitz et al., 2024; Kruesi et al., 2026). Consequently, various terminologies such as organizational citizenship behavior (OCB), prosocial behavior, contextual performance, organizational spontaneity, and extra-role behavior are used to describe these proactive efforts. However, the literature contains different research findings regarding the underlying motivation for this behavior. For example, researchers such as Guo et al. (2026) suggest that extra-role behaviors are driven by altruism, obedience, and commitment. Liu et al. (2026) on the other hand, reveal that extra-role behavior develops through cognitive and affective pathways, and that this process is shaped according to the level of relational dependency of individuals. Conversely, scholars such as Wulani et al. (2022) argue that employees engage in such actions primarily for personal gain or impression management. Fröhlich et al., (2025) on the other hand, emphasize that workplace happiness is a determining factor in extra-role behaviors, especially among newly hired employees. Therefore the emergence of these non-mandatory workplace behaviors is frequently linked to employees' positive emotional states, which are influenced by favorable perceptions of their work environment. Therefore, apart from intrinsic motives such as altruistic tendencies and impression management (Hoxha & Ramadani, 2024), the development of extra-role behavior is also influenced by organizational context, including organizational culture, group interactions, and employee brand perception (Costa et al., 2022; El Baroudi et al., 2023).

Ultimately, the cultivation of extra-role behaviors offers significant benefits for both the employee and the organization. The advantages it creates for employees include increasing their informal knowledge, enriching their social capital, and accelerating career advancement (Kane et al., 2012; Liao, 2022). Moreover, engaging in extra-role behavior boosts employees' creative abilities, contributing to better overall performance (Demerouti et al., 2015). Research also shows that when employees believe their discretionary actions lead to improved performance, this perception fosters positive emotional states that result in better organizational outcomes

(Balkin & Werner, 2023). On a macro level, these behaviors are vital for enhancing employee performance and reducing turnover intentions (Caillier, 2016a), which ultimately drives organizational effectiveness, boosts operational efficiency, and supports long-term sustainability. Hence, by prioritizing these practices, organizations can position themselves for success and resilience in a constantly evolving environment and for competitive advantage.

Although extra-role behaviors are widely associated with positive organizational outcomes, recent studies have increasingly emphasized their potential adverse consequences. Employees who continuously undertake responsibilities beyond their formally defined roles may be more vulnerable to role overload, heightened stress, and work–family conflict (Bolino et al., 2013). Sustained expectations to demonstrate such discretionary behaviors may also result in “citizenship fatigue,” which can negatively affect employee well-being as well as subsequent in-role performance (Bolino & Grant, 2016). Consequently, identifying and managing the balance between the beneficial and detrimental dimensions of extra-role behavior has emerged as a significant concern in contemporary management research.

Systematic reviews and meta-analyses on extra-role performance in specific fields reveal clear findings. A systematic review of public service studies in Indonesia (Miarni & Ibrahim, 2025) shows that intrinsic motivation is a fundamental antecedent of extra-role behavior in public service, and that contextual factors such as leadership and reward systems also have a significant impact on this concept. Another systematic review study (Sleman et al., 2026) examining nurses' extra-role behaviors reveals that leadership style is a key determinant of extra-role behavior. Compiling findings from 18 studies across four different databases, including WoS and Scopus, between 2014 and 2024, this research shows that transformational leadership has a positive impact on nurses' job satisfaction, motivation, and organizational commitment levels. In this respect, patient satisfaction, organizational efficiency, and corporate image perception are shaped by the leadership skills of managers. Another meta-analysis study (Schepers & Van der Borgh, 2020). examined the extra-role behaviors of employees who have direct contact with customers, such as customer representatives or sales consultants, within the context of culture. This research, which included 105 studies conducted in 35 different countries, revealed that customer expectations were the strongest determinant of extra-role behavior. However, the study also indicated that culture was a significant determinant in these employees' role development processes.

The novelty of this systematic review is that, unlike the studies mentioned above, it does not limit extra-role behavior to a specific sample or discipline but rather compiles the most frequently cited studies in the literature. Thus, it classifies common findings regarding the extra-role behavior concept that emerge in these most referenced studies in the literature. Therefore, by refining the findings of the most prestigious studies, this review contributes to a better overall understanding of the extra-role behavior concept.

Data and Methodology

This study, designed according to qualitative research methods, employed the systematic review technique as its data collection method. Systematic review involves examining and refining the existing literature according to various criteria in order to better understand a field (Harris et al., 2014). This method is considered highly reliable since it is based on verifiable findings. This method also allows for the simplification and clarity of a field by summarizing the findings of numerous studies conducted in a specific field. Thus, by revealing contradictory results in this field and identifying research gaps, it also guides researchers for future studies (Verdecchia et al., 2023). This study, which will employ a

systematic review process, primarily focuses on two research questions: 1) What are the main themes and variables researched alongside extra-role behavior in the most influential studies? and, 2) What are the key findings regarding the antecedents, mediators, and consequences of extra-role behavior? To answer these questions, the research specifically focuses on the most cited studies indexed in the Web of Science (WoS) database. The WoS database is described as a leading database that indexes the most reputable scientific journals, focusing on quality and transparency in scientific processes (Zhu & Liu, 2020). In this respect, the WoS database is a fundamental database where leading scientific developments are recorded and monitored. This database also serves as a key criterion for researchers' career development, considered in terms of academic advancement, awards, and prestige (Birkle et al., 2020). In this respect, examining the most cited studies in the WoS database is important for compiling high-quality research findings in any research field.

In line with the study's objective, inclusion and exclusion criteria were determined prior to the screening process. Based on the research questions, the inclusion and exclusion criteria were determined as follows. Inclusion: a) Extra-role behavior is examined as a separate, either dependent or independent variable, b) Findings regarding the antecedents of the extra-role behavior are included. c) Findings regarding the consequences of the extra-role behavior are included, d) Findings regarding the mediating nature of the extra-role behavior are included, f) Publications written exclusively in English language, f) All document types such as peer-reviewed journal articles, conference proceedings, and book chapters are included, g) Entire publication year available in the database is included and lastly, h) indexed in the WoS Core Collection. Exclusion criteria were defined as follows: a) Extra-role behavior was not examined as one of the main variables of the study, b) Extra-role behavior was not one of the sub-variables of the study, c) no findings related to extra-role behavior were included in the findings, d) no findings related to antecedents or successors of extra-role behavior were included in the findings, and lastly e) Non-English publications.

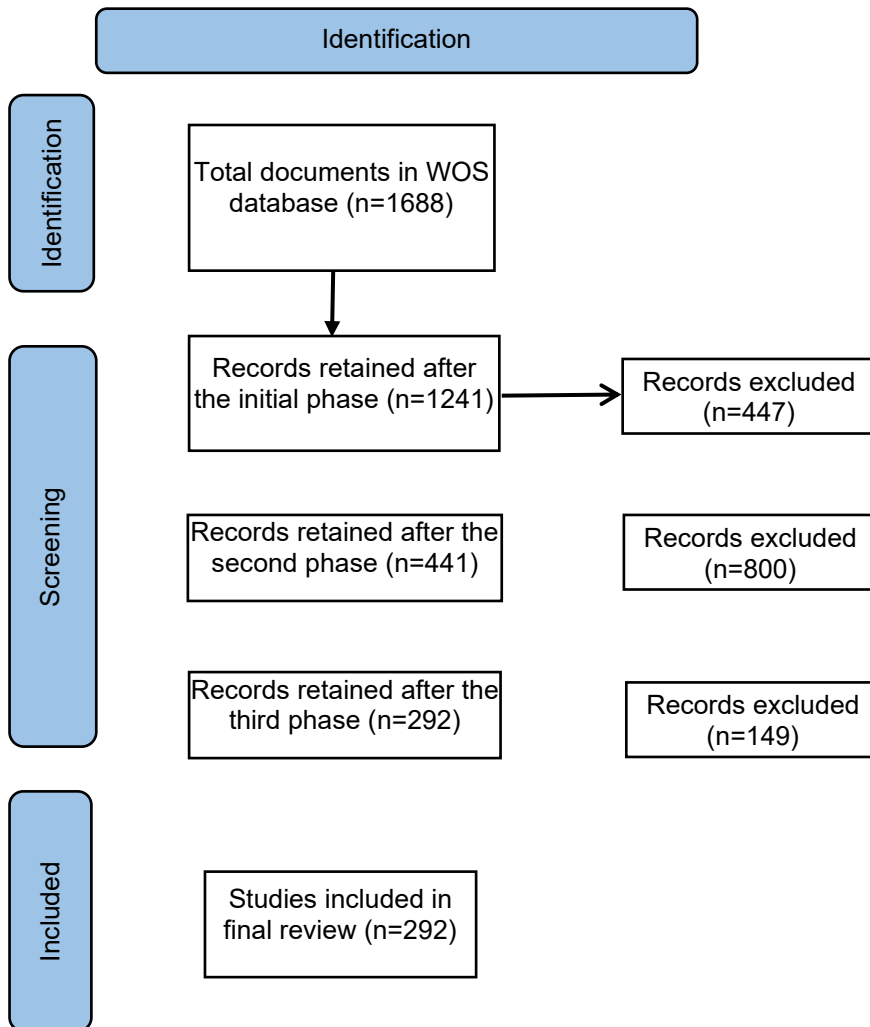
The data scanning and selection process was carried out based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. PRISMA provides verifiable characteristics such as reliability, transparency, and reproducibility in systematic review studies. It also allows the research to remain within a predetermined framework, thus facilitating the research process for researchers. (Sarkis-Onofre et al., 2021). PRISMA flow diagram showing the study's screening process is presented in Figure 1 below.

The data collection process was carried out between April and May 2026 by the authors together. The search of the WoS database was performed using the advanced search feature and by typing keywords related to extra-role behavior obtained from the existing literature, including “extra role behavior”, OR “extra-role behavior”, OR “extra role behaviour”, OR “extra-role behaviour”, OR “extra role”, OR “extra-role”.

In the identification phase, the following criteria were initially selected: publication language (English), publication type (any type), and publication year (any year available in the database). Then, the relevant keywords mentioned above were written in the “Topic” field, resulting in a total of 1688 records.

Figure 1

PRISMA Flow Diagram of the Study Selection Process



Note. This figure was created by the authors using MS Word

During the screening phase, the obtained records were systematically evaluated according to pre-defined inclusion and exclusion criteria. In this phase, titles, abstracts, and keywords were examined to identify studies that did not explicitly address the concept of extra-role behavior. Accordingly, many of these studies did not directly examine the concept but were indexed in the topic section. A second search, limited to the “Abstract” section, yielded 1241 results. These results were also evaluated within the scope of the study's objective, and since some studies were found to be irrelevant to the research aim, a third search was conducted. In this stage, a search limited to the “Keywords” group yielded a total of 441 results. Upon reviewing these studies, it was found that extra-role behavior was not the main theme in some research, which therefore did not meet the inclusion criteria of the study. In this regard, a fourth scan was conducted, limited to the “Title” section. As a result, 292 records were obtained.

In the eligibility phase, the 292 studies obtained were evaluated for their suitability to the research aim through a full-text review. Thus, this detailed review confirmed that all final records were suitable for the research topic. To ensure that extra-role behavior was the primary

focus of investigation, this rigorous process was intentionally selected in accordance with the aim of the research.

In the included phase, citation counts were applied, and initially the documents were ranked by their total citation counts on WoS Core Collection. Although there were a total of 292 research, only 52 of them had 50 or more citations. Therefore, for the final qualitative synthesis only these 52 highly cited articles were included, considering the researcher's time constraints and the complications that might have occurred if all 292 records had been analyzed. An overview of the articles included in the research is presented in Appendix 1.

To improve the comprehensibility of the research findings and to better reflect the relationships between variables, the Flourish program was used. Flourish visualizes the findings, revealing thematic relationships more clearly. Thus, it assists researchers in the process of visually reporting the findings. These visual representations also allow for the simplified presentation of complex relationships and a better understanding of the network of relationships between variables, helping both the researchers and the readers. This program, which does not include analysis features, was used solely for the purpose of visualizing the research findings.

Findings

The analysis included fifty-two highly cited articles focusing on extra-role behavior, each receiving at least fifty citations, with publication dates spanning from 1993 to 2023. According to the Web of Science database, the two most cited articles were foundational works focused on scale development: Van Dyne and Le Pine (1998) with 2,217 citations, and Van Dyne et al. (1995) with 885 citations. Excluding these methodological studies, the most highly cited empirical paper was MacKenzie et al. (1998), which accrued 465 citations for its investigation into the effects of job satisfaction, organizational commitment, role perceptions and turnover intention on extra-role behavior. Underscoring a growing contemporary interest in this research domain, the majority of the selected papers ($n = 33$) were published in 2010 or later. Appendix 1 summarizes these top-cited articles, detailing their total citation counts and annual citation rates.

The second stage of the study focused on analyzing the variables and key findings reported across the fifty-two highly cited articles on extra-role behavior. A thematic synthesis approach was used to systematically analyze the fifty-two highly cited articles. The primary coding unit was defined as the different findings, conceptual models, and theoretical discussions presented in the result and conclusion sections of each research. The analysis followed an inductive coding approach, that is, codes were generated directly from the data. This allowed for a data-driven examination of the articles. The synthesis was carried out in three main stages. Firstly, line-by-line coding was used to create initial codes that captured key concepts related to extra-role behavior in the examined studies. Secondly, descriptive themes were developed by grouping the initial codes according to their similarities and differences. Lastly, the descriptive themes were synthesized and interpreted to create analytical themes, answering the research questions and mapping variable relationships. To ensure the reliability and rigor of the analysis, two researchers conducted the coding process independently. After completing the initial coding, they assessed inter-coder agreement through a series of discussions. Any discrepancies in their coding decisions were resolved through mutual agreement, resulting in a unified analytical framework.

During the synthesis, extra-role behavior and other variables examined alongside it were systematically extracted and classified according to their structural placement in the research

models. Additionally, the result sections were cross-checked to verify these findings. Therefore, this process allowed the researchers to categorize the variables accurately as independent, dependent, or moderate.

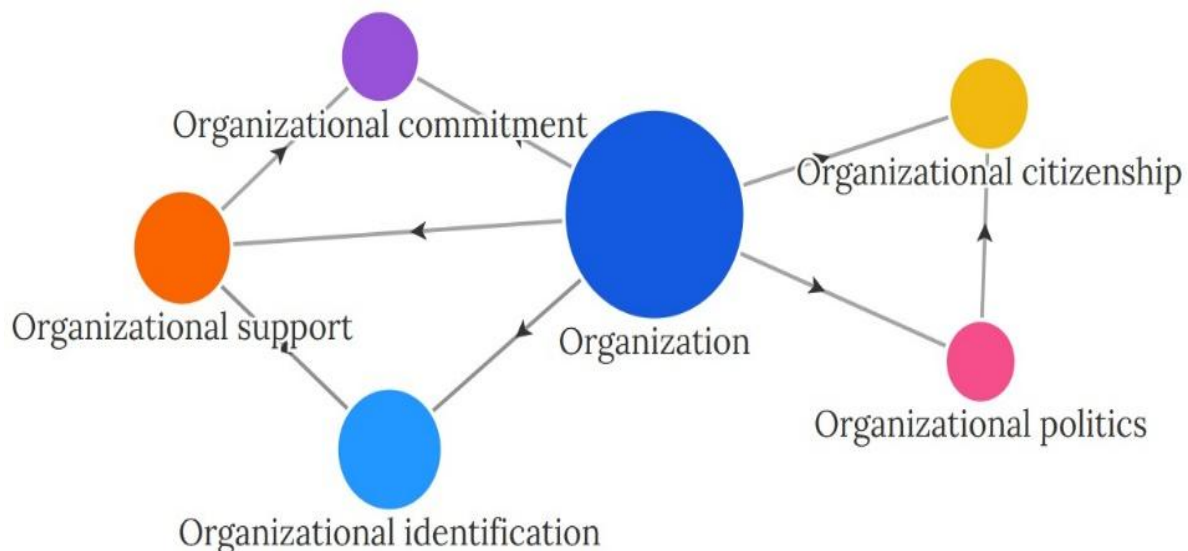
Thematic Analysis of Research Variables

The variables investigated across the selected articles were categorized based on their conceptual similarities. This classification revealed that the examined variables group into six primary themes: leadership, organizational factors, human resources management, customer-related variables, job attributes, and negative attitudes.

According to the findings, studies examining extra-role behavior from an organizational perspective predominantly focused on variables such as organizational identification, commitment, politics, support, and citizenship. Organization-wide findings are visualized in figure 2.

Figure 2

Variables Examined in Organization-Focused Studies

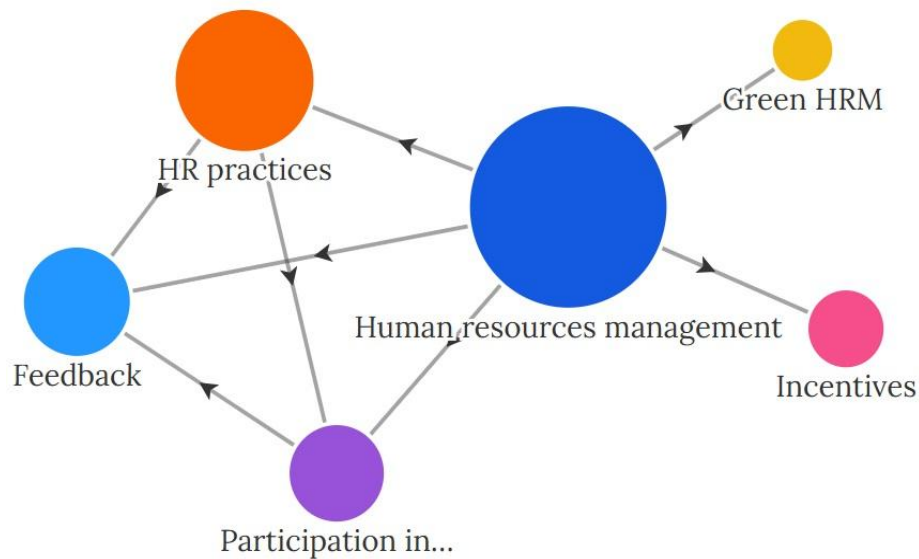


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The findings indicate that research addressing the human resources management dimension of extra-role behavior primarily concentrated on variables including positive and negative feedback, participation in decision-making, incentives, HR practices, and green HRM. Human resources management-focused findings are shown in figure 3.

Figure 3

Variables Examined in Human Resources-Focused Studies

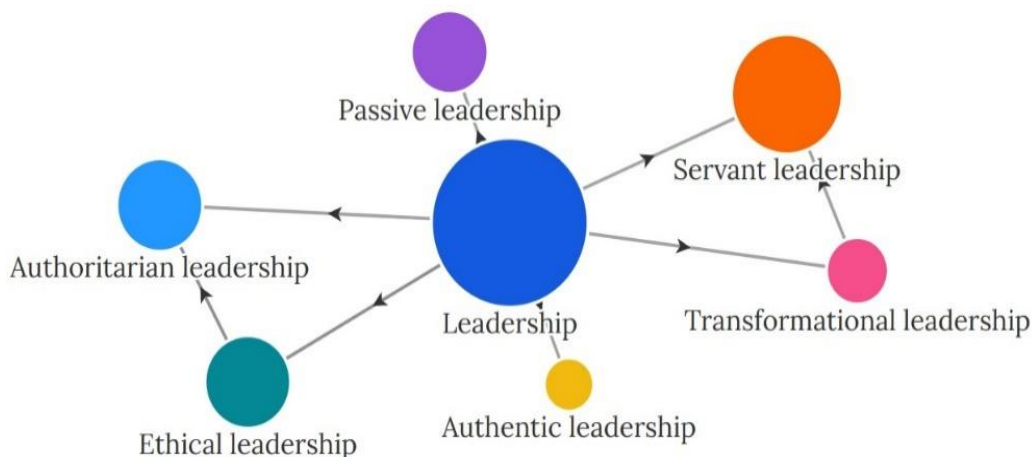


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Within the leadership category, the findings indicate that studies frequently examined the influence of diverse leadership styles on extra-role behavior, specifically highlighting authoritarian, passive, transformational, servant, authentic, and ethical leadership. Figure 4 represents leadership-focused findings.

Figure 4

Variables Examined in Leadership-Focused Studies

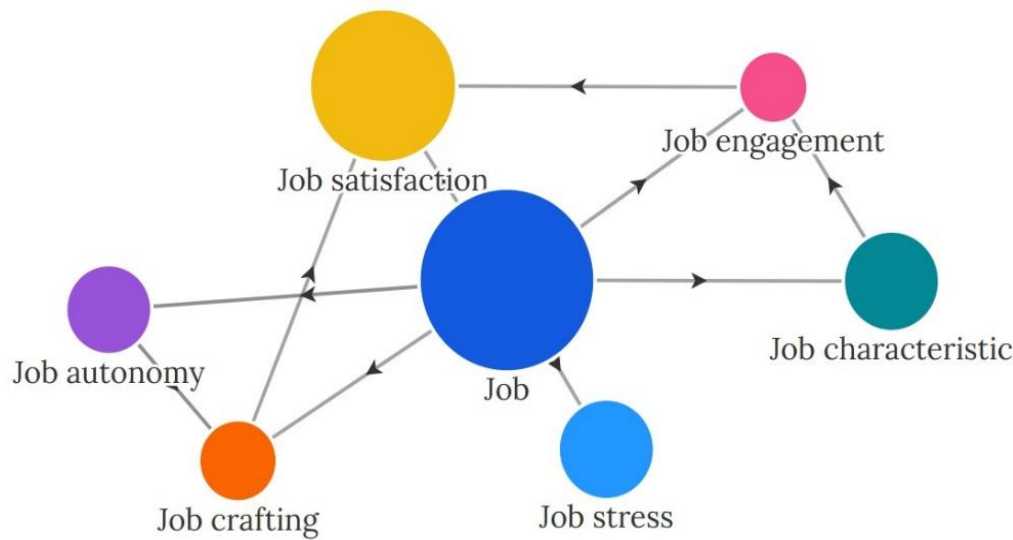


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Studies associating extra-role behavior with job attributes focused on variables such as job satisfaction, job crafting, job stress, job autonomy, job characteristics, and job engagement. Notably, among these variables, the concept of job satisfaction was examined in five different studies. Job-related findings are illustrated in figure 5.

Figure 5

Variables Examined in Job Attributes-Focused Studies

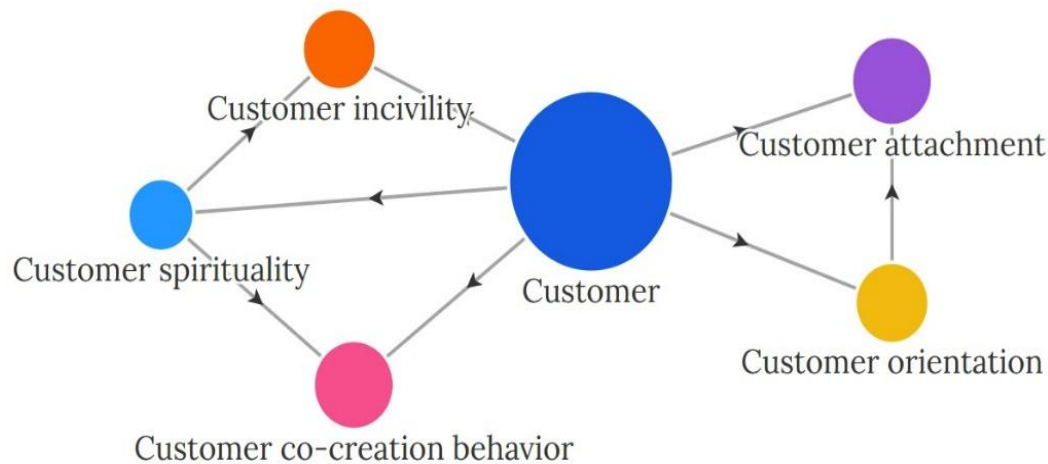


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Studies examining extra-role behavior from a customer perspective primarily focused on the following variables: customer spirituality, customer attachment, customer co-creation behavior, customer incivility, and customer orientation. Customer-related findings are shown in Figure 6.

Figure 6

Variables Investigated from the Customer Perspective

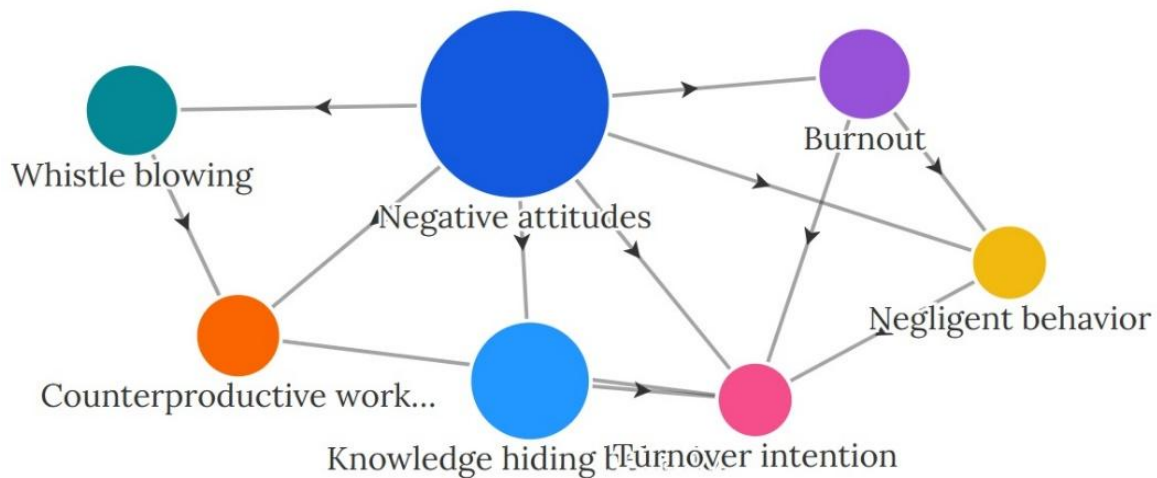


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Research exploring the negative dimensions associated with extra-role behavior predominantly concentrated on variables such as turnover intentions, burnout, knowledge hiding behavior, whistleblowing, counterproductive work behavior, and negligent behavior. Figure 7 depicts the negative attributes.

Figure 7

Variables Examined in Relation to Negative Attitudes



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Thematic Analysis of the Research Findings

The empirical findings from the most cited articles on extra-role behavior can be grouped into four core dimensions: leadership dynamics, individual psychological drivers and attitudes, organizational climate and job design, and negative dynamics. This classification helps in understanding the complex web of antecedents, mediators, and outcomes associated with these voluntary actions.

Leadership Dynamics

This cluster focuses on how top-down management styles trigger or inhibit extra-role behaviors. A significant cluster of findings highlights the vital role of leadership styles in extra-role behavior.

Positive leadership approaches: Transformational, servant, authentic, empowering, and ethical leadership styles all exhibit positive relationships with ERB (Islam et al., 2021). These relationships are often indirect, mediated by mechanisms such as mission valence (transformational), work engagement (servant), and psychological capital (authentic leadership, moderated by autonomy) (Raub & Robert, 2010). Empowering leadership specifically drives challenging extra-role behaviors, while ethical leadership stimulates extra-role green behaviors.

Destructive leadership approaches: Conversely, authoritarian leadership indirectly decreases extra-role behavior (ERB) by increasing subordinate role conflict and role overload. Interestingly, while authoritarian behavior increases role ambiguity, this specific ambiguity was not found to be directly associated with OCB (Zhang & Xie, 2017).

Individual Psychological Drivers & Attitudes

This category group factors are internal to the employee, their feelings, personality traits, and cognitive evaluations of their job. Findings strongly support the premise that positive psychological states, personality traits, and internal motivations act as primary antecedents to ERB.

Attitudes & satisfaction: Job satisfaction, a sense of efficacy, organizational identification, and commitment are consistently and positively associated with ERB (Van Dick et al., 2008; Bowling, 2010). Furthermore, emotional reactions, stemming from feedback—mediate the relationship between the feedback received and subsequent citizenship behaviors (Belschak & Den Hartog, 2009).

Personality & capability: Conscientiousness is a key personality antecedent (Sulea et al., 2012). Furthermore, a sense of efficacy and psychological capital (PsyCap) empower employees to go beyond their formal roles (Malik & Dhar, 2017).

Motivational orientations: General motivational orientations (such as communion and status striving) drive ERB. In public service contexts, Public Service Motivation (PSM) and goal clarity are positive antecedents (Caillier, 2016b), with person-job fit acting as a stronger mediator than person-organization fit for PSM's impact on these behaviors (Van Loon et al., 2017).

Organizational Climate and Job Design

The structural and cultural environment created by the organization significantly dictates the frequency of ERBs. Shared ethical atmosphere of a workplace is a strong predictor of ERB behavior.

Work design and autonomy: Job characteristics positively influence ERB, both directly and indirectly through work engagement (Sulea et al., 2012). Autonomy demonstrates a significant effect on ERB, which is fully mediated by employee commitment (Knies & Leisink, 2014).

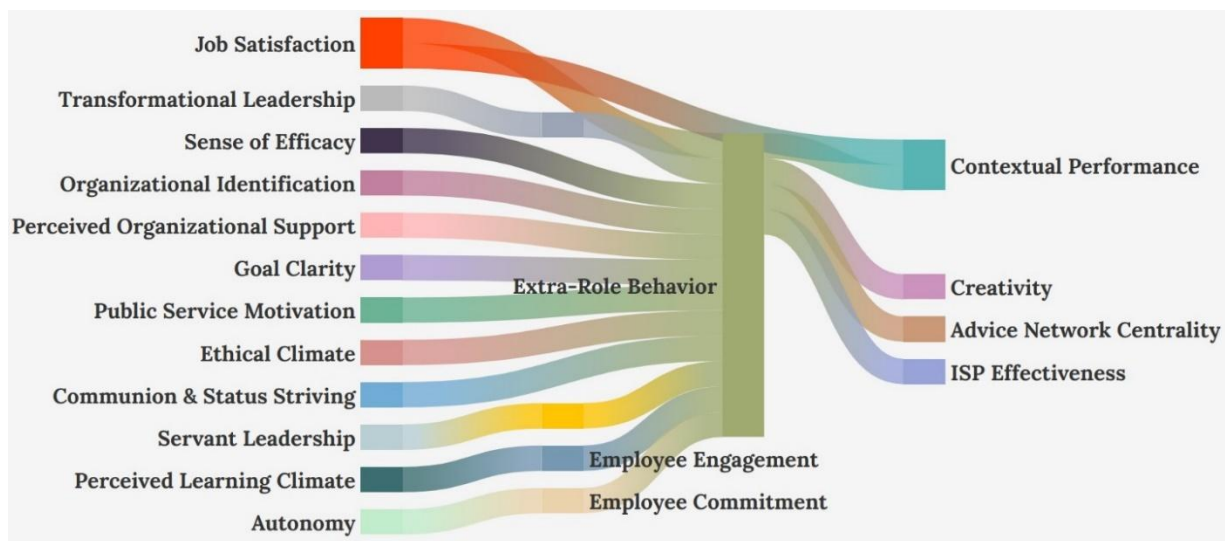
Climate and support: A perceived learning climate boosts ERB via employee engagement (Eldor & Harpaz, 2016), while perceived organizational support has a direct positive impact (Alnaimi & Rjoub, 2021). Similarly, higher levels of an ethical climate (caring and law-and-code, indicating a strong relational contract) foster positive ERB, whereas lower levels (instrumentality and independence) correlate with negative outcomes (Leung, 2008).

Goal setting: The relationship between goals and ERB is highly nuanced. While general goal clarity is positively associated with ERB (Caillier, 2016b), assigning difficult goals coupled with pay-for-attainment actually results in the lowest levels of ERB.

The positive antecedents and outcomes associated with extra-role behavior are outlined in Figure 8.

Figure 8

Positive Antecedents and Outcomes of Extra-Role Behavior



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Negative Dynamics

Several findings illuminate the detrimental elements that stifle voluntary behaviors or transform them into negative outcomes.

Knowledge hiding behavior: When employees actively hide knowledge from colleagues, it negatively impacts extra-role behavior. This hiding often stems from a sense of psychological entitlement (Alnaimi & Rjoub, 2021).

Compulsory citizenship behavior: When extra-role behavior loses its voluntary nature and becomes "compulsory," it leads to distinctly negative outcomes. Compulsory Citizenship Behavior is negatively related to actual organizational citizenship behavior, employee innovation, job satisfaction, and formal in-role performance (Vigoda-Gadot, 2007).

Strict goal attainment and role formalization: Assigning difficult goals and paying employees purely based on goal attainment results in the lowest levels of extra-role behavior. For highly committed individuals, strict goals can actually be negatively related to extra-role efforts (Wright et al., 1993). Highly formalized roles and strict procedural boundaries reduce the likelihood of extra-role behavior.

Customer incivility: Hostile or rude behavior from customers creates a highly stressful environment for front-line employees. This incivility negatively affects extra-role behaviors indirectly by causing emotional exhaustion and burnout (Bani-Melhem, 2020).

Negative antecedents of extra-role behavior are presented in Figure 9.

Figure 9

Inhibitors of Extra-Role Behavior



Note. This figure was created via Flourish where Arial font customization is not supported

Discussion

The aim of this systematic review was to map the intellectual structure of extra-role behavior by identifying and synthesizing the most influential variables addressed in the highly cited literature. By integrating fragmented findings across diverse theoretical perspectives, this review provides a comprehensive understanding of the antecedents and consequences of extra-role behavior. The findings demonstrate that extra-role behavior is a complex and multidimensional construct shaped by the interaction of leadership practices, individual psychological characteristics, organizational conditions, and negative workplace dynamics (Liu et al., 2026). Rather than functioning independently, these dimensions collectively explain the emergence, sustainability, and organizational outcomes of extra-role behavior.

One of the most prominent themes emerging from the reviewed studies is the decisive role of leadership in fostering voluntary employee behaviors. The literature consistently indicates that constructive leadership approaches, including transformational, servant, authentic, and ethical leadership, positively influence extra-role behavior (Islam et al., 2021). However, these leadership styles rarely exert a direct effect on employee behaviors. Instead, their influence is generally mediated through psychological mechanisms such as work engagement, psychological capital, organizational commitment, and mission valence (Usman et al., 2024; Raub & Robert, 2010). This finding supports the evidence from a systematic review examining nurses' extra-role behaviors. Conducted by Sleman et al., (2026) this study suggests that managers' transformational leadership traits positively influence nurses' job satisfaction, organizational commitment, and motivation, thereby increasing their tendency towards extra-role behaviors.

In contrast, destructive leadership styles, particularly authoritarian leadership, negatively affect extra-role behavior by increasing role conflict, emotional exhaustion, and role overload (Zhang & Xie, 2017). Collectively, these findings suggest that leadership functions as a critical contextual factor that shapes employees' psychological safety, motivation, and willingness to engage in behaviors beyond formal role requirements.

The findings further reveal that extra-role behavior is strongly associated with positive psychological states and intrinsic motivation. Individual-level variables such as

conscientiousness, self-efficacy, job satisfaction, and organizational identification appear to serve as important antecedents of extra-role behavior (Van Dick et al., 2008; Bowling, 2010; Sulea et al., 2012). Nevertheless, these psychological drivers are not independent of organizational context. Organizational climate and job design play a substantial role in strengthening or weakening these internal motivations. In particular, job autonomy, perceived organizational support, and ethical organizational climates create conditions that encourage employees to voluntarily contribute beyond their formal job duties (Knies & Leisink, 2014; Alnaimi & Rjoub, 2021). These findings reinforce the argument that extra-role behavior should not be viewed solely as an individual characteristic, but rather as the outcome of reciprocal interactions between employees' personal dispositions and supportive organizational environments (Kao et al., 2023). This finding is consistent with the result of a systematic review (Miarni & Ibrahim, 2025) that examines employees' extra role behavior in the public sector in Indonesia and concluded that the notion is affected by contextual factors such as the reward system and organizational climate as well as personal motivation.

Another significant issue highlighted in the literature concerns the relationship between goal setting, formalization, and extra-role behavior. Although goal clarity generally contributes positively to extra-role behaviors (Caillier, 2016b), highly formalized systems characterized by difficult performance targets and pay-for-performance mechanisms may undermine employees' willingness to engage in discretionary behaviors (Wright et al., 1993). This finding points to a critical paradox within organizational management. While organizations seek to improve performance through strict monitoring and transactional reward systems, excessive formalization may weaken intrinsic motivation and reduce employees' tendency to engage in voluntary and prosocial actions. In this sense, extra-role behavior appears to flourish more effectively in environments that balance organizational expectations with employee autonomy and psychological empowerment.

The reviewed literature also emphasizes the "dark side" of extra-role behavior, which has become an increasingly important topic in contemporary organizational research. The concept of compulsory citizenship behavior (Vigoda-Gadot, 2007) demonstrates that when organizations implicitly or explicitly pressure employees to perform voluntary behaviors, the discretionary nature of extra-role behavior is fundamentally undermined. Such pressures may lead to reduced job satisfaction, emotional exhaustion, and lower in-role performance. Similarly, external stressors such as customer incivility and toxic workplace interactions consume employees' emotional resources, increasing the likelihood of burnout and decreasing their capacity to engage in extra-role activities (Bani-Melhem, 2020). These findings suggest that extra-role behavior is a fragile organizational resource that can easily deteriorate under conditions characterized by excessive pressure, psychological strain, and unhealthy organizational climates.

Taken together, the four thematic dimensions identified in this review provide and integrated conceptual framework for understanding extra-role behavior. By consolidating previously fragmented evidence, this study extends existing knowledge beyond isolated antecedents and consequences, illustrating how leadership, individual psychological resources, organizational context, and negative workplace dynamics interact to influence discretionary employee behavior.

Conclusion and Implications

The study demonstrates that extra-role behavior thrives in organizational environments characterized by ethical and supportive leadership, psychological empowerment, job autonomy, and positive organizational climates (Raub & Robert, 2010). Conversely, authoritarian management practices, excessive formalization, compulsory expectations, and workplace stressors significantly weaken employees' willingness and capacity to engage in voluntary behaviors. Therefore, sustaining extra-role behavior requires organizations to create work environments that support intrinsic motivation, psychological well-being, and employee autonomy rather than relying solely on external controls or performance pressures.

The findings of this review offer several important implications for organizational leaders, human resource professionals, and policymakers seeking to cultivate sustainable extra-role behavior. First, organizations should avoid treating extra-role behaviors as implicit or explicit performance requirements. Although such behaviors contribute to organizational effectiveness, institutionalizing them through rigid performance evaluation systems, mandatory expectations, or financial incentives may undermine their voluntary nature (O'Brien et al., 2025). As the reviewed literature demonstrates, compulsory citizenship behavior often generates unintended consequences, including emotional exhaustion, citizenship fatigue, decreased intrinsic motivation, and lower in-role performance (Suhail et al., 2024). Therefore, managers should recognize extra-role behavior as an outcome of supportive organizational conditions rather than as an obligation that employees are expected to fulfill.

Second, leadership development should be considered a strategic investment for promoting extra-role behavior. The reviewed studies consistently indicate that transformational, servant, authentic, and ethical leadership foster discretionary employee behaviors by enhancing trust, psychological safety, work engagement, and organizational commitment (Giancaspro et al., 2022; Javed & Shafique, 2025). Organizations should therefore invest in leadership development programs that emphasize coaching, empowerment, transparent communication, ethical decision-making, and individualized consideration rather than command-and-control management styles. Leadership evaluation systems should also incorporate relational competencies, such as supporting employee development and fostering collaboration, instead of focusing exclusively on operational performance indicators.

Third, organizations should design work systems that strengthen employees' intrinsic motivation and psychological resources. Human resource practices should prioritize job autonomy, meaningful work, participation in decision-making, and opportunities for skill development. Providing employees with discretion over how they accomplish their tasks enables them to perceive extra-role behavior as self-initiated rather than externally imposed (Nguyen & Tuan, 2022). Likewise, strengthening psychological resources—including self-efficacy, resilience, organizational identification, and psychological capital—through mentoring, developmental feedback, and well-being initiatives may increase employees' willingness to contribute beyond formal job requirements (Sidorenkov et al., 2023).

Fourth, organizational climate should be deliberately cultivated to encourage reciprocity and trust. The findings suggest that employees are more likely to engage in extra-role behaviors when they perceive fairness, organizational support, ethical practices, and respectful interpersonal relationships (Ayele et al., 2024; Nuchpramool et al., 2025). Consequently, organizations should strengthen procedural and interactional justice, encourage open communication, and create psychologically safe environments where employees feel comfortable sharing ideas, assisting colleagues, and taking initiative without fear of negative

consequences. Such climates not only promote extra-role behavior but also reinforce organizational commitment and long-term employee engagement.

Finally, organizations should actively manage the risks associated with the dark side of extra-role behavior. Managers should monitor indicators of role overload, emotional exhaustion, work-family conflict, and citizenship fatigue, particularly among highly committed employees who frequently engage in discretionary activities. Employee assistance programs, workload assessments, flexible work arrangements, and regular well-being evaluations can help prevent excessive behavioral expectations from evolving into chronic stress and burnout (Bartram et al, 2023, Bellini et al., 2025). Organizations should also ensure that helping behaviors are distributed fairly among employees to avoid concentrating additional responsibilities on a limited number of high performers.

Limitations and Future Research Directions

Despite offering a comprehensive overview of the extra-role behavior literature, this study has certain limitations due to its methodological choices. First, limiting the final search to the title field creates a selection bias, thus relevant studies that examine the concept using alternative terminology may have been ignored. Another selection bias in the research is evident in limiting the number of citations to 50. This approach inherently favors earlier publications that have had the time to accrue citations, while potentially omitting recent publications that have not yet reached this metric. Therefore, while this study does offer insights into the most cited studies in this field, it does not claim to encompass the entire field of extra-role behavior or recent research trends in the field. Another limitation is that the research covers only the WoS Core Collection Database and the specific time period in which the research was conducted. Therefore, conducting similar research in another database might yield different results. Additionally, since the citation index is constantly changing, a similar study in the future might present different findings. Finally, the impact of technological changes and transformations on extra-role behavior could also be an important research area. In particular, the relationship between flexible and remote working conditions, which have become popular today, and the innovations brought about by artificial intelligence could be explored.

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- Vigoda-Gadot, E. (2007). Redrawing the boundaries of OCB? An empirical examination of compulsory extra-role behavior in the workplace. *Journal of Business and Psychology*, 21(3), 377-405. <https://doi.org/10.1007/s10869-006-9034-5>
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- Wright, P. M., George, J. M., Farnsworth, S. R., & McMahan, G. C. (1993). Productivity and extra-role behavior: The effects of goals and incentives on spontaneous helping. *Journal of Applied Psychology*, 78(3), 374. <https://doi.org/10.1037/0021-9010.78.3.374>
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Appendix

Appendix 1: Overview of the Most Cited Publications on Extra-Role Behavior

No	Publication	Total WoS citations	Citations per year
1	Van Dyne, L., & Le Pine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. <i>Academy of Management Journal</i> , 41(1), 108-119. https://doi.org/10.5465/256902	2,217	82
2	Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extra-role behaviors-in pursuit of construct and definitional clarity (a bridge over muddied waters). <i>Research in Organizational Behavior: An Annual Series of Analytical Essays and Critical Reviews</i> , (17), 215-285.	885	30
3	MacKenzie, S. B., Podsakoff, P. M., & Ahearne, M. (1998). Some possible antecedents and consequences of in-role and extra-role salesperson performance. <i>Journal of Marketing</i> , 62(3), 87-98. https://doi.org/10.5465/256902	465	17
4	Demerouti, E., Bakker, A. B., & Gevers, J. M. (2015). Job crafting and extra-role behavior: The role of work engagement and flourishing. <i>Journal of Vocational Behavior</i> , (91), 87-96. https://doi.org/10.1016/j.jvb.2015.09.001	344	34
5	Hui, C., Law, K. S., & Chen, Z. X. (1999). A structural equation model of the effects of negative affectivity, leader-member exchange, and perceived job mobility on in-role and extra-role performance: A Chinese case. <i>Organizational Behavior and Human Decision Processes</i> , 77(1), 3-21.	274	10
6	Somech, A., & Drach-Zahavy, A. (2000). Understanding extra-role behavior in schools: The relationships between job satisfaction, sense of efficacy, and teachers' extra-role behavior. <i>Teaching and Teacher Education</i> , 16(5-6), 649-659. https://doi.org/10.1016/S0742-051X(00)00012-3	244	10
7	Eldor, L., & Harpaz, I. (2016). A process model of employee engagement: The learning climate and its relationship with extra-role performance behaviors. <i>Journal of Organizational Behavior</i> , 37(2), 213-235. https://doi.org/10.1002/job.2037	201	22
8	Tremblay, M., Cloutier, J., Simard, G., Chênevert, D., & Vandenberghe, C. (2010). The role of HRM practices, procedural justice, organizational support and trust in organizational commitment and in-role and extra-role performance. <i>The International Journal of Human Resource Management</i> , 21(3), 405-433. https://doi.org/10.1080/09585190903549056	192	12
9	Islam, T., Khan, M. M., Ahmed, I., & Mahmood, K. (2021). Promoting in-role and extra-role green behavior through ethical leadership: Mediating role of green HRM and moderating role of individual green values. <i>International Journal of Manpower</i> , 42(6), 1102-1123. https://doi.org/10.1108/IJM-01-2020-0036	191	48
10	Van Dick, R., Van Knippenberg, D., Kerschreiter, R., Hertel, G., & Wieseke, J. (2008). Interactive effects of work group and organizational identification on job satisfaction and extra-role behavior. <i>Journal of Vocational Behavior</i> , 72(3), 388-399. https://doi.org/10.1016/j.jvb.2007.11.009	187	11
11	Miles, D. E., Borman, W. E., Spector, P. E., & Fox, S. (2002). Building an integrative model of extra role work behaviors: A comparison of counterproductive work behavior with organizational citizenship behavior. <i>International Journal of Selection and Assessment</i> , 10(1-2), 51-57. https://doi.org/10.1111/1468-2389.00193	183	8
12	Belschak, F. D., & Den Hartog, D. N. (2009). Consequences of positive and negative feedback: The impact on emotions and extra-role behaviors. <i>Applied Psychology</i> , 58(2), 274-303. https://doi.org/10.1111/j.1464-0597.2008.00336.x	182	11
13	Vigoda-Gadot, E. (2007). Redrawing the boundaries of OCB? An empirical examination of compulsory extra-role behavior in the workplace. <i>Journal of Business and Psychology</i> , 21(3), 377-405. https://doi.org/10.1007/s10869-006-9034-5	180	10

14 Hsu, J. S. C., Shih, S. P., Hung, Y. W., & Lowry, P. B. (2015). The role of extra-role behaviors and social controls in information security policy effectiveness. <i>Information Systems Research</i> , 26(2), 282-300. https://doi.org/10.1287/isre.2015.0569	170	17
15 Raub, S., & Robert, C. (2010). Differential effects of empowering leadership on in-role and extra-role employee behaviors: Exploring the role of psychological empowerment and power values. <i>Human Relations</i> , 63(11), 1743-1770. https://doi.org/10.1177/0018726710365092	163	11
16 Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. <i>Human Performance</i> , 16(4), 327-348. https://doi.org/10.1207/S15327043HUP1604_1	133	8
17 Sulea, C., Virga, D., Maricutoiu, L. P., Schaufeli, W., Zaborila Dumitru, C., & Sava, F. A. (2012). Work engagement as mediator between job characteristics and positive and negative extra-role behaviors. <i>Career Development International</i> , 17(3), 188-207. https://doi.org/10.1108/13620431211241054	131	7
18 Wright, P. M., George, J. M., Farnsworth, S. R., & McMahan, G. C. (1993). Productivity and extra-role behavior: The effects of goals and incentives on spontaneous helping. <i>Journal of Applied Psychology</i> , 78(3), 374-381. https://doi.org/10.1037/0021-9010.78.3.374	126	4
19 Chen, Z., Eisenberger, R., Johnson, K. M., Sucharski, I. L., & Aselage, J. (2009). Perceived organizational support and extra-role performance: Which leads to which? <i>The Journal of Social Psychology</i> , 149(1), 119-124. https://doi.org/10.3200/SOCP.149.1.119-124	124	7
20 Panaccio, A., Henderson, D. J., Liden, R. C., Wayne, S. J., & Cao, X. (2015). Toward an understanding of when and why servant leadership accounts for employee extra-role behaviors. <i>Journal of Business and Psychology</i> , 30(4), 657-675. https://doi.org/10.1007/s10869-014-9388-z	121	12
21 Erdogan, B., Karaeminogullari, A., Bauer, T. N., & Ellis, A. M. (2020). Perceived overqualification at work: Implications for extra-role behaviors and advice network centrality. <i>Journal of Management</i> , 46(4), 583-606. https://doi.org/10.1007/s10869-014-9388-z	116	23
22 Little, L. M., Nelson, D. L., Wallace, J. C., & Johnson, P. D. (2011). Integrating attachment style, vigor at work, and extra-role performance. <i>Journal of Organizational Behavior</i> , 32(3), 464-484. https://doi.org/10.1002/job.709	114	8
23 Leung, A. S. (2008). Matching ethical work climate to in-role and extra-role behaviors in a collectivist work setting. <i>Journal of Business Ethics</i> , 79(1), 43-55. https://doi.org/10.1007/s10551-007-9392-6	113	7
24 Albrecht, S. L. (2012). The influence of job, team and organizational level resources on employee well-being, engagement, commitment and extra-role performance: Test of a model. <i>International Journal of Manpower</i> , 33(7), 840-853. https://doi.org/10.1108/01437721211268357	112	8
25 Karaosmanoglu, E., Altinigne, N., & Isiksal, D. G. (2016). CSR motivation and customer extra-role behavior: Moderation of ethical corporate identity. <i>Journal of Business Research</i> , 69(10), 4161-4167. https://doi.org/10.1016/j.jbusres.2016.03.035	103	11
26 Salanova, M., Lorente, L., Chambel, M. J., & Martínez, I. M. (2011). Linking transformational leadership to nurses' extra-role performance: The mediating role of self-efficacy and work engagement. <i>Journal of Advanced Nursing</i> , 67(10), 2256-2266. https://doi.org/10.1111/j.1365-2648.2011.05652.x	103	7
27 Hall, A. T., & Ferris, G. R. (2011). Accountability and extra-role behavior. <i>Employee Responsibilities and Rights Journal</i> , 23(2), 131-144. https://doi.org/10.1007/s10672-010-9148-9	101	7
28 Bowling, N. A. (2010). Effects of job satisfaction and conscientiousness on extra-role behaviors. <i>Journal of Business and Psychology</i> , 25(1), 119-130. https://doi.org/10.1007/s10869-009-9134-0	97	6

29 Alnaimi, A. M. M., & Rjoub, H. (2021). Perceived organizational support, psychological entitlement, and extra-role behavior: The mediating role of knowledge hiding behavior. <i>Journal of Management & Organization</i> , 27(3), 507-522. https://doi.org/10.1017/jmo.2019.1	95	24
30 Tjosvold, D., Hui, C., & Yu, Z. (2003). Conflict management and task reflexivity for team in-role and extra-role performance in China. <i>International Journal of Conflict Management</i> , 14(2), 141-163. https://doi.org/10.1108/eb022895	86	4
31 Zhu, J. N., Lam, L. W., & Lai, J. Y. (2019). Returning good for evil: A study of customer incivility and extra-role customer service. <i>International Journal of Hospitality Management</i> , (81), 65-72. https://doi.org/10.1016/j.ijhm.2019.03.004	85	12
32 Vey, M. A., & Campbell, J. P. (2004). In-role or extra-role organizational citizenship behavior: Which are we measuring? <i>Human Performance</i> , 17(1), 119-135. https://doi.org/10.1207/S15327043HUP1701_6	83	4
33 Knies, E., & Leisink, P. (2014). Linking people management and extra-role behaviour: Results of a longitudinal study. <i>Human Resource Management Journal</i> , 24(1), 57-76. https://doi.org/10.1111/1748-8583.12023	82	7
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35 Hur, W. M., Moon, T. W., & Kim, H. (2020). When does customer CSR perception lead to customer extra-role behaviors? The roles of customer spirituality and emotional brand attachment. <i>Journal of Brand Management</i> , 27(4), 421-437. https://doi.org/10.1057/s41262-020-00190-x	77	15
36 Kim, W. C., & Mauborgne, R. A. (1996). Procedural justice and managers' in-role and extra-role behavior: The case of the multinational. <i>Management Science</i> , (42), 499-515. https://doi.org/10.1287/mnsc.42.4.499	77	3
37 Ahmad, I., Donia, M. B., Khan, A., & Waris, M. (2019). Do as I say and do as I do? The mediating role of psychological contract fulfillment in the relationship between ethical leadership and employee extra-role performance. <i>Personnel Review</i> , 48(1), 98-117. https://doi.org/10.1108/PR-12-2016-0325	75	11
38 Gaither, C. A., Kahaleh, A. A., Doucette, W. R., Mott, D. A., Pederson, C. A., & Schommer, J. C. (2008). A modified model of pharmacists' job stress: The role of organizational, extra-role, and individual factors on work-related outcomes. <i>Research in Social and Administrative Pharmacy</i> , 4(3), 231-243. https://doi.org/10.1016/j.sapharm.2008.04.001	72	4
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40 Islam, T., & Tariq, J. (2018). Learning organizational environment and extra-role behaviors: The mediating role of employee engagement. <i>Journal of Management Development</i> , 37(3), 258-270. https://doi.org/10.1108/JMD-01-2017-0039	69	9
41 Van Loon, N. M., Vandenabeele, W., & Leisink, P. (2017). Clarifying the relationship between public service motivation and in-role and extra-role behaviors: The relative contributions of person-job and person-organization fit. <i>American Review of Public Administration</i> , 47(6), 699-713. https://doi.org/10.1177/0275074015617547	61	8
42 Chiaburu, D. S., Marinova, S. V., & Lim, A. S. (2007). Helping and proactive extra-role behaviors: The influence of motives, goal orientation, and social context. <i>Personality and Individual Differences</i> , 43(8), 2282-2293. https://doi.org/10.1016/j.paid.2007.07.007	61	3
43 Wuyts, S. (2007). Extra-role behavior in buyer-supplier relationships. <i>International Journal of Research in Marketing</i> , 24(4), 301-311. https://doi.org/10.1016/j.ijresmar.2007.05.002	60	3
44 Zhang, Y., & Xie, Y. H. (2017). Authoritarian leadership and extra-role behaviors: A role-perception perspective. <i>Management and Organization Review</i> , 13(1), 147-166. https://doi.org/10.1017/mor.2016.36	59	7

45 Bani-Melhem, S. (2020). What mitigate and exacerbate the influences of customer incivility on frontline employee extra-role behaviour? <i>Journal of Hospitality and Tourism Management</i> , (44), 38-49. https://doi.org/10.1016/j.jhtm.2020.05.005	58	12
46 Caillier, J. G. (2016c). Do transformational leaders affect turnover intentions and extra-role behaviors through mission valence? <i>The American Review of Public Administration</i> , 46(2), 226-242. https://doi.org/10.1177/0275074014551751	53	6
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48 Garg, S., & Dhar, R. L. (2016). Extra-role customer service: The roles of leader-member exchange (LMX), affective commitment, and psychological empowerment. <i>International Journal of Hospitality & Tourism Administration</i> , 17(4), 373-396. https://doi.org/10.1080/15256480.2016.1226151	53	5
49 Aboramadan, M., Hamid, Z., Kundi, Y. M., & El Hamalawi, E. (2022). The effect of servant leadership on employees' extra-role behaviors in NPOs: The role of work engagement. <i>Nonprofit Management and Leadership</i> , 33(1), 109-129. https://doi.org/10.1002/nml.21505	52	17
50 Malik, N., & Dhar, R. L. (2017). Authentic leadership and its impact on extra role behaviour of nurses: The mediating role of psychological capital and the moderating role of autonomy. <i>Personnel Review</i> , 46(2), 277-296. https://doi.org/10.1108/PR-05-2015-0140	51	6
51 Afridi, S. A., Afsar, B., Shahjehan, A., Khan, W., Rehman, Z. U., & Khan, M. A. (2023). Impact of corporate social responsibility attributions on employee's extra-role behaviors: Moderating role of ethical corporate identity and interpersonal trust. <i>Corporate Social Responsibility and Environmental Management</i> , 30(2), 991-1004. https://doi.org/10.1002/csr.2017	51	17
52 Ain, N. U., Azeem, M. U., Sial, M. H., & Arshad, M. A. (2022). Linking knowledge hiding to extra-role performance: The role of emotional exhaustion and political skills. <i>Knowledge Management Research & Practice</i> , 20(3), 367-380. https://doi.org/10.1080/14778238.2021.1876536	50	13

Note. Appendix has been created by the authors, benefiting from WoS database.

Information About the Article/Makale Hakkında Bilgiler

The Ethical Rules for Research and Publication / Araştırma ve Yayın Etiği

The authors declared that the ethical rules for research and publication followed while preparing the article.

Yazarlar makale hazırlanırken araştırma ve yayın etiğine uyulduğunu beyan etmiştir.

Conflict of Interests/ Çıkar Çatışması

The authors have no conflict of interest to declare.

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Author Contributions/ Yazar Katkıları

The draft process of the manuscript/ Taslağın Hazırlanma Süreci A.Y.Ö/G.K., Data Collection/Verilerin Toplanması A.Y.Ö/G.K., Writing the Manuscript/ Makalenin Yazılması A.Y.Ö/G.K., Submit, Revision and Resubmit Process/ Başvuru, Düzeltme ve Yeniden Başvuru Süreci A.Y.Ö.

Below are the question posed to the authors concerning the use of artificial intelligence in the preparation of the manuscript and the authors' response to that question.

Did you benefit in any way from generative artificial intelligence programs during the preparation, execution, data analysis, or any other stages of this article? Yes

If your answer is yes, please explain at which stage(s) you used generative artificial intelligence programs: Artificial intelligence (AI) was used exclusively for proofreading of the manuscript.

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