

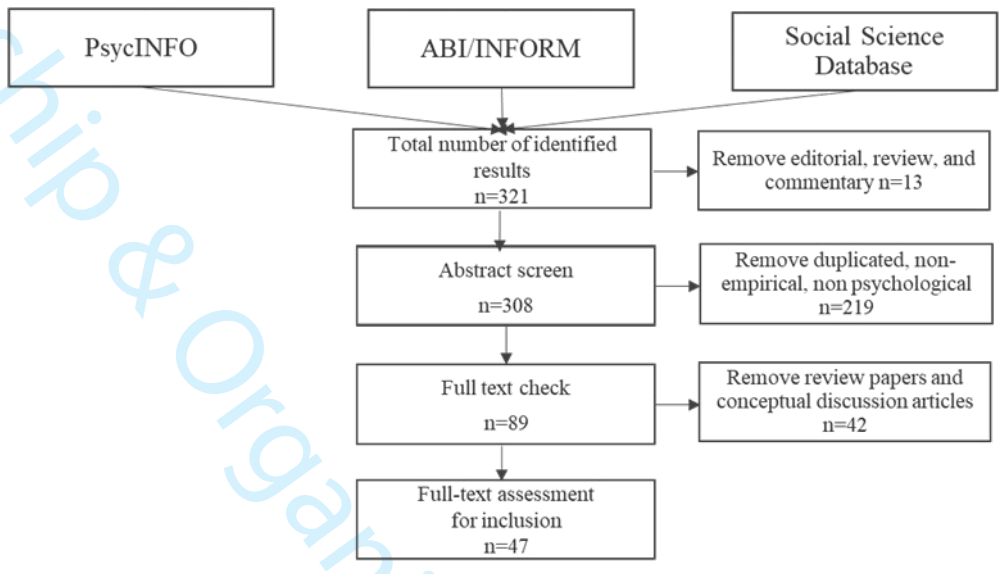


Building-up Resilience and Being Effective Leaders in the Workplace—A Systematic Review and Synthesis Model

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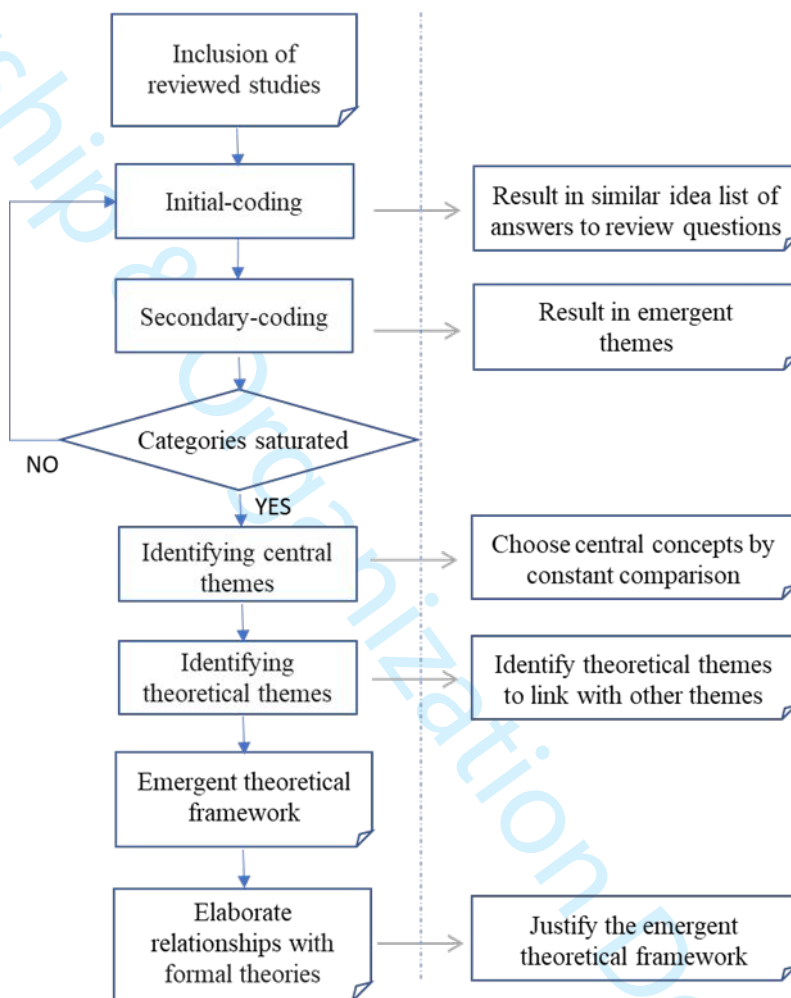
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Manuscripts

Figure 1: The Articles Selection Flowchart



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Figure 2: Data-analysis Process in a Systematic Literature Review



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Figure 3: The Building-up Resilience and Being Effective Model

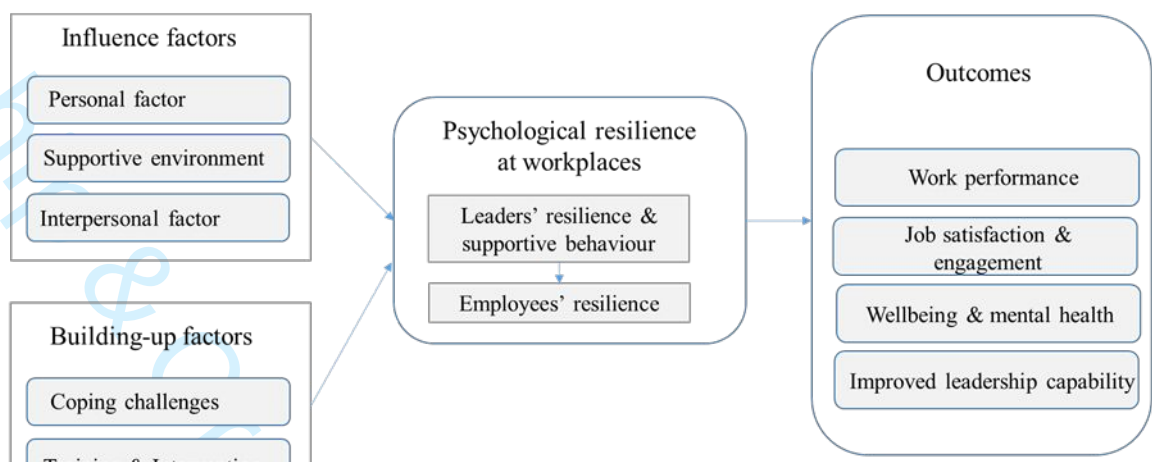


Table 1: The Summary of Included Studies Characters-1

| | Author | Country | Research method | Industry | Sample | Sample number | Data collect method |
|----|-----------------------------|--------------|-----------------|-----------------|----------------------|---------------|----------------------|
| 1 | Harland et al., 2004 | USA | quantitative | education | MBA students | 150 | survey |
| 2 | Maulding et al., 2012 | USA | mixed methods | education | doctoral students | 48 | open-ended survey |
| 3 | Koen et al., 2013 | 4 countries | qualitative | healthcare | healthcare leaders | 148 | intervention |
| 4 | Everly Jr et al., 2013 | USA | quantitative | healthcare | historical scholars | 123 | survey & observation |
| 5 | Howard & Irving, 2014 | USA | quantitative | across industry | leaders | 167 | survey |
| 6 | Bande et al., 2015 | Spanish | quantitative | across industry | salespeople | 209 | survey |
| 7 | O'Connor & Batcheller, 2015 | USA | qualitative | healthcare | nurse leaders | 12 | in-depth interview |
| 8 | Reed & Blaine, 2015 | USA | quantitative | education | school leaders | 113 | resilience profile |
| 9 | Elkington & Breen, 2015 | USA | qualitative | across industry | senior leaders | 17 | in-depth interview |
| 10 | Nguyen et al., 2016 | New Zealand | quantitative | across industry | employees | 269 | online survey |
| 11 | Sommer et al., 2016 | Canada | quantitative | healthcare | leaders & employees | 478 | survey |
| 12 | Brendel et al., 2016 | USA | quantitative | across industry | leaders | 41 | leadership program |
| 13 | Su & Linderman, 2016 | USA & Taiwan | quantitative | manufacturing | business units | 147 | online survey |
| 14 | Hudgins, 2016 | USA | quantitative | healthcare | nurse leaders | 89 | survey |
| 15 | Zehir & Narcikara, 2016 | Turkey | quantitative | across industry | white-collar workers | 645 | survey & interview |
| 16 | Forster & Duchek, 2017 | German | qualitative | across industry | leaders | 27 | interviews |
| 17 | Teo et al., 2017 | Singapore | qualitative | healthcare | key decision-makers | 7 | interviews |
| 18 | Bargavi et al., 2017 | India | quantitative | IT industry | young leaders | 525 | survey |
| 19 | Wang et al., 2017 | China | quantitative | IT industry | sales workers | 422 | survey |
| 20 | Mahmud, 2017 | Bangladesh | quantitative | Construction | project managers | 15 | survey & case study |
| 21 | Grant et al., 2017 | Australia | mixed methods | healthcare | leaders | 31 | intervention |
| 22 | Sardar & Galdames, 2018 | UK | qualitative | education | school leaders | 3 | interviews |
| 23 | Dimas et al., 2018 | Portugal | quantitative | across industry | employee & leaders | 535 | survey |

Table 1: The Summary of Included Studies Characters 2-continued

| | Author | Country | Research method | Industry | Sample | Sample number | Data collect method |
|----|------------------------------|--------------|-----------------|-----------------|----------------------|---------------|---------------------------|
| 24 | Tau et al., 2018 | Africa | quantitative | healthcare | managers & nurses | 290 | survey |
| 25 | Gupta & Sharma, 2018 | India | quantitative | transport | leaders | 328 | survey |
| 26 | Franken et al., 2019 | New Zealand | quantitative | public service | employees | 222 | cross-sectional survey |
| 27 | Meng et al., 2019 | China | quantitative | public service | civil servants | 236 | cross-sectional survey |
| 28 | Thude et al., 2019 | Denmark | qualitative | healthcare | nurses & physician | 2 | interviews & discussion |
| 29 | Shelton et al., 2019 | USA | mixed methods | across industry | EMBA students | 101 | survey & interview |
| 30 | Cooke et al., 2019 | China | quantitative | bank | banking workers | 2025 | survey |
| 31 | Caniëls & Hatak, 2019 | Holland | quantitative | public service | defense employees | 123 | 2 studies cross-sectional |
| 32 | Kodama & Dugan, 2019 | USA | quantitative | education | college students | 2223 | survey |
| 33 | Zhu et al., 2019 | China | quantitative | education | academics & students | 538 | 2 studies cross-sectional |
| 34 | Spiva et al., 2020 | Holland | quantitative | healthcare | charge nurses | 41 | pilot training program |
| 35 | Sundermeier et al., 2020 | German | qualitative | investment | experts | 29 | interview |
| 36 | Pillay, 2020 | South Africa | quantitative | education | female leaders | 255 | cross-sectional approach |
| 37 | Tian & Bush, 2020 | China | qualitative | public service | female leaders | 6 | in-depth interview |
| 38 | Djourova Nia et al., 2020 | Spain | quantitative | social services | employees | 225 | two waves survey |
| 39 | Lin & Liao, 2020 | China | quantitative | across industry | leaders & employees | 222 | survey |
| 40 | Çop et al., 2021 | Turkey | quantitative | service | employees | 351 | survey |
| 41 | Shin & Park, 2021 | Korea | quantitative | across industry | leaders | 228 | survey |
| 42 | Crosweiler & Tschakert, 2021 | 3 countries | mixed methods | across industry | leaders | 89 | survey & interview |
| 43 | Shelton et al., 2021 | USA | mixed methods | across industry | leaders | 101 | survey & interview |
| 44 | Howard & Irving, 2021 | 3 countries | quantitative | across industry | leaders | 365 | survey |
| 45 | Sanfuentes et al., 2021 | Chile | qualitative | mining | miners | 33 | case study |
| 46 | Li & Tong, 2021 | China | quantitative | across industry | leaders & employees | 857 | survey |
| 47 | Chance, 2021 | USA | qualitative | education | leaders | 9 | interview |

Table 2: Themes of Influence Factors and Building-up Factors

| Themes | Sub-themes | Article-No |
|--|-------------------------------------|------------|
| Influence factors | Personal factors | |
| | dark-side of personality | 31 |
| | differentiation of self | 5 |
| | individual factors | 15 |
| | leadership traits | 16 |
| | optimism | 10 |
| | proactive personality | 10 |
| | Interpersonal factors | |
| | alignment | 37 |
| | co-worker support | 30 |
| | emotion tie | 28 |
| | insider identity | 33 |
| | positive affect | 11,36 |
| | Supportive environment | |
| 5 types supportive leadership behaviours | 10,11,15,23,30,38,40 | |
| job-related factors | 15 | |
| perceived organizational support | 26 | |
| perceived supportive environment | 16,31,36 | |
| Building-up factors | Coping challenges | |
| | adversity | 9, 47 |
| | experiencing job loss | 7 |
| | obstacles | 5, 44 |
| | performance pressure | 30, 45 |
| | resistance | 37 |
| | Training & interventions | |
| | leadership coaching | 21,22 |
| | leadership Hub intervention | 3 |
| | mindfulness | 12 |
| spiritual practice | 29, 43 | |

Table 3: Four Sub-themes of Resilience's Outcomes in Leadership

| Sub-themes of outcomes | Article No |
|--|------------|
| Performance | |
| ERP extra-role performance | 25 |
| performance | 37 |
| productivity | 15 |
| team effectiveness | 23 |
| team viability | 23 |
| Job satisfaction & engagement | |
| anticipated turnover | 14 |
| employee engagement | 25 |
| interpersonal adaption | 27 |
| job satisfaction | 14 |
| organizational commitment | 27 |
| turnover intension | 6 |
| work engagement | 19 |
| high-involvement | 27 |
| Well-being and mental health | |
| overcome emotional exhaustion | 6 |
| well-being | 27 |
| Improved leadership capacity | |
| able to lead | 38, 43 |
| empowering leader behaviours | 20 |
| empowering leader behaviours | 24 |
| higher leadership quality | 24,34 |
| improved leadership behaviour | 2,18,24 |
| coping skill | 37, 44, 47 |

Table 4. Psychological Resilience in Twelve Leadership Styles

| Leadership Style | Key Findings | Article-No |
|-----------------------------|---|----------------------------|
| Transformational leadership | 1. Transformational leadership attributes positively impact subordinates' psychological resilience. 2. Transformational nurse leaders' resilience can be developed through a training program. | 1, 4, 11, 19, 23, 34,38,40 |
| Authentic leadership | Authentic leaders' transparency and self-awareness could positively influence subordinates' productivity through improved resilience. | 15 |
| Charismatic leadership | Charismatic leadership behaviours can improve organizational resilience and positively impacting organizational performance | 17 |
| Contingent leadership | The positive association between employees' resilience and contingent reward leadership. | 10 |
| Empowering leadership | 1. Positive association between employee resilience and empowering leadership. 2. Empowering leader behaviour of nurse managers significantly enhances employees' motivation and job engagement. | 10, 24 |
| Hubristic leadership | Resilience may help hubristic leadership persist under problems. | 35 |
| Humble leadership | Humble leadership could predict employees' resilience through work-related promotion and perceived insider identity. | 33 |
| Leader-member exchange | Leader-member exchange (LMX) and employee resilience can influence organizational performance and lessen employees' burnout. | 25, 27 |
| Paradoxical leadership | Employees' resilience can be directly fostered by Paradoxical leadership behaviour can be mediated by organizational support. | 26 |
| Resilient leadership | Highlighted the importance of resilient leadership and described the attributes by evaluating the resilient leadership profile. | 4 |
| Servant leadership | Salespeople's resilience and emotional intelligence directly influence their intention of turnover, which is moderated by servant leadership. | 6 |
| Supportive leadership | Supportive leadership and co-worker support are positively associated with employees' resilience by enhancing coping skills. | 30 |
| Shared leadership | Collective sensemaking and dealing with the complexity of emotional experiences may activate resilience result from facing adversity | 45 |
| Narcissistic leadership | Narcissistic leadership has a positive effect on goal-directed energy, which in turn enhances employee resilience | 46 |
| Crucible leadership | Crucible adverse experiences may develop the necessary leadership skills | 47 |

Building-up Resilience and Being Effective Leaders in the Workplace: A Systematic Review and Synthesis Model

Abstract

Purpose: Psychological resilience, defined here as the capacity to bounce back from adversity and failure, has been studied in various leadership contexts. However, the literature demonstrates less consensus concerning how psychological resilience manifests in, and interacts within, the leadership role and, equally, the focus on resilience development is underdeveloped. This paper addresses these issues by focusing on the interactions between psychological resilience and leadership and presents practical development strategies.

Design/methodology/approach: A systematic review employing 47 empirical studies followed a thematic synthesis within an associated model encapsulated as: *Building-up Resilience and Being Effective*.

Findings: First, resilience is identified as an aspect that is essential and can benefit individuals and organizations' work outcomes across leadership contexts, including work performance, job engagement, well-being, and enhanced leadership capability. Secondly, leaders may build up their resilience by obtaining *coping skills* and *improved attitudes* toward challenges. The idea of *resilient attitudes*, which are presented as paradoxical perspectives toward challenges, may help leaders adapt to challenges and adversities, and lead to beneficial outcomes.

Originality: Fundamentally, the synthesized model applied may encourage further studies to focus on how to build up resilience and practically apply it in workplaces across leadership contexts. In particular, this study found that adopting paradoxical perspectives and ambidextrous leadership approaches toward adversities is an original resilience development strategy, which serves to contribute to the gap in the literature.

Keywords: Leadership, psychological resilience, work outcome, resilience development

Introduction

Along with increasing uncertainty and intensifying worldwide competition, organizational leaders play an essential role in surviving in an increasingly challenging environment (Crossan *et al.*, 2017). Such environments can lead to high levels of stress and psychological disorders, e.g. managerial burnout, anxiety, or depression (Roche *et al.*, 2014). Thus, organizational leaders need to be equipped with the capacity to deal with increasingly complex and dynamic work requirements. Extant studies have found that psychological resilience, defined here as the capacity to bounce back from adversity and failure (Luthans, 2002), may help individuals cope with work complexity and improve employees' and organizational outcomes (Sommer *et al.*, 2016, Bargavi *et al.*, 2017, Koen *et al.*, 2013).

Indeed, the behaviour of, for example, authentic leaders may positively impact their subordinates' psychological resilience and consequently benefit employees' outcomes (Anwar *et al.*, 2019). Through transparent communication under an authentic leadership context, employees' resilience may mediate the relationship between leadership practices (e.g. awareness of challenges) and organizational creativity (Anwar *et al.*, 2019). Such above-mentioned studies identify that psychological resilience may significantly impact leadership, which is crucial for contemporary leaders and organizations to deal with challenges, whether day-to-day, strategic, or internal/ external to the organization.

However, the effects of resilience engendered directly through leadership approaches are often divergent and varied, e.g. improving organizational creativity (Anwar *et al.*, 2019), employees' job engagement (Gupta and Sharma, 2018), or team effectiveness (Dimas *et al.*, 2018). Findings drawn from extant studies may lead to a misunderstanding of resilience, such as, resilience was helpful in some particular contexts (e.g. transformational leadership,

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3 authentic leadership), but not work in other circumstances; such as workplaces not exhibiting
4 clear leadership styles. Furthermore, the mechanism through which psychological resilience
5 interacts with leadership is unclear in terms of resilience's function (e.g. mediator or
6 moderator) and leadership styles (e.g. specific leadership style or across leadership contexts).
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8 In other words, the literature has not yet offered a consensus overview on how psychological
9 resilience interacts with leadership delivery. Moreover, it is unclear whether resilience as a
10 leadership trait can positively impact leadership outcomes across leadership contexts or,
11 alternatively, if it is helpful in some specific leadership styles, e.g. authentic leadership,
12 transformational leadership, servant leadership.
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24 Add to this the COVID-19 age, whereby the “disaster of uncertainty” with ambiguity
25 about its nature and trajectory may be destined to have an ever strong psychological impact on
26 leaders and employees that may extend far beyond the end of the pandemic season (Everly *et*
27 *al.*, 2020). Resilience is expected to be more involved in workplaces to help individuals
28 overcome various adversities or disasters (Arslan *et al.*, 2021, Kahn *et al.*, 2021). Thus, this
29 study aims to advance understanding of how resilience is operationalized with leadership in
30 workplaces and provide practical insights into building up individuals' resilience to confront
31 changes, uncertainty, and other challenges. To address the above, we conduct a systematic
32 literature review to present a landscape of studies focusing on psychological resilience and
33 leadership via following the research question:
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- 48 1. How is psychological resilience applied in a leadership context within workplaces?

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50 The paper will bring up-to-date discussions around psychological resilience and
51 leadership, as well as apply the trait of leadership resilience across a wider scope of leadership
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3 approaches. A paradoxical lens is subsequently applied and this includes ambidextrous
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5 leadership as a theory of focus.
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8 **Systematic Literature Review and Analysis Process**

9 ***Psychological Resilience Enhancement and Dealing with Challenges***

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Positive effects of resilience have been observed in various contexts, such as: child development (Martinez-Torteya *et al.*, 2009); patient care (Koral and Cirak, 2021); and, the military (Pietrzak and Cook, 2013). Martinez-Torteya *et al.* (2009) suggested that children who had been exposed to domestic violence (DV) (family violence, normally male toward female partner) were more likely to develop emotional and behavioural problems than non-exposed children. The study (Martinez-Torteya *et al.*, 2009) found that the resilience of a sub-group of DV exposed children is higher than the nonexposed group (around half of the investigated sample) did not show behavioural or emotional problems. Furthermore, Koral and Cirak (2021) found that psychological resilience can support patients, such as women with breast cancer, to reduce the ongoing fear of recurrence and, consequently, benefit patients' well-being. Additionally, in the military, exposure to traumatic events is a risk factor that may lead to severe psychological distress (Isaacs *et al.*, 2016). Pietrzak and Cook (2013) found that (1) moderate-level trauma may improve veterans' resilience, and (2) a higher scored resilient group of veterans, compared to the low-level resilient group, equally reported more positive perceptions of the military's effect on their lives and social engagement. Therefore, extant studies have provided plenty of evidence to support the potential for psychological resilience and its developable characteristics, whether either helping children confront family violence or supporting individuals overcome disease and conflict post-trauma. In particular, it is perhaps important to note that, frequently, these studies underlined that experiencing *moderate*

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3 adversities may improve individuals' resilience across a range of the population from children
4 to adults/veterans (Martinez-Torteya *et al.*, 2009; Pietrzak and Cook, 2013).
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8 Psychological resilience has been investigated in various leadership contexts, such as
9 transformational leadership (Dimas *et al.*, 2018), authentic leadership (Anwar *et al.*, 2019), and
10 some other contexts (Tau *et al.*, 2018) and found that leaders' supportive behaviour can
11 enhance employees' resilience and positive outcomes. For example, employee resilience
12 mediates the relationships between organizational commitment and job burnout (Meng *et al.*,
13 2019), or resilience can be a moderator in displaying a higher overall life satisfaction (Shelton
14 *et al.*, 2019). Thus, these above-studies investigate resilience and report divergent underpinning
15 mechanisms pertaining to *how resilience interacts with leadership and how to develop it*.
16 Nevertheless, there are additional interesting questions concerning resilience and leadership,
17 such as which factors may influence resilience and how to build up individuals' resilience
18 effectively. Nguyen *et al.* (2016) found that a proactive personality is an influencing factor of
19 resilience. Furthermore, Elkington and Breen (2015) disclosed that supportive coaching and
20 experiencing challenges might help senior leaders improve their resilience. Due to the
21 divergent investigations and varied results about psychological resilience in workplaces, the
22 systematic literature aims to deepen insights into the operationalizing mechanism of *resilience*
23 *within leadership*, and reveal influential factors and present practical development strategies.
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45 ***Systematic Literature Review Search Strategy***

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47 All peer-reviewed empirical articles that include both leader* (for leader, leaders, and
48 leadership) and resilien* (resilience, resilient, and resiliency) as keywords or research subjects
49 were included in this review. As psychological resilience and leadership are multi-disciplinary,
50 overlapping subjects such as psychology, management, and social science, the inclusion of this
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3 review is derived from a keyword-based search in three subject-related databases: PsycINFO,
4 ABI/INFORM, and Social Science Database.
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7 All publications included related to studies concerning the psychological resilience of
8 leaders and subordinates within industrial organizations. We focus on peer-reviewed scholarly
9 journal articles in English with the cut-off date of 4th July 2021 so as afford reasonable currency
10 to the research. Any books, dissertations, or non-peer-reviewed articles are excluded. The
11 search procedure is presented in Figure 1.
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24 The first step yielded 321 articles with the inclusion criteria. The second step removed
25 13 editorials, reviews, or commentary articles leaving 308 articles. The third step screened
26 abstracts to remove 219 articles, including duplications, non-empirical studies, non-
27 psychological resilience studies (e.g. environment resilience), or military contexts. The
28 rationale for excluding studies on a military context relates to their nuanced and frequently
29 ‘extreme’ environments and experiences, as well as military occupations being arguably not
30 directly comparable to most other occupations (Bartone *et al.*, 2013). The fourth step involved
31 full-text checking of the remaining 89 articles and removal of 42 review papers, conceptual
32 discussion, and non-empirical reports. Finally, 47 peer-reviewed empirical articles are chosen
33 that fully meet the systematic literature review requirements for this study (see Table 1).
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52 The first identified study focused on the association of psychological resilience and
53 leadership was published in 2004 (Harland *et al.*, 2004). This study initiated the focus on
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3 leadership impacts on others' resilience and found that transformational leadership behaviour
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5 can positively influence subordinates' psychological resilience. Following this, more studies
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7 were published over time, including six in 2020 and eight in 2021.
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10 11 12 ***Review Questions and Data Analysis*** 13

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15 This study aims to discover whether psychological resilience can be an essential
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17 leadership capability across leadership contexts and help individuals and organizations deal
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19 with challenges, which may result in practical resilience development strategies. To achieve
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21 these research objectives, we identify the effects of psychological resilience in different
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23 leadership styles and the influencing factors of resilience in extant studies. Therefore, this
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25 systematic literature review follows three review questions to guide data analysis: (1) What
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27 types of factors can influence or develop leaders' or employees' psychological resilience?; (2)
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29 What types of outcomes of resilience are found at workplaces?; and (3) What types of
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31 leadership styles are investigated?
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38 Data analysis methods and processes of a systematic literature review, including coding
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40 and synthesis, vary considerably depending on the research aims (Gough *et al.*, 2017). We
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42 apply a thematic summary that combines primary statistical (quantitative data) and non-
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44 statistical (qualitative data) findings of reviewed studies to present an overview of the key
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46 characteristics (Gough *et al.*, 2017). This study employs a Data-Analysis Process in a
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48 Systematic Literature Review facilitated with QDAS-NVivo 12 by involving a two-step open-
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50 coding and two-step theory-constituting approach (Yu and Smith, 2021) in a systematic
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52 literature review (shown in Figure 2).
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Insert Figure 2 about here

Results

The thematic synthesis is derived from the findings of 47 reviewed articles listed in Table 1. The results and related themes are presented according to the review questions outlined in the last section. In the 47 reviewed articles, three types of research methods are identified, which are quantitative (66%, 31 papers), qualitative (23%, 11 papers), and mixed-method (11%, five papers). All the inclusion articles investigated resilience at the workplace as one key research subject: 24 studies focused on leaders' resilience; 18 reviewed studies focused on employees' resilience; and, five focused on organizational resilience.

In all the reviewed studies, 66% of the included articles (31 papers) collected data by a self-reported survey and other quantitative approaches. The investigated industries included industry, healthcare, and public service. In total, 13,120 participants from 22 countries are involved in the 47 reviewed articles, which include leaders (e.g. school leaders, nurse leaders, and company decision-makers) and employees (e.g. nurses, white-collar workers, college students, and sales workers).

Influence Factors and Building-up Factors of Psychological Resilience

By following the Data-Analysis Process in a Systematic Literature Review, five sub-themes emerged from open-coding and constant comparison analysis, including: personal characteristics; interpersonal factors; supportive environment; leadership behaviour; challenging experiences; and, interventions (coaching and training). These five sub-themes were organized into two main themes: 'Influence Factors' and 'Building-up Factors' according to their different effects on resilience (see **Table 2**). The reviewed studies found that Building-

up Factors (interventions and experiences of coping challenges) may significantly improve employees' or leaders' resilience, which suggests that resilience can be developmental. By contrast, personal factors, interpersonal factors, and supportive environments may influence individuals' or organizational resilience without explicating whether these factors may strengthen resilience.

Insert Table 2 about here

The first sub-theme, *personal factors*, refers to: proactive personality; optimism; the dark-side of personality; promotion focus; leadership traits; differentiation of self; and, individual factors. Secondly, *interpersonal factors* include: alignment; emotional tie; insider identity; and positive affection; all of these demonstrating the interpersonal relationship or emotional connection. The third sub-theme, *supportive environment factors*, contains: supportive networks; work environment; job-related factors; co-worker support; and, perceived organizational support (POS). Similarly, five types of leadership behaviours are perceived as supportive work environment factors, namely: transformational leadership; contingent rewards leadership; empowering leadership; supportive leader; and, authentic leadership.

The fourth sub-theme, *coping challenges*, is categorized as a building-up factor as these experiences, e.g. adversity, resistance, job loss, obstacles, and performance pressure, are effective in developing an individual's resilience. Similarly, leadership coaching and training and some other interventions, such as leadership hub intervention, mindfulness, and spiritual practice, are categorized as building-up factors as they have shown to be effective in developing resilience.

Contributions and Outcomes of Resilience

Analyzing the contribution of resilience also follows the two-step coding process, including open-coding and constant comparison. The first step-initial-coding directly identifies all reported outcomes from reviewed studies which result in an outcome list of resilience. In total, 20 kinds of concepts are identified as individual or organizational outcomes. Through secondary-coding with constant comparison, the 200 types of outcomes result in four emergent sub-themes: (1) Performance, (2) Leadership capacity improvement, (3) Job satisfaction & engagement, and (4) Well-being and mental health (see **Table 3**). This category is aligned with the most common leadership outcome criteria, e.g. behavioural measures (job performance), attitudinal measures (job satisfaction), and relational perception (Hoch *et al.*, 2018, Bedi *et al.*, 2016).

Insert Table 3 about here

Psychological Resilience Operationalizes within Various Leadership Styles

In the 47 reviewed articles, 20 studied resilience interacting with leadership generally, while the other 23 investigated 14 types of leadership, such as transformational leadership, empowering leadership, authentic leadership, and leader-member exchange (see **Table 4**).

Insert Table 4 about here

First, six studies investigated how transformational leadership influences leader or subordinate resilience, job engagement, or productivity (article 1, 4, 11, 19, 23, 34, 38, and 40). Secondly, empowering leadership, demonstrated as sharing power and coaching employees, is

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3 linked to improvement in leaders' and employees' resilience and performance (Tau *et al.*, 2018)
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5 (Article 24). Authentic Leadership (Howard and Irving, 2014) and Leader-Member Exchange
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7 (LMX) (Meng *et al.*, 2019) is argued to potentially positively influence subordinates' resilience
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9 and productivity by demonstrating their transparency, self-awareness, and lessening employees'
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11 burnout. Another study by (Teo *et al.*, 2017) investigated the association between leadership
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13 behaviour, employee engagement (EE), and organizational performance. These studies found
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15 that both LMX and employee resilience can influence organizational performance mediating
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17 by EE (Gupta and Sharma, 2018) and lessen employees' burnout (Meng *et al.*, 2019).
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22 To summarize, the reviewed studies investigated psychological resilience
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24 operationalized in 15 types of leadership and reported benefits of resilience through the various
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26 roles, e.g. mediator (Zhu *et al.*, 2019), moderator (Cooke *et al.*, 2019), or predictor (Pillay,
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28 2020) within outcomes. Furthermore, four leadership styles, including transformational
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30 leadership, empowering leadership, authentic leadership, and LMX, are argued to create
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32 supportive work environments, which may enhance employees' resilience.
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38 **Findings and Discussion**

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40 By constantly comparing the emergent themes and sub-themes, psychological resilience
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42 in workplaces (resilience of leaders, employees, or organizations) is identified as the central
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44 theme. All the reviewed articles took resilience at the workplace as one key subject and
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46 examined its associations with either influence factors, build-up factors, or outcomes (i.e.
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48 performance, well-being, job satisfaction, or improved capability). This refers to Grounded
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50 Theory's (Glaser, 1992) definition of the central theme, which has the most frequent
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52 relationships with other themes, e.g. outcomes and influence factors here (Glaser and Holton,
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54 2004). Thus, the theme of psychological resilience in workplaces is identified as the core theme,
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3 which is affected by *Influence* and *Build-up factors* and consequently benefits outcomes, which
4 may be demonstrated as improved work performance, job satisfaction, well-being, or
5 enhanced leadership capabilities. Therefore, the identified central theme and related theoretical
6 themes constitute the emergent theoretical model Building-up Resilience and Being Effective
7 (refer to **Figure 3**).

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16 Insert Figure 3 about here
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22 Fundamentally, this Building-up Resilience and Being Effective Model originally offers
23 a collective knowledge about how psychological resilience is operationalized in leadership by
24 systematic review and synthesis findings of 47 reviewed articles. This model integrates three
25 key findings: (1) Psychological resilience is an essential capability across leadership styles; (2)
26 Psychological resilience can be influenced and developed by personal factors, supportive
27 environment, challenging experience, training, etc.; and, (3) Psychological resilience at
28 workplaces can directly or indirectly improve work performance, leadership capacity, job
29 satisfaction and engagement, well-being, and job satisfaction. From one side, the current study
30 deepens the understanding of resilience in the workplace. The synthesized result highlights
31 resilience's essential role by being reported broader outcomes in diverse leadership contexts.
32 On the other side, the current study presents insights into developing resilience through
33 supportive work environments and challenging experiences.
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52 ***Psychological Resilience—Essential Leadership Capability***

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54 By synthesizing the effects of resilience in 15 leadership styles, the current study
55 proposes that psychological resilience is essential in leadership across contexts. No matter the
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work context, psychological resilience can enhance leaders' ability, which will improve leaders' or employees' performance, well-being, and mental health. This finding is yielded from the various and diversified results reported in reviewed articles. For example, eight reviewed articles have found that transformational leadership may influence leaders' or subordinates' resilience, job engagement, or productivity. The study by Harland *et al.* (2004) analyzed the relationship between psychological resilience and five transformational leadership dimensions by collecting data from 150 MBA students in the USA, which found a significant association between leaders' charismatic and inspirational behaviours and subordinates' resilience and well-being. In addition, other studies have investigated psychological resilience is operationalized within different contexts, including charismatic leadership (Teo *et al.*, 2017), authentic leadership (Zehir and Narcikara, 2016), empowering leadership (Tau *et al.*, 2018), contingent leadership (Camps and Torres, 2011), hubristic leadership (Claxton *et al.*, 2015), humble leadership (Zhu *et al.*, 2019), leader-member exchange (Teo *et al.*, 2017), paradoxical leadership (Franken *et al.*, 2019; Smith and Butler, 2020), servant leadership (Nguyen *et al.*, 2016), and supportive leadership (Cooke *et al.*, 2019). Even though these studies investigated resilience in diverse leadership contexts and reported varied function roles, e.g. mediation (Franken *et al.*, 2019) or moderation (Cooke *et al.*, 2019), most reviewed studies have supported that leaders' behaviours can improve individuals' (leaders and employees) resilience through supportive environments. In turn, improved resilience will positively impact work outcomes, including well-being, work engagement, and performance. Therefore, the finding of the current review emphasizes that as an essential quality, resilience will advance work outcomes across any leadership style and context. This finding may encourage organizations or society to promote psychological resilience, including developing resilient attitudes via adopting a paradoxical perspective, to deal with adversities and uncertainties.

Adopting Paradoxical Perspective and Building-up Resilience

The current study gains some insights into developing psychological resilience by using paradoxical perspectives. The paradoxical lens is a perspective that considers the both-and perspective of the contradictory sides in paradoxes (Schad *et al.*, 2016). Scholars have applied a paradoxical lens to perceive organizational challenges, which interprets challenges from both positive and negative perspectives (Smith and Lewis, 2011). Therefore, a paradoxical perspective can be applied in resilience development as challenging experiences may cause stress and problems and meanwhile may associate with gained coping skills or opportunities. In the reviewed articles, seven studies have found the positive effects of experiencing negative cases: e.g. obstacles (Howard and Irving, 2014); job loss (O'Connor and Batcheller, 2015); adversity (Elkington and Breen, 2015); performance pressure (Cooke *et al.*, 2019, Sanfuentes *et al.*, 2021); and, other work resistance (Tian and Bush, 2020).

Other studies have reported that adversity, such as depression or anxiety, are not only associated with job loss and negative emotions, but also shown positive effects on well-being and enhanced coping skills (Seery *et al.*, 2010, Mancini, 2019). A recent reviewed article investigated the role of adversity in developing black women leaders in USA higher education and found that leaders' adverse life experiences may be transformed into resilience and promote their later leadership development (Chance, 2021). Adversities were fuel for these female leaders' to overcome adverse crucible experiences, thus developing the necessary leadership skills. Additionally, other studies also demonstrated how to learn knowledge and skills from failed projects (Köhler, 2018) or other failure cases (Krieger, 2021, Catalano *et al.*, 2019) and improve capabilities for future tasks. All these studies display that adversity may also demonstrate adversity's positive effects: learning skills failure experience. The

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3 experiences of dealing with challenges may help individuals obtain coping skills and prepare
4 the mindset to respond to adversities. These studies demonstrated the function of paradoxical
5 perspectives, especially in challenging situations.
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10 More importantly, paradoxical perspectives may help leaders and employees to increase
11 their awareness of challenges and focus on both the negative and potential positive aspects.
12 The current study found that supportive leadership behaviours, such as transformational,
13 authentic, empowering, and supportive work environments, may encourage employees to be
14 more adaptive and able to endure work challenges. Adaptive to challenges and persistence
15 under pressure may be recognized as resilient attitudes, and this is aligned with the commonly
16 accepted resilience criteria (Windle *et al.*, 2011, Campbell-Sills and Stein, 2007). Through
17 paradoxical perspectives, individuals may transform their perception of challenges from being
18 afraid of failures to adapting to challenges, which will help them be resilient and endure the
19 work pressure. In other words, the adoption of a paradoxical lens to challenges may be
20 identified as a resilient attitude. Adopting a paradoxical perspective may help leaders and
21 employees increase their awareness of challenges, focus on both the negative and potential
22 positive aspects, and consequently improve their resilient attitudes. These findings can be
23 utilized broadly in practices such as leadership development programmes, talent management,
24 and other human resource activities. In addition, this may align with the recommendation of
25 building up resilience from the American Psychological Association (2020) and be utilized in
26 daily leadership practice beyond workplaces, such as within a family setting and personal
27 relationships.
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51 Thus, promoting paradoxical perspective and resilient attitudes may help individuals and
52 organizations to prosper during challenging times. Attitudes have been acknowledged as a
53 determinant of observed behaviour broadly since the 1970s (Fazio *et al.*, 1983). Individuals
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3 with a resilient attitude tend to develop positive coping strategies to move across, demonstrate
4 better capacities to buffer the negative impact of challenges, and subsequently show a
5 flourishing state despite adversities (Gerino *et al.*, 2017). By adapting to changing
6 circumstances with resilient attitudes, individuals can be empowered to take active steps
7 through difficult circumstances and thus bounce back to normal or better well-being (Luthans
8 *et al.*, 2007). By adapting to changing circumstances with resilient attitudes, leaders can be
9 empowered to take active steps through difficult circumstances. When responding calmly to an
10 extreme challenge, leaders can maintain their emotional stability, behave resiliently, and thus
11 be able to confront challenges.
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24 Moving forward, and following this discussion of paradoxical perspectives,
25 ‘ambidextrous leadership’ could help to assist in coping with the complexities of paradox
26 within psychological resilience in leadership. Ambidextrous leadership is related to
27 Organizational Ambidexterity and is a theory pertaining to paradox (Smith and Butler, 2021).
28
29 An ambidextrous leader can be broadly defined as someone with an ability for embracing and
30 mitigating challenges within and around ‘opposing and complementary poles’ in a flexible way
31 (Kafetzopoulos, 2021). To further explain these ambidextrous theories in simplistic terms, they
32 address and tackle two polar opposites, namely *exploitation* and *exploration* (Birkinshaw and
33 Gupta, 2013; O’Reilly and Tushman, 2013). In broad terms, the former emphasises efficiency,
34 reducing costs and keeping within ‘the known’, and the latter is in line with innovation,
35 experimentation, flexibility and expanding into ‘the unknown’ (Smith, 2016). For resilience
36 and ambidextrous leadership, the emphasis here is not on those specific organisational
37 practices, but is more about having the ability to offer radically different leadership approaches
38 to suit the situation needed. As an example, to manage crises and effectively develop
39 psychological resilience within leaders, there is a need to balance multiple stakeholders, e.g.
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3 the needs of the business and/versus the needs of its people. During a crisis (e.g. COVID-19),
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5 a single approach to leadership could prove ineffective for one of the key stakeholders
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7 (depending on the style adopted). Thus, ambidextrous leadership could offer a different way of
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9 thinking, could highlight a need for agility in leadership skills, and could be considered as a
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11 potential framework for developing psychological resilience in leaders. This could be one
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13 pathway for future research.
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17 To summarise, the current review deepens understanding of resilience development in
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19 two aspects by perceiving challenges through the paradoxical lens. First, adverse experiences
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21 may help leaders improve coping skills and subsequently enhance leadership capabilities.
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23 Secondly, paradoxical perspectives in terms of challenges can be considered as resilient
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25 positions/outlooks, which may help leaders and employees adapt to challenges and endure
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27 pressures. These findings may encourage innovative practical applications of a paradoxical lens
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29 during such adversities, respond with resilient attitudes, and gain coping skills from related
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31 experiences.
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37 **Limitations**

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39 Even though this study provides a deeper understanding of the essential function of
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41 psychological resilience in leadership, the findings are limited to the workplace contexts
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43 investigated, e.g. exploring small sample sizes (13,120) or country contexts (22). Future
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45 research could expand the rhetoric around interactions between psychological resilience and
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47 leadership. Furthermore, the underlining mechanism between the paradoxical perspective and
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49 resilient attitudes is still largely unclear. Thus, more research is needed to disclose the
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51 interaction of paradoxical perceptions and leadership resilience. Further research can
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3 investigate how resilient attitudes demonstrate in actions in dealing with challenges and
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5 adversities.
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10 **Conclusion**

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12 This systematic literature review synthesizes 47 extant studies and provides collective
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14 knowledge about existing studies on resilience in leadership at workplaces by the emergent
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16 Building-up Resilience and Being Effective Model. First and foremost, a key contribution is
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18 the current study brought a diversity of research studies together to discuss their complexities.
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22 Importantly, this study found that resilience is an essential leadership trait and can benefit
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24 individuals and organizations' work outcomes across leadership contexts, and it is not only
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26 helpful in some particular contexts, which goes beyond the limited scope offered in the
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28 literature. Secondly, and perhaps somewhat affirming what may have been expected, leaders
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30 may build up their resilience by obtaining coping skills and improved attitudes toward
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32 challenges. Interestingly, we further an argument that leaders may enhance their resilience
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34 through embracing a paradoxical perspective towards challenges (resilient attitude), e.g. being
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36 adaptive to adversities, and the attitude of learning from failures. These enhanced resilient
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38 attitudes could help leaders deeper understand and examine their reality and persist under high
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40 pressures and develop an innate ability to utilise resources more effectively to help them
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42 survive and thrive in challenging circumstances, instead of becoming overwhelmed by the
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44 burden of complexity or giving up. This will offer a practical contribution to resilience
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46 development and encourage individuals and organizations to promote resilient attitudes toward
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48 adversities.
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55 To conclude, this study first supplies a collective picture of how resilience
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57 operationalizes within leadership at the workplace through thematic synthesizing the extant
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3 studies. The findings highlight that resilience is an essential leadership capability across
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5 leadership styles and provides insight into its build-up and influence mechanism through
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7 paradoxical perspectives and ambidextrous leadership approaches. The findings may
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9 encourage individual leaders and organizations to develop resilience in workplaces,
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11 particularly in dynamic and flexible circumstances.
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Response to Reviewers R1

Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation: Minor Revision

Comments:

See specific comments on each section.

Additional Questions:

1. Originality: Does the paper contain new and significant information adequate to justify publication?: The paper provides a new perspective about resilience development strategy by adding discussions around paradoxical perspectives and ambidextrous leadership approaches. However, the definition of ambidextrous leadership is not given in the paper.

RESPONSE: Thanks for all your positive responses. We have now added further detail around a definition for ambidextrous leadership (please see page 16)—the detail as the following.

An ambidextrous leader can be broadly defined as someone with an ability for embracing and mitigating challenges within and around ‘opposing and complementary poles’ in a flexible way (Kafetzopoulos, 2022). To further explain these ambidextrous theories in simplistic terms, they address and tackle two polar opposites, namely exploitation and exploration (Birkinshaw and Gupta, 2013; O’Reilly and Tushman, 2013).

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3 2. Relationship to Literature: Does the paper demonstrate an adequate understanding
4
5 of the relevant literature in the field and cite an appropriate range of literature sources?
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7 Is any significant work ignored?: The paper synthesizes the effects of resilience in 15
8
9 leadership styles, which shows an adequate understanding of the relevant literature in
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11 the field.
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15 RESPONSE: Thanks!
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20 3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts or
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22 other ideas? Has the research or equivalent intellectual work on which the paper is based
23
24 been well designed? Are the methods employed appropriate?: The paper clearly shows the
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26 data-analysis process and categorizes the themes.
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30 RESPONSE: Thanks!
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34 4. Results: Are results presented clearly and analysed appropriately? Do the conclusions
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36 adequately tie together the other elements of the paper?: The results were clearly presented
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38 and adequately tie together all the elements mentioned above.
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42 RESPONSE: Thanks!
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46 5. Implications for research, practice and/or society: Does the paper identify clearly any
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48 implications for research, practice and/or society? Does the paper bridge the gap between
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50 theory and practice? How can the research be used in practice (economic and commercial
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52 impact), in teaching, to influence public policy, in research (contributing to the body of
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54 knowledge)? What is the impact upon society (influencing public attitudes, affecting quality
55
56 of life)? Are these implications consistent with the findings and conclusions of the paper?:
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3 The paper illustrates different aspects of how adversity works in organizations and the
4 practical application of the paradoxical perspectives.
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8 RESPONSE: Thanks!
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13 6. Quality of Communication: Does the paper clearly express its case, measured against the
14 technical language of the fields and the expected knowledge of the journal's readership? Has
15 attention been paid to the clarity of expression and readability, such as sentence structure,
16 jargon use, acronyms, etc.: Please consider the following :
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22 The last paragraph of the introduction only needs to point out the key questions of the paper
23 and the ideas of writing, rather than using a self-questioning approach.
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28 RESPONSE: Thank you for your comments. This section has been simplified and hopefully
29 avoids this self-questioning approach. We hope the changes can address this issue (please see
30 pages3-4).
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