



## BIROn - Birkbeck Institutional Research Online

Sayers-Brown, Rob and Beauregard, Alexandra and Lewis, Rachel and Yarker, Jo (2025) Examining multi-sector women-only leadership development programs: a scoping review of recruitment processes, design and instruction methods, content and outcomes. *Diversity & Inclusion Research* 2 (1), pp. 1-23. ISSN 2835-236X.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/54543/>

*Usage Guidelines:*

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html> or alternatively contact [lib-eprints@bbk.ac.uk](mailto:lib-eprints@bbk.ac.uk).

REVIEW ARTICLE OPEN ACCESS

# Examining Multi-Sector Women-Only Leadership Development Programmes: A Scoping Review of Recruitment Processes, Design and Instruction Methods, Content and Outcomes

Rob Sayers-Brown<sup>1,2</sup>  | T. Alexandra Beauregard<sup>1</sup>  | Rachel Lewis<sup>1,3</sup>  | Joanna Yarker<sup>1,3</sup> 

<sup>1</sup>Birkbeck Business School, University of London, London, UK | <sup>2</sup>Kiddy & Partners, London, UK | <sup>3</sup>Affinity Health at Work, London, UK

**Correspondence:** Rob Sayers-Brown ([rmsayers@me.com](mailto:rmsayers@me.com))

**Received:** 15 September 2023 | **Revised:** 1 August 2024 | **Accepted:** 1 October 2024

**Keywords:** intersectionality | leadership diversity | scoping review | women-only leadership development programmes

## ABSTRACT

Organisations are recognising that more needs to be done to support female talent. One response to this is women-only leadership development programmes (WLDPs). To date, no scoping review has previously been conducted to examine the design and outcomes of these programmes. The purpose of the present review was therefore to bring together current knowledge of these interventions. In June 2022, a scoping review of the academic literature was performed using Business Source Premier (EBSCO), PsycINFO and SCOPUS, resulting in 13 articles meeting the inclusion criteria. Findings indicate encouraging signs that these programmes support women's development through incorporating intersectionality and positive psychology theories, as well as curricula on networking, conflict management and career planning. Whilst the specifics about the design and delivered content of these theories are unclear, their inclusion appears to lead participants in the reviewed WLDPs to report increased self-awareness, clarity of purpose and enhanced feelings of authenticity. This review also raises questions regarding the rigour of the selection methods by which participants are given access to the programmes, and the transparent reporting of the design and delivery methodologies. Further, research directions and implications for both theory and practice are provided.

## 1 | Introduction

In 1986, the 'glass ceiling' metaphor was introduced by Hy-mowitz and Schechellhardt in the *Wall Street Journal* (Jain and Mukherji 2010) as 'an invisible, covert and unspoken phenomenon that existed to keep executive level leadership positions in the hands of Caucasian males' (p. 13). Organisations are increasingly recognising the inhibiting nature of this analogy, employing strategies and policies to leverage an inclusive workforce and obtaining competitive advantage amongst their competitors (Pichler, Varma, and Bruce 2010). Yet even though protocols exist within UK legislation (i.e., the Equality Act 2010) to protect against gender-based discrimination in the

workplace, empirical observations have suggested that the 'glass ceiling' is still very much in existence in the United Kingdom (Maddrell, Thomas, and Wyse 2019), with the UK scoring below the OECD average in *The Economist* (2024) Glass Ceiling Index.

This continued vertical gender segregation cannot fully be explained on the basis of human capital factors and differences in qualifications, work history and experience. For example, Manning and Swaffield (2008) explain the career mobility gap based on gender differences in psychological attitudes which can promote occupational attainment, for example, attitudes towards risk-taking, competition and self-esteem, with women leaders noted as displaying more considered amounts of these

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 The Author(s). *Diversity & Inclusion Research* published by John Wiley & Sons Ltd.

qualities. Stamarski and Son Hing (2015) point to gender inequalities in organisational structure, strategy, culture, climate and HR policies contributing to gender discrimination in HR-related decision making, in addition to the role of sexism in organisational decision makers. More recently, data from the Global Gender Gap Report (World Economic Forum 2022), which measures the share of women and men who occupy senior and manager roles across 146 countries, suggests that whilst, overall, women's career advancement has become more similar to men over time, the progress towards gender parity remains hindered. They attribute this to an increasing polarisation of employment and occupational structures coupled with societal expectations and uncertainties about labour market conditions. These barriers can exacerbate differences in psychological attributes, affecting individuals' self-efficacy (Gascoigne and Kelliher 2018), motivation (Nirwana and Prasojo 2021) and ambition (Cooke and Xiao 2021).

These observations have informed a growing area of interest in women-only leadership development programmes (WLDPs, Lanaj and Hollenbeck 2015). To date, there has been no review that seeks to synthesise and conceptualise the programmes aimed at advancing women in leadership within organisations. Such a review is crucial for four reasons. First, prior observations note that women have often had limited access to such developmental opportunities (Hopkins et al. 2008). Consequently, it is essential to understand the selection and recruitment mechanisms of development programmes to prevent them from exacerbating existing barriers. Second, understanding the design and instruction methods employed in WLDPs is essential for delivering programmes that are both relevant and impactful, whilst addressing the unique challenges and needs of women leaders (Eagly and Carli 2007; Martin and Meyerson 1998). Third, assessing the contents of WLDPs enhances our understanding of effective components that facilitate the growth of women leaders, better equipping them with the skills and resources necessary to thrive in their roles (Ibarra and Obodaru 2016). Finally, examining the outcomes of WLDPs provides valuable insights into their efficacy and value. By analysing the impact of WLDPs on participants, including the components and content that 'make the difference', we can better understand how these programmes contribute to advancing women's leadership trajectories and fostering inclusive workplaces (Ely, Ibarra, and Kolb 2011; Vinnicombe and Singh 2002).

This scoping review aims to consider these four facets of WLDPs that make them successful, and to understand if and/or how they have benefited participants on their journey to leadership through the synthesis of the most contemporary and pertinent research. In the next section, we define leadership development and briefly examine factors that aid effective learning before identifying broad outcomes of leadership development programmes.

## 1.1 | Leadership Development Programmes

According to Kaye Hart, Conklin and Allen (2008), leadership development 'involves expanding an organisation's capacity to generate leadership' through 'development at an individual

level' (p. 633). This positions leadership development programmes (LDPs) as a coordinated effort between the individual and the organisation, directed toward leader improvement. Despite this definition, there is no universally accepted theoretical framework for LDPs, as leadership development is a complex, multifaceted process that integrates multiple approaches and adapts to changing organisational and individual needs (Day 2000).

Whilst the underlying theory of LDPs is opaque, the content of effective LDPs appears more coherent. Conger (1993) categorises the content into four overarching domains: personal growth, conceptual understanding, skills building and feedback. These domains encompass a broad range of activities and approaches designed to develop effective leaders. The following sections will examine each of these domains in turn.

### 1.1.1 | Personal Growth

LDPs focused on personal growth encourage participants to reflect on their behaviours, values and needs (Amagoh 2009; Ely, Ibarra, and Kolb 2011; Northouse 2010). Ely, Ibarra and Kolb (2011) describe these programmes as 'identity work', where individuals build their leadership identity, recognise their strengths and areas for development, and understand factors that enable or hinder their success (Avolio, Avey, and Quisenberry 2010; Day 2000).

### 1.1.2 | Conceptual Understanding

LDPs that emphasise conceptual understanding highlight key leadership theories, such as Transformational Leadership (Bass and Riggio 2006), Authentic Leadership (Avolio and Gardner 2005) and Situational Leadership (Hersey, Blanchard, and Johnson 2008), and the contexts in which specific behaviours are effective (Goldman et al. 2021; Burbaugh and Kaufman 2017). This exploration and acquisition of knowledge can broaden an individual's perspective and foster the creation of new mental frameworks (Mezirow 2000).

### 1.1.3 | Skills Building

Skills-focused LDPs provide predefined, instructional content, in contrast to the above which involve a co-creative environment between participants and facilitator (Atwater et al. 1999). These programmes concentrate on practising essential leadership skills, such as feedback conversations and presentations, through simulations and role-plays to build proficiency (Goldman et al. 2021; Kaye Hart, Conklin, and Allen 2008).

### 1.1.4 | Feedback

Feedback-oriented LDPs use psychometric assessments, multirater feedback, peer debriefs and mentoring or coaching sessions (Boyce, Jeffrey Jackson, and Neal 2010). These individualised programmes address the unique learning and development needs of each

participant, unlike group-based approaches seen in other domains (Ely and Rhode 2010).

Programmes combining these domains have been observed to be fruitful in terms of perceived utility and applicability by the participants (Frawley, Favaloro, and Schulenkorf 2018; Goldman et al. 2021). However, there appears to be two factors which promote the effective transfer of learning: those which are in place before the learning (antecedents) and those which are in place after the learning (sustainability practices) (Collins and Holton 2004).

### 1.1.5 | Antecedents and Sustainability Practices

Baldwin and Ford (1988) summarise these antecedents and sustainability practices into three domains: internal characteristics of the participant, the design and instructional methodologies of the programme and a favourable work environment and learning climate. Internal characteristics of the participant refer to the desire and motivation to learn, with higher levels observed to positively impact participation and learning outcomes (Avolio, Avey, and Quisenberry 2010; Gentry and Martineau 2010; Harris and Cole 2007; Ladyshevsky 2007). Personality constellations, and those possessing high levels of openness to experience, extroversion and conscientiousness, have also been noted to positively impact learning outcomes (Burke and Hutchins 2007; Colquitt, LePine, and Noe 2000). Participants exhibiting these traits are thought more likely to benefit from leadership development initiatives, as they demonstrate a predisposition towards growth, adaptability and effective leadership skills development (Colquitt, LePine, and Noe 2000; Gentry and Martineau 2010). These traits are thus often assessed during the selection process for LDPs (Gentry and Martineau 2010).

LDPs incorporating a range of design and instructional methodologies have been found to enhance the application of learning (Frawley, Favaloro, and Schulenkorf 2018; Goldman et al. 2021; McAlearney 2006; Salas and Cannon-Bowers 2001). For example, content surrounding goal setting, journaling and peer coaching and feedback improves the implementation and sustainability of learning (Boud 1988; Boud and Edwards 1999; Schwartz 1991). In terms of work environment and learning climate, support from supervisors and peers (Day et al. 2014; Hillman, Schwandt, and Bartz 1990), as well as the opportunity to deploy newly acquired knowledge (Baldwin and Ford 1988; Cromwell and Kolb 2004), appears to be key to the sustainability of learning outcomes.

The outcomes of LDPs can be broadly grouped into two domains: human capital and social capital (Day 2000). Human capital refers to a focus on intrapersonal competence, enabling participants to think and act in new ways (Coleman 1988) and to engage with productive behaviours (such as self-control, adaptability and confidence) through an enhanced self-view and leadership identity formation (Hall and Seibert 1992). Social capital refers to the personal relationships and partnerships that a leader has within an organisation (Adler and Kwon 2002; Nahapiet and Ghoshal 1998), to enhance cooperation, knowledge sharing and resource exchanges (Bouty 2000).

In the following section, we briefly discuss women's ability to develop these forms of capital and review some of the critiques that have been levelled at LDPs created to support women in doing so.

## 1.2 | Women and Leadership Development

Women have less ability to develop both human capital and social capital due to bias arising from prevailing cultural beliefs regarding gender, workplace barriers and patterns favouring men (Calás and Smircich 2009; Ely and Meyerson 2000; Kolb and McGinn 2008; Sturm 2004). Organisational hierarchies in which men dominate, along with practices and beliefs which identify leadership behaviours as masculine characteristics, are an example. Although these practices may appear innocuous and be unintentional, they unwittingly communicate that women are less suited to positions of authority (Hopkins et al. 2008). Additionally, male-dominated hierarchies heighten the risk of peoples's natural inclination to drift towards and advocate for those who are similar to themselves. Thus, powerful men champion other men when leadership positions arise (Eagly and Carli 2007). The upshot is less opportunity for women leaders to participate in leadership identity formation and develop their human capital, and build the relationships and networks that cultivate political support and which strengthen their social capital (DeRue et al. 2010; Ibarra, Carter, and Silva 2010; Lord and Hall 2005). The result is one of perpetuation: women's underrepresentation in leadership positions reinforces entrenched societal systems and biases that affirm men's legitimacy for these positions, which in turn maintains these prevailing norms.

This perspective on the interaction between gender and leadership has prompted a focus on WLDPs, aimed at supporting women in and aspiring to positions of seniority (Lanaj and Hollenbeck 2015). Previous scholarship has noted, however, that these programmes fail to fully appreciate the invisible barriers women face on the path to leadership and lack a comprehensive framework or theoretical stance to underpin the design and delivery. For example, many programmes adopt an 'add-women-and-stir' methodology (Martin and Meyerson 1998, 312) and deliver the same content as that delivered to men, failing to appreciate the role of gender in leadership. Other programmes adopt a 'fix-the-women' methodology (Ely and Meyerson 2000), which accepts that gender within leadership does matter, but positions women as deficient and in need of being taught the skills and characteristics demonstrated by their male counterparts. Whilst these two approaches may incorporate some useful tactics, particularly in skill growth surrounding social capital, neither addresses the realities of leadership nor are they likely to support women in developing a leadership identity and the growth of human capital (Ely, Ibarra, and Kolb 2011).

## 1.3 | The Present Review

As outlined, women face unique challenges on the path to leadership (Ely, Ibarra, and Kolb 2011; Kiamba 2008), and this demands a more nuanced approach to their leadership development (Ely and Meyerson 2000; Martin and Meyerson 1998).

Historically, women have had less access to such development (Hopkins et al. 2008). Therefore, it is vital to understand the recruitment and selection mechanisms of development programmes to ensure they do not create further barriers. Furthermore, the underlying design theories, instructional methods and content (i.e., skills, knowledge and abilities developed) of these programmes need to competently address challenges women face, as well as support them in navigating effectively through leadership identity formation (Ely, Ibarra, and Kolb 2011; Vinnicombe and Singh 2002). There is also a need to understand the outcomes of WLDPs and their measurement. This is particularly salient in light of their emphasis on human capital and leadership identity formation, as more traditional methods of evaluation (i.e., surveys and questionnaires) are likely to be inappropriate in capturing the richness of such outcomes (Ely, Ibarra, and Kolb 2011; Vinnicombe and Singh 2002).

Scoping reviews serve as essential tools for mapping the landscape of existing literature, identifying key themes and guiding future research directions (Arksey and O'Malley 2005; Armstrong et al. 2011; Levac, Colquhoun, and O'Brien 2010). They offer a broad overview, helping researchers pinpoint gaps and opportunities for further exploration (Peters et al. 2015). Although LDPs have been extensively analysed through scoping reviews (Allen et al. 2019; Onnis, Hakendorf, and Tsey 2018; Hay et al. 2022), the specific domain of WLDPs remains underexplored. Addressing this gap will enable the present review to offer targeted guidance and informed recommendations for future programmes aimed at developing and supporting women leaders. Additionally, this review will lay the groundwork for subsequent empirical research, contributing to a more nuanced understanding of WLDPs and their impact.

This review aims to examine how leadership development programmes contribute to leadership development in women leaders by posing the question: What is known about leadership development programmes designed to develop women leaders? Specifically, this review looks to understand:

- i. Who is recruited to WLDPs and how does this recruitment take place?
- ii. What design and instructional methodologies are employed?
- iii. What are the skills, knowledge and abilities developed?
- iv. What are the outcomes of programmes and how are these measured?

Exploring these sub-questions is crucial for understanding the effectiveness and impact of WLDPs. First, examining who is recruited and how recruitment takes place helps assess inclusivity and reach, ensuring diverse representation and identifying barriers to entry (Chin 2010; Eagly and Carli 2007). Second, investigating the design and instructional methodologies employed allows for the evaluation of programme quality and innovation, highlighting best practices and areas for improvement (Day 2000; Guthrie and Jones 2012). Third, identifying the skills, knowledge and abilities developed through WLDPs ensures alignment with the competencies required for effective

leadership, providing a framework for assessing the programmes' impact on participants (Mumford et al. 2000). Finally, evaluating the outcomes of these programmes and understanding how they are measured is vital for determining their success, setting benchmarks and guiding continuous improvement efforts (Phillips and Phillips 2016). Addressing these four areas offers a comprehensive understanding of WLDPs, informing the development and enhancement of future programmes tailored for women leaders.

## 2 | Method

### 2.1 | Search and Selection Strategy

In June 2022, a computerised search of the literature was performed using the databases Business Source Premier (EBSCO), PsycINFO and SCOPUS. These were selected to ensure comprehensive coverage, robust functionality and extensive access to full-text articles. Business Source Premier (EBSCO) offers a rich repository of business and management journals. PsycINFO, from the American Psychological Association, specialises in psychological literature and behavioural research. SCOPUS covers multiple disciplines with advanced search and analytics tools for cross-disciplinary analysis.

The SPIO framework (study design, participant population, interventions, outcomes), a variation on PICO (Population, Interventions, Comparison and Outcomes; Richardson et al. 1995), was utilised to define the search terms.

**Study Design:** The search included any type of study set in the context of women's leadership development programmes and published from 2000 until 2022. This timeframe reflects a shift in the global agenda for gender equality, following the release of the United Nations Millennium Development Goals in 2000.

**Population:** The search terms from Mousa et al. (2021) were used to explore the relevant population. Their study explored organisational factors affecting women's advancement in leadership. This review adopts their search terms for consistency as the researcher is targeting the same demographic. These search terms used were ('lead\*' OR 'Manager\*' OR 'supervis\*') AND ('women' OR 'female' OR 'women'), where 'lead\*' enables broader inclusion of 'leads', 'leader(s)', 'leading' and 'leadership', and where 'supervis\*' enables broader inclusion of 'supervises', 'supervisor(s)' and 'supervisory'.

**Intervention:** As LDPs are synonymous with a variety of terminologies, the search terms used for the intervention were based on previous literature reviews which explored LDPs (Frich et al. 2015; Kirchner and Akdere 2014; Rosenman et al. 2015; Straus, Soobiah, and Levinson 2013), namely ('leadership development\*' OR 'development program\*' OR 'development train\*'); where 'leadership development\*' enables broader inclusion of 'leadership development program or programme'; where 'development program\*' enables broader inclusion for 'development programme(s)' and where 'development train\*' enables broader inclusion for 'development training(s)'. Additionally, as WLDPs are deployed by a variety of



institutions and workplaces, it was decided not to include terms relating to the setting as this may reduce the inclusiveness of the search.

Outcomes: Any outcomes related to the efficacy of the development programme were included, as these may be driven by the organisational context and programme design/delivery.

## 2.2 | Eligibility and Review Strategy

The SPIO framework detailed above was utilised to select papers for inclusion. The review included all empirical research, both quantitative and qualitative, that was reported in peer-reviewed journals. Nonempirical studies, purely theoretical or descriptive work, non-intervention studies, books, conference proceedings and publications not peer-reviewed were excluded. The participant population encompassed adults (age 18+) from any sector or country, with nonwork samples being excluded. The intervention considered any programme that was designed and delivered with the purpose of developing female leaders, excluding programmes not specifically aimed at developing female leaders. The outcomes included all measures that assessed the efficacy of the programmes in developing female leaders, with studies that only provided process evaluations being excluded. At each stage of the screening process, all records were evaluated against these criteria. Table 1 provides an overview of the criteria used.

Upon completion of the initial searches, the outputs were transferred to Zotero, a research and reference collation tool. After duplicates were removed, the records were subject to a title sift undertaken by the lead author and second author, achieving a strong Cohen's Kappa ( $k = 0.75$ ), with disagreements resolved via discussion. Titles were preserved if an WLDP intervention appeared to be the focus, and a conservative approach was taken, meaning the record was kept for further screening if the title was unclear.

Following this, the lead author and second author independently conducted an abstract sift using inclusion and exclusion criteria based on the SPIO framework (Table 1), achieving a strong Cohen's Kappa ( $k = 0.87$ ). As before, disagreements were

resolved via discussion. A number of records were discarded as they did not meet the inclusion criteria (i.e., not empirical studies or included nonwork samples). The lead author then conducted a full record sift independently, where the remaining records were subjected to a further screening using the SPIO inclusion and exclusion criteria. A full view of the process is represented in Figure 1.

## 2.3 | Data Extraction and Synthesis

An extraction tool was developed using a modified 'matrix method' offered by Garrard (2020), which followed the SPIO framework to capture the required data systematically (Klopper, Lubbe, and Rugbeer 2007). The data was extracted and populated by the lead author, with the second author reviewing the extraction tool for consistency. In employing a narrative approach, the authors of this review attempt to bring together 'the findings from the set of included studies to draw

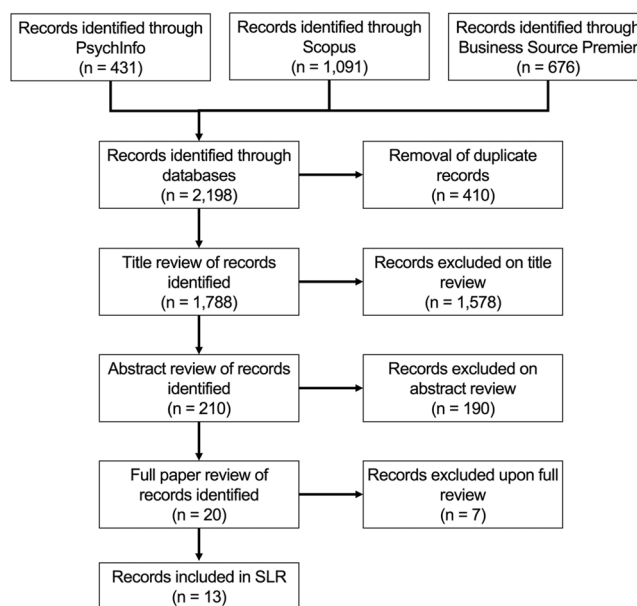


FIGURE 1 | Review strategy and process.

TABLE 1 | SPIO inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criterion
Study design	All empirical research both quantitative and qualitative reported in peer-reviewed journals	Non-empirical studies (purely theoretical or descriptive) Non-interventional studies Books or conference proceedings Not published in peer-reviewed journals
Participant population	Any sector or country Adult population (age 18+)	Non-work samples
Intervention	Any programme designed and delivered with the purpose of developing female leaders	Not specifically aiming to develop female leaders
Outcomes	All outcome measures that measure the efficacy of the programme/s aimed in developing female leaders	Only provides a process evaluation

conclusions based on the body of evidence' (Popay et al. 2006, 10) and build a tessellation of findings. The flexibility of this approach allows the authors to focus on a wide range of questions, not only those concerned with the effectiveness of an intervention (Briner and Denyer 2012).

A quality assessment was conducted and the checklists offered by Snape et al. (2017) were used. These allow for the analysis of qualitative, quantitative and mixed-method studies. Each study was assigned an overall evaluation according to a predefined scoring system based on the number of 'yes' responses: < 10, very low; 10–14, lower low; 15–19, low; 20–24, upper low; > 25, moderate. The data was assessed by the lead author with the third and fourth authors reviewing for consistency, with discrepancies resolved through discussion. Tables were then produced representing the results of the quality assessment (Table 2 for qualitative results and Table 3 for quantitative results).

### 3 | Results

The initial search of the databases retrieved 2198 records. Following a screening procedure (see Figure 1), 13 records remained (Clarke 2011; Dannels et al. 2008; Ford et al. 2021; Harris and Leberman 2012; Helitzer et al. 2014; Kvach et al. 2017; Martínez-Martínez et al. 2021; Nash and Moore 2018, 2021; O'Brien and Allin 2022; Parker et al. 2018; Peterson 2019; Selzer, Howton, and Wallace 2017). The 13 studies originated from eight countries. Four were from the United States, with another being a collaboration between scholars in the United States and Ethiopia. Three studies originated in Australia, and one study each from New Zealand, South Africa, Spain, Sweden and the United Kingdom.

As shown in Table 4, the predominant data collection methodology was qualitative, with nine studies using a qualitative approach. Seven studies used post-WLDP interviews, and another supplemented this with an open-question survey, again administered after the WLDP. One study (Selzer, Howton, and Wallace 2017) used an autoethnographical methodology, where the authors reflected on their experiences post completion. The remaining four studies employed a quantitative approach. Two studies (Helitzer et al. 2014; Parker et al. 2018) used a cross-sectional approach. Helitzer et al. (2014) used a post-WLDP survey to understand perceptions of participants. Parker et al. (2018) conducted two surveys: one to explore differences in participants versus nonparticipants of a WLDP, and another administered to participants only, to gather perceptions and anecdotal feedback. The remaining two studies (Dannels et al. 2008; Ford et al. 2021) used a longitudinal approach. Only one study (Dannels et al. 2008) conducted nonrandomised controlled trials (CT) of a WLDP, with the remaining studies reporting on WLDPs without control groups. No studies employed a randomised controlled trial approach. Dannels et al. (2008) used a pre- and post-WLDP measure, surveying the participants of two WLDPs and comparing these to nonattendees. Ford et al. (2021) used an adapted version of the Leadership Learning and Career Development (LLCD) survey (McDade et al. 2004) which was administered at three timepoints: at the start of the WLDP, upon graduation and 2-years post completion.

### 3.1 | Participant Characteristics

Across the 13 studies, there were a total of 1977 participants. Participant age ranged from 20 to 67 in the six studies that reported this information. As per the inclusion criteria, these studies focused on WLDPs and, as such, the gender of the participants was female only. Of the four studies (Helitzer et al. 2014; Kvach et al. 2017; Nash and Moore 2021; Selzer, Howton, and Wallace 2017) which reported the ethnicity of participants, 733 participants were White, 58 were Asian, 39 were Black, 25 were Hispanic, 6 were American Indian or Alaskan Native, and 4 were Hawaiian or Pacific Islander, signifying an ethnicity bias across the studies.

The setting of the studies was relatively homogenous, with 10 of the studies occurring within academia, and the occupations of the participants were listed as academic educators and leaders. One study (Clarke 2011) focused on the public sector, though the precise occupations are not reported. One study (O'Brien and Allin 2022) centred around leaders within the outdoor sector with participants listed as being in a variety of professional roles. One study (Martínez-Martínez et al. 2021) reported on a WLDP that was open to a broad range of roles and sectors, with the participants belonging to 18 different industries (namely, automotive, health care, insurance, consulting, IT, banking, real estate, furniture retailing, catering, travel, law, advertising, electric, oil and gas, NGO, building, manufacturing and delivery).

As reported in Table 4, nine studies reported the seniority of the participants, with five focused on senior-level leaders (Dannels et al. 2008; Ford et al. 2021; Kvach et al. 2017; Parker et al. 2018; Selzer, Howton, and Wallace 2017), two on mid-level leaders (Clarke 2011; Harris and Leberman 2012), one explored three separate WLDPs aligned each geared a particular level of leadership (junior, mid-level and senior level, Helitzer et al. 2014), and one using a sample of participants across junior, mid and senior-level (Nash and Moore 2018). This suggests a bias towards mid- to senior-level leadership. Four studies (Martínez-Martínez et al. 2021; Nash and Moore 2021; O'Brien and Allin 2022; Peterson 2019) provided no information on the seniority of their participants. An overview of the participant characteristics can be found in Table 4.

### 3.2 | Intervention Characteristics

#### 3.2.1 | Participant Selection Process

Seven of the studies mentioned the participant selection process but with varying degrees of detail surrounding the processes employed. Six of the studies stated that participants were selected and sponsored by senior management, but precise detail about this selection process is not included. Four of these said that selection was open to those with a certain academic rank, tenure and academic achievement, one stated that selection was based on previously displayed leadership characteristics but offers no details surrounding these, and one mentioned selection via senior management. Another study spoke of an application process and selection day, but the specifics were not reported.

**TABLE 2** | Quality assessment for qualitative studies.

Study	6. Was the data analysis sufficiently rigorous?												7. Has the relationship between researcher and participants been adequately considered?	8. Have ethical issues been taken into consideration	9. Contribution to existing knowledge or understanding the research
	1. Is a qualitative methodology appropriate?	2. Is the research design appropriate for addressing the aims of the research?	3. Is there a clear statement of findings?	4. Was the data collected in a way that addressed the research issue?	5. Was the recruitment strategy appropriate to the aims of the research	6. Was the data analysis sufficiently rigorous?	7. Has the relationship between researcher and participants been adequately considered?	8. Have ethical issues been taken into consideration	9. Contribution to existing knowledge or understanding the research	Total score					
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21
4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	17
7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	23
8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	18
6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21
10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21
12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	17
13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	26



TABLE 3 | Quality assessment for quantitative studies.

	1. Was the evaluation well-designed?	2. Was the study carried out appropriately?	3. Was analysis appropriate?	4. Is the evidence consistent?	8. Have ethical issues been taken into consideration	9. Contribution of the research
Study	Fidelity—extent to which the intervention was delivered with fidelity is clear	Measurement—measures are appropriate for outcomes and population	Measurement—all participants took same measures before and after	Measurement—participants completed	Measurement—assignment to treatment and pre/postmeasures	
	Counterfactual—assignment to treatment and comparison was at appropriate level	Counterfactual—comparison condition provides appropriate	Counterfactual—comparison condition provides appropriate	Counterfactual—comparison condition provides appropriate	Counterfactual—comparison condition provides appropriate	
	Comparison to treatment—thoroughly described	Representative sample for target population	Representative in terms of baseline equivalence between treatment and comparison groups	Sample size—sufficiently large to test for desired impact	Attrition—minimum of 35% completed pre/postmeasures	
	Attrition—clear processes for determining and reporting drop-out and dose	Attrition—assessed and reported overall and differential attrition	Equivalence—risks for contamination of comparison group and other confounding factors taken into account and controlled for—blind assignment	Equivalence—consistent and equivalent measurement of treatment and control	Measures—valid and reliable	
	Measures—valid and reliable	Measures—valid and reliable	Measures—independent of those used as part of intervention	Measures—independent information not just self-report	Analysis methods appropriate	
	Missing data appropriately treated	Findings made explicit	Discussion of evidence for and against researcher arguments	Discussion of credibility of findings	Discussion of findings in relation to research question	
	Sufficient details of how research explained to participants	Researcher discussed issues raised by study	Adequate discussion of issues such as informed consent and anonymity	Consequences of research considered	Approval from an ethics committee	
	Contribution to existing knowledge or understanding					
Total score						
2	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓
5	✓	✓	✓	✓	✓	✓
11	✓	✓	✓	✓	✓	✓

Note: 1 = Clarke (2011); 2 = Dannels et al. (2008); 3 = Ford et al. (2021); 4 = Harris and Leberman (2012); 5 = Helitzer et al. (2014); 6 = Kvach et al. (2017); 7 = Martinez-Martinez et al. (2021); 8 = Nash and Moore (2018); 9 = Nash and Moore (2021); 10 = O'Brien and Allin (2022); 11 = Parker et al. (2018); 12 = Peterson (2019); 13 = Selzer, Howton, and Wallace (2017).

**TABLE 4** | Study and participant characteristics.

Author/date	Country	Sample	Age	Ethnicity	Sector	Occupation	Seniority	Design (quant only)			Data collection
								RCT	CT	T	
Clarke (2011)	South Africa	<i>n</i> = 17	25–45	Not reported	Public Sector	Not reported	Mid				Qual: Postintervention interviews
Dannels et al. (2008)	USA	<i>n</i> = 609	Not reported	Not reported	Academia	Health care educator	Senior	✓			Quant: Pre- and postsurvey, comparing responses to nonattendees
Ford et al. (2021)	USA	<i>n</i> = 197	Not reported	Not reported	Academia	Health care educator	Senior		✓		Quant: Pre-, graduation and postintervention leadership Learning Career Development Survey
Harris and Leberman (2012)	New Zealand	<i>n</i> = 172	Not reported	Not reported	Academia	Educator/ leader in University	Mid				Qual: Postintervention open-ended survey and follow-up interviews
Helitzer et al. (2014)	USA	<i>n</i> = 845	Not reported	White = 712 Asian = 58 Black = 30 Hispanic = 25 American Indian/ Alaskan Native = 6 Hawaiian or Pacific Islander = 4 Other = 10	Academia	Health care educator	Junior, Mid and Senior		✓		Quant: Postintervention survey
Kvach et al. (2017)	USA and Ethiopia	<i>n</i> = 8	20s–40s	Black	Academia	Health care educator	Senior				Qual: Postintervention interviews

(Continues)

TABLE 4 | (Continued)

Author/date	Country	Sample	Age	Ethnicity	Sector	Occu- pation	Seniority	Design (quant only)			Data collection
								RCT	CT	T	
Martínez-Martínez et al. (2021)	Spain	n = 32	Not reported	Not reported	Mixed	Mixed	Not reported				Qual: Postintervention interviews
Nash and Moore (2018)	Australia	n = 25	24–60	Not reported	Academia	University educator	Junior, Mid and Senior				Qual: Postintervention interviews
Nash and Moore (2021)	Australia	n = 19	24–60	White	Academia	University educator	Not reported				Qual: Postintervention interviews
O'Brien and Allin (2022)	UK	n = 845	23–33	Not reported	Outdoor sector	Mixed	Not reported				Qual: Postintervention interviews
Parker et al. (2018)	Australia	n = 47	57–67	Not reported	Academia	Educator/leader in University	Senior		✓		Quant: Survey to understand demographics and postintervention survey sent to those that attended
Peterson (2019)	Sweden	n = 15	Not reported	Not reported	Academia	Educator/leader in University	Not reported				Qual: Postintervention interviews
Selzer, Howton and Wallace (2017)	USA	n = 3	Not reported	White = 2 Black = 1	Academia	Academic staff	Senior				Qual: Postintervention autoethnographical

### 3.2.2 | Design and Delivery

Where reported, the length of the WLDPs ranged from 1 week (Harris and Leberman 2012) to 12 months (Nash and Moore 2018, 2021; Parker et al. 2018). WLDPs were also delivered over 2-week (Kvach et al. 2017), 3-week (Martínez-Martínez et al. 2021), 10-week (O'Brien and Allin 2022) and 7-month (Clarke 2011; Selzer, Howton, and Wallace 2017) periods.

Eight of the studies mentioned the design stages of the WLDPs, though detailed reporting was lacking. Two studies (Clarke 2011; Harris and Leberman 2012) referred to the WLDP being designed by women for women but with no elaboration. One of these (Harris and Leberman 2012) did mention that the design was linked to business strategy and the context of the institution, and balanced with more personal and individual aspects of leadership development. Three studies (Dannels et al. 2008; Nash and Moore 2018; Parker et al. 2018) stated that the design supported women in navigating barriers. Kvach et al. (2017) referred to a 'pre-fellowship needs assessment of fellows to guide curricular objectives and content', though the specifics of this assessment were not provided. Martínez-Martínez et al. (2021) and O'Brien and Allin (2022) offered the most comprehensive overview. The designers of the WLDP investigated by O'Brien and Allin (2022) created a curriculum with similarities to the domains identified by Conger (1993), with a focus on enhancing authenticity and self-confidence. Similarly, Martínez-Martínez et al. (2021) examined a WLDP aimed at enhancing Authentic Leadership (Shamir and Eilam 2005).

Only two studies reported the credentials of the WLDP facilitators. O'Brien and Allin (2022) stated facilitators had a background in psychology and the outdoor sector. Parker et al. (2018) reported facilitators being female academics and external female organisational leadership trainers. Eight of the studies mentioned the importance of a safe and secure environment (Clarke 2011; Kvach et al. 2017; Martínez-Martínez et al. 2021; Nash and Moore 2018, 2021; O'Brien and Allin 2022; Parker et al. 2018; Selzer, Howton, and Wallace 2017), and the facilitator playing a key role in nurturing this. One study (Nash and Moore 2018) reported negative perceptions of where this safety was absent, capturing participant feedback that it can lead to scepticism surrounding the facilitator and the WLDP itself. Three studies (Nash and Moore 2018, 2021; Parker et al. 2018) highlighted the gender of the facilitators, those being one male and one female (Nash and Moore 2018, 2021) and female only (Parker et al. 2018). None of the studies reported on the perceptions of the participants—either positive or negative—regarding any impact of the gender of the WLDP facilitator on the effectiveness of the WLDP or the outcomes they experienced.

Delivery methods were not widely reported or explicit. Where this was reported, group-based discussions (Kvach et al. 2017; Nash and Moore 2018, 2021; O'Brien and Allin 2022; Parker et al. 2018), delivered either virtually or face-to-face, were employed.

### 3.2.3 | Content

The content of the WLDPs mirrored Conger's (1993) four domains of personal growth, conceptual understanding, skills building and feedback.

#### 1. Personal growth

Eleven studies explored WLDPs incorporating the topic of personal growth, with six studies discussing this in some detail. Five of these (Clarke 2011; O'Brien and Allin 2022; Parker et al. 2018; Peterson 2019; Selzer, Howton, and Wallace 2017) focused on the growth of awareness of the intersectionality (Crenshaw 1989) of the participant's multiple identities, as well as the impact this has on their leadership identity construction. Intersectionality has been observed to have conceptual links to Authentic Leadership (Leroy, Palanski, and Simons 2012) and whilst only Martínez-Martínez et al. (2021) explicitly referred to this concept as the framework underpinning the WLDP in their study, it is also mentioned in three other studies (O'Brien and Allin 2022; Parker et al. 2018; Selzer, Howton, and Wallace 2017).

#### 2. Conceptual understanding

Eight of the studies highlighted leadership theories as part of the WLDP content, with varying degrees of detail about the concepts covered. Four of these discussed the core theories in some detail. Nash and Moore (2018, 2021) focused on the concept of Transformational Leadership, emphasising the growth of collaboration, teamwork and the use of authenticity to harness the motivation of the followers of the participants. Authentic Leadership (Leroy, Palanski, and Simons 2012) was the predominant conceptual framework underpinning the WLDP explored by Martínez-Martínez et al. (2021), supporting the participants in developing their sense of self and, in turn, a greater sense of their leadership identity. The concept of Strengths-Based Leadership (Linley, Govindji, and West 2007; Rath and Conchie 2008) underpinned the WLDP and was explored by Parker et al. (2018), with the onus on 'accentuating strengths to enhance personal leadership' (p. 4).

#### 3. Skills building

All studies, apart from one (O'Brien and Allin 2022), reported on skill building elements, with variability in the reporting as to why these skills were selected, explored and developed. Ten studies (Clarke 2011; Dannels et al. 2008; Harris and Leberman 2012; Kvach et al. 2017; Martínez-Martínez et al. 2021; Nash and Moore 2018, 2021; Parker et al. 2018; Peterson 2019; Selzer, Howton, and Wallace 2017) incorporated networking and the growth of connections. Clarke (2011) offered some rationale for its inclusion, with the metaphor of a 'labyrinth' (p. 501) and advocated that networks are required to navigate this effectively. Harris and Leberman (2012) and Nash and Moore (2021) also cited the use of multiple developmental relationships in enhancing outcomes for individuals (Higgins and Kram 2001; Higgins and Thomas 2001). Six studies (Clarke 2011; Dannels et al. 2008; Ford et al. 2021; Harris and Leberman 2012; Helitzer et al. 2014; Selzer, Howton, and Wallace 2017) reported the inclusion of conflict management, though did not offer any rationale for doing so. Six studies (Clarke 2011; Harris and Leberman 2012; Helitzer et al. 2014; Martínez-Martínez et al. 2021; Parker et al. 2018; Selzer, Howton,

and Wallace 2017) reported the inclusion of career planning, though the rationale for its inclusion was limited. Martínez-Martínez et al. (2021) did offer an explanation, identifying the role of prevailing norms and ideologies contributing to potentially lower levels of career agency in women (Eagly and Carli 2003).

#### 4. Feedback

Eight studies incorporated a feedback element, which included coaching, mentoring and psychometric assessments. Five studies mentioned coaching in some capacity, with three mentioning individual coaching (Clarke 2011; Ford et al. 2021; Nash and Moore 2021), two mentioning peer coaching (Parker et al. 2018; Peterson 2019) and one mentioning group coaching (Nash and Moore 2021). However, there was no mention of any contracting via tripartite meetings, cadence of coaching sessions or the position of the sessions in the programme journey (i.e., during or post-WLDP). Additionally, there was limited reporting in relation to the perceived impact from participants on these interventions, though in the only study where this was noted (Parker et al. 2018) it appeared to be mixed, with 62% of participants finding it either quite beneficial or extremely beneficial.

Two studies (O'Brien and Allin 2022; Parker et al. 2018) mentioned mentoring, though there was limited reporting as to perceived impact. Only one study (Parker et al. 2018) reports this, and the perceived usefulness is mixed, with 55% of participants finding it either quite beneficial or extremely beneficial. However, two studies (Clarke 2011; Selzer, Howton, and Wallace 2017) recommended that a mentoring relationship or guidance on how to secure a mentor would be a useful addition to the content. As with coaching, there was no mention of how these mentoring sessions were arranged, who was involved in the implementation or monitoring, the cadence of sessions or the position of the sessions in the programme journey.

Two studies (Nash and Moore 2021; Selzer, Howton, and Wallace 2017) mentioned the use of psychometric instruments. Prior research has found the use of such tools most effective when linked to the LDP content and future development planning as, without this, the application of insights and the return on investment is likely to be minimal (Kaye Hart, Conklin, and Allen 2008). These observations were mirrored by Selzer, Howton and Wallace (2017), with the results of the StrengthsFinder (Asplund et al. 2007) being discussed only 'at the first meeting' (p. 5). A more beneficial experience was reported by Nash and Moore (2021) with the use of the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT, Mayer, Salovey, and Caruso 2002). The authors noted that the WLDP had a continual focus on emotional intelligence throughout and this alignment with the MSCEIT had a positive impact on participants and their ability to 'enhance their effectiveness as leaders by leveraging emotions' (p. 370).

360-feedback was reported in two studies (Ford et al. 2021; Martínez-Martínez et al. 2021) but with no information regarding the behaviours explored or the perceived value from the participants. Ford et al. (2021) did mention that the findings were integrated to form personal and professional development

plans. An overview of the design and delivery characteristics can be found in Table 5.

### 3.3 | Outcome Characteristics

As reported in the Data Collection section, nine studies used a qualitative approach to the capturing of outcomes, incorporating post-WLDP interviews, open-question surveys and an autoethnographic approach as a means to reflect on the authors' own experiences. The remaining four studies employed a quantitative approach to data collection, incorporating post-WLDP surveys to understand perceptions of participants, pre- and post-WLDP measures constructed around the main themes of the WLDP and compared to perceptions of nonattendees (Dannels et al. 2008), and the LLC (McDade et al. 2004) administered before, after and 2 years post completion of the WLDP.

Using Day (2000) dichotomy, outcomes are categorised as human or social capital.

#### Human capital:

##### 1. Intersectionality and authenticity

Unsurprisingly, all six studies which reported this outcome employed a qualitative approach to data collection, allowing for a more intimate exploration of individual conceptualisations and the experiences of identity development. All six studies reported perceived utility from the participants, with improved self-knowledge, enhanced awareness and deeper confidence in their authentic self, as well as an improved understanding and empathy with others being described. Nash and Moore (2021) noted that the omission of this intersectional lens had ramifications regarding the impact of the programme, observing that this felt akin to 'deleting' (p. 357) the other intersecting identities (e.g., race, ethnicity, class and sexuality) which culminate in a unique array of challenges and obstacles to leadership identity development. This was echoed by Selzer, Howton and Wallace (2017, 12) who highlighted the need for WLDPs to incorporate space for reflection and exploration of complex and nuanced identity intersections as 'authentic leadership requires that we bring more of who we are to the table more often'.

##### 2. Career planning

Six studies reported enhanced career planning as an outcome. The four qualitative studies (Clarke 2011; Harris and Leberman 2012; Martínez-Martínez et al. 2021; Selzer, Howton, and Wallace 2017) reported enhanced clarity and confidence in participants' career direction, as well as in explaining the path of their careers. From a quantitative perspective, Helitzer et al. (2014) also found positive improvements in two areas of planning for promotion and planning for the next career stage. Skill increases were reported across the three programmes: junior level = 49% and 43%, mid level = 31% and 41% and senior level = 23% and 55%. Additionally, Parker et al. (2018) observed perceived usefulness from participants, with 83% of participants



**TABLE 5** | WLDP design and delivery characteristics.

Study	Selection procedure				Delivery method			Content of interventions			
	Intervention length	Design method	Facilitator credentials	Facilitator gender	Virtual or f2f	Type of delivery	Personal Growth	Conceptual Understanding	Skill Building	Feedback	
Clarke (2011)	7 months	Designed by women for women	Not reported	Not reported	Not reported	Not reported	✓	Not reported	✓	✓	
Dannels et al. (2008)	Not reported	To enable female leaders to navigate barriers	Not reported	Not reported	Not reported	Not reported	✓	✓	✓	Not reported	
Ford et al. (2021)	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	✓	✓	✓	✓	
Harris and Leberman (2012)	1 week	Designed by women for women	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	✓	Not reported	
Helitzer et al. (2014)	Not reported	Selected by senior management, with a focus on rank, experience or tenure	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	✓	Not reported	
Kvach et al. (2017)	2 week	Selected by senior management, with a focus on previously demonstrated leadership characteristics	Not reported	Not reported	Face-to-face	Group-based discussion	✓	✓	✓	Not reported	
Martinez-Martinez et al. (2021)	3 weeks	Selected by senior management, with a focus on rank, experience or tenure	Not reported	Not reported	Not reported	Not reported	✓	✓	✓	✓	
Nash and Moore (2018)	12 months	Not reported	Not reported	Male and Female	Virtual, apart from 3-week voyage to Antarctica	Group-based discussion	✓	✓	✓	✓	
Nash and Moore (2021)	12 months	Not reported	Not reported	Male and Female	Virtual, apart from 3-week voyage to Antarctica	Group-based discussion	✓	✓	✓	✓	
O'Brien and Allin (2022)	10 weeks	Selection day	Based on previous research on key constraints in the outdoor industry	Not reported	Face-to-face	Group-based discussion	✓	Not reported	Not reported	Not reported	

(Continues)

**TABLE 5** | (Continued)

Study	Selection procedure			Delivery method				Content of interventions			
	Intervention length	Design method	Facilitator credentials	Facilitator gender	Virtual or f2f	Type of delivery	Personal Growth	Conceptual Understanding	Skill Building	Feedback	
Parker et al. (2018)	12 months	To enable female leaders to navigate barriers	Female academics and leadership trainer	Female	Face-to-face	Group-based discussion	✓	✓	✓	✓	
Peterson (2019)	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	✓	Not reported	✓	✓	
Selzer, Howton and Wallace (2017)	7 months	Not reported	Not reported	Not reported	Not reported	Not reported	✓	✓	✓	✓	

finding the review of their career plans either beneficial or extremely beneficial.

### Social capital

#### 1. Networking

Ten studies reported increased confidence in networking as an outcome. The eight qualitative studies (Clarke 2011; Dannels et al. 2008; Harris and Leberman 2012; Kvach et al. 2017; Martínez-Martínez et al. 2021; Nash and Moore 2021; Parker et al. 2018; Selzer, Howton, and Wallace 2017) reported perceived utility, enhanced confidence and learning in this area. From a quantitative perspective, Helitzer et al. (2014) reported perceived confidence increases in this skill across the three WLDPs in their study (junior level = 50%, mid level = 48% and senior level = 78%). Ford et al. (2021) also reported sustained increases in confidence across three timepoints in leveraging Communities of Leadership Practice skills, which has a focus on networking ( $F(1.899, 328.507), p = 0.00$ ).

#### 2. Conflict management

Six studies reported a perceived increase in comfort in using conflict management techniques. Participants of the WLDPs explored by Harris and Leberman (2012), Kvach et al. (2017) and O'Brien and Allin (2022) reported in post-WLDP interviews that they felt more comfortable and confident in difficult discussions. Ford et al. (2021) reported sustained increases across three timepoints in confidence in leveraging Personal and Professional Leadership Skills, which has a focus on conflict management ( $F(1.876, 313.362) = 81.458, p = 0.00$ ). Helitzer et al. (2014) observed increases in participant perceptions in this area (junior level = 35%, mid level = 38% and senior level = 67%). Dannels et al. (2008) saw a statistically significant increase in this area in the two programmes in comparison to the control group ( $F(2,229) = 3.637, p = 0.05$ ). Table 6 provides an overview of the WLDP outcome characteristics.

### 3.4 | Quality Ratings and Evidence Statements

Using the checklists offered by Snape et al. (2017), a quality rating was allocated to each of the studies. Of the nine qualitative studies, one was of moderate quality, four were of upper low quality and four were of low quality. For those assigned low or very low ratings, these were largely attributed to the lack of discussion of evidence for and against the researcher's arguments, and the lack of explanation regarding modifications during the research; the rationale of participant selection; the analysis technique used; the researchers' relationship with the participants and consideration of ethical issues. Of the four quantitative studies, one was of upper low quality, two of low quality and one of very low quality. Low or very low-quality ratings were largely attributed to lack of consistency in completion of pre/postmeasures, the lack of control groups, the use of only self-report measures, and the lack of explicit consideration of ethical issues and the consequences of these. Evidence statements using the predefined research questions for this review have been created, as seen in Table 7. These were

TABLE 6 | WDLP outcome characteristics.

Study	Outcomes			
	Human		Social	
	Intersectionality and identity dynamics	Career planning	Networking	Conflict management
Clarke (2011)	✓	✓	✓	—
Dannels et al. (2008)	—	—	✓	✓
Ford et al. (2021)	—	—	✓	✓
Harris and Leberman (2012)	—	✓	✓	✓
Helitzer et al. (2014)	—	✓	✓	✓
Kvach et al. (2017)	—	—	✓	✓
Martínez-Martínez et al. (2021)	✓	✓	✓	—
Nash and Moore (2018)	—	—	—	—
Nash and Moore (2021)	—	—	✓	—
O'Brien and Allin (2022)	✓	—	—	✓
Parker et al. (2018)	✓	✓	✓	—
Peterson (2019)	✓	—	—	—
Selzer, Howton and Wallace (2017)	✓	✓	✓	—

assigned a quality rating using the GRADE-CERQual table adapted from Snape et al. (2017).

## 4 | Discussion

This review is the first to synthesise current research on WLDPs. The key aims were to understand the selection process of participants, the design and instructional methodologies used, the skills, knowledge and abilities developed, and the exploration of outcomes as well as the measurement of these.

### 4.1 | Who Is Recruited to WLDPs and How Does This Recruitment Take Place?

A lack of clear reporting is observed in the reviewed studies surrounding how participants are selected and, as a result, have access to WLDPs. Experience, rank and academic achievement/education are key components of selection. When viewed in comparison to predictive validity estimates in a selection and hiring context, Schmidt and Hunter (1998) estimate that these areas have relatively weak predictive power, with estimates ranging between 0.10 and 0.18, with an even more recent review of selection methods finding weaker variations (Sackett et al. 2022). Specifically in relation to proficiency of learning, Hunter (1980) found that these areas were not useful in predicting outcomes and the application of learning. There is also no reference to the antecedents of individual characteristics being understood as part of the selection processes, which is surprising given that such characteristics have been observed to support learning outcomes and application (Colquitt, LePine, and Noe 2000; Gentry and Martineau 2010). There is evidence of

organisational sponsorship, a factor in effective learning transfer (Day et al. 2014; Hillman, Schwandt, and Bartz 1990; London and Mone 1987), in the form of the nomination and selection of participants by senior management. This nomination, however, appears to be used as a *gateway* to access, rather than the support *following* access. Viewing these observations holistically, there appears to be scope for more transparent and robust selection processes to be utilised in the selection of participants. Furthermore, a consequence of the incorporation of selection methods into the participant selection process means that these WLDPs are not accessible to all. This is particularly concerning given the use of selection criteria which have limited predictive power. This could be viewed as reinforcing privilege and favouring socioeconomic status over capability and potential, which these programmes purport to nurture.

### 4.2 | What Design and Instructional Methodologies Are Employed?

A lack of clear reporting is observed in the reviewed studies regarding the design methodologies used. Whilst some of this obscurity may, in part, be attributed to the protection of intellectual property, particularly in relation to those studies which use WLDPs designed by management consultants (Nash and Moore 2018, 2021; Peterson 2019), our findings indicate a dearth of knowledge sharing regarding design methodologies and content.

Most salient among the instructional methodologies was the highlighted role of the facilitator(s), and the need to create a safe and secure environment for participants. Such an environment was observed to create optimum conditions for

TABLE 7 | Evidence statements.

Evidence statement	Quality rating	Reasoning	In which studies
Female leaders are recruited into WLDPs via Selection procedures based on tenure, rank and academic achievements	Initial evidence	There are four studies, ranging from low quality to moderate quality	Helitzer et al. (2014); Martínez-Martínez et al. (2021), Parker et al. (2018); Selzer, Howton and Wallace (2017)
An application process and selection day	Unclear evidence	There is a single study of low quality	O'Brien and Allin (2022)
The design of WLDPs incorporates Women-only designers	Unclear evidence	There are two studies, both of low quality	Clarke (2011); Harris and Leberman (2012)
A participant needs assessment	Unclear evidence	There is a single study of low quality	Kvach et al. (2017)
A focus on navigating gender bias	Unclear evidence	There are three studies, all of which are low quality	Dannels et al. (2008); Nash and Moore (2018); Parker et al. (2018)
Positive leadership theories	Unclear evidence	There are two studies, both of low quality	Martínez-Martínez et al. (2021); O'Brien and Allin (2022)
The delivery of WLDPs incorporates A supportive environment	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Kvach et al. (2017); Martínez-Martínez et al. (2021); Nash and Moore (2018, 2021); O'Brien and Allin (2022); Parker et al. (2018); Selzer, Howton and Wallace (2017)
Group-based discussions (either virtual or fact-to-face)	Initial evidence	There are five studies, all of which are low quality	Kvach et al. (2017); Nash and Moore (2018, 2021); O'Brien and Allin (2022); Parker et al. (2018)
Female-only facilitators	Unclear evidence	There is a single study with some limitations	Parker et al. (2018)
The content of WLDPs includes topics surrounding Personal growth	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Dannels et al. (2008); Ford et al. (2021); Kvach et al. (2017); Martínez-Martínez et al. (2021); Nash and Moore (2018, 2021); O'Brien and Allin (2022); Parker et al. (2018); Peterson (2019); Selzer, Howton and Wallace (2017)
Conceptual understanding	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Dannels et al. (2008); Ford et al. (2021); Kvach et al. (2017); Martínez-Martínez et al. (2021); Nash and Moore (2018, 2021); Parker et al. (2018); Selzer, Howton and Wallace (2017)
Skills building	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Dannels et al. (2008); Ford et al. (2021); Harris and Leberman (2012); Helitzer et al. (2014); Kvach et al. (2017); Martínez-Martínez et al. (2021); Nash and Moore (2021); Parker et al. (2018); Peterson (2019); Selzer, Howton, and Wallace (2017)
Feedback	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Ford et al. (2021); Martínez-Martínez et al. (2021); Nash and Moore (2021); O'Brien and Allin (2022); Parker et al. (2018); Peterson (2019); Selzer, Howton and Wallace (2017)

(Continues)

TABLE 7 | (Continued)

Evidence statement	Quality rating	Reasoning	In which studies
WLDPs influence outcomes of Human capital	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Harris and Leberman (2012); Helitzer et al. (2014); Martínez-Martínez et al. (2021); Nash and Moore (2021); O'Brien and Allin (2022); Parker et al. (2018); Peterson (2019); Selzer, Howton and Wallace (2017)
Social capital	Promising evidence	There are multiple studies, ranging from low quality to moderate quality	Clarke (2011); Dannels et al. (2008); Ford et al. (2021); Harris and Leberman (2012); Helitzer et al. (2014); Kvach et al. (2017); Martínez-Martínez et al. (2021); Nash and Moore (2021); O'Brien and Allin (2022); Parker et al. (2018); Selzer, Howton and Wallace (2017)

exploration and learning. Where this environment was not created and protected by the facilitator, as captured in the observations made by Nash and Moore (2018), it may have the potential to undermine the security of the environment and, in turn, erode the impact of the WLDP. These observations highlight the importance of the skills of the facilitators, and how they must remain finely attuned to the sensitivities of the group. Interestingly, the gender of the facilitator(s) is not widely reported, and no studies highlighted facilitator gender as having an impact—either positive or negative—on the delivery and outcomes of the WLDP. Finally, neither the delivery medium (i.e., face-to-face or virtual) nor time commitment and length of the WLDP have been evaluated, and these components present an opportunity to deepen knowledge and are worthy of future exploration to understand any effects.

### 4.3 | What Are the Skills, Knowledge and Abilities Developed?

In terms of skills, knowledge and abilities developed, Conger's (1993) four domains provide a useful framework for the consolidation of focus areas. For *personal growth*, the observations from this review suggest that intersectionality, and guided reflection surrounding the interplays among an individual's identities, may be a prerequisite for enhanced growth in the areas of self-awareness, clarity of purpose and, in turn, enhanced feelings of authenticity. Previous scholarship (Debebe et al. 2016) has recommended that WLDPs employ intersectionality as a theoretical lens to prompt and support participants to examine their own leadership identities and narratives, and this lens should transcend single-identity-based (i.e., gender) exploration in favour of broader, more complex intersecting identities (Atewologun, Sealy, and Vinnicombe 2016; Debebe and Reinert 2014). This may, in turn, support participants in the creation of 'identity-specific strategies' to navigate the complexities of their unique organisational context (Atewologun, Sealy, and Vinnicombe 2016, 227). The observations captured in this review regarding the positive response when an intersectional lens is incorporated, as well as critiques of its omission, suggest that it may provide fruitful and reflective ground in WLDPs. By centring intersectionality in programme content and activities, WLDPs may

provide a more inclusive and empowering environment for all participants.

In relation to *conceptual understanding*, the topics of Transformational Leadership, Authentic Leadership and Strengths-based Leadership are most salient. These areas are firmly rooted in disciplines of Positive Psychology and forms of positive leadership (Banks et al. 2016), aimed at supporting women leaders in accentuating their areas of strengths and moving towards an authentic representation of themselves. These observations highlight synergies with those findings outlined above regarding intersectionality and identity dynamics, suggesting that WLDPs which incorporate Positive Psychology theory may help to prompt exploration and enhance the clarity of an individual's leadership 'self'.

In the *skill building* domain, three salient topic areas were identified: networking, conflict management and career planning. Previous scholars exploring access to networks note that these are limited for women leaders. This is, in part, due to the small number of suitable connections and their exclusion from networks which are male dominated (Gibson 2008; Ibarra 1993). These observations, as well as the positive outcomes reported in this review, suggest that content and support in widening these developmental connections is a useful addition. Although the rationale for including conflict management was not disclosed, the observed advantages in terms of perceived usefulness and improved comfort were highlighted. Previous research (Chen 2002; Munduate et al. 1999) has suggested that women may often adopt conflict management styles involving ingratiation (Canary 1995), avoidance (Chen 2002) and compromise (Conrad and Poole 2012) as a means to protect interpersonal relations (Harris 2002). Given these observations, and the outcomes reported in this review, the incorporation of conflict management techniques appears to be a useful addition to support women in feeling comfortable in harnessing a broader range of conflict management techniques. Women may also face challenges in attaining a sense of autonomy and control in their careers, which can be attributed to entrenched traditional gender roles and associated societal norms (Eagly and Carli 2003; Ibarra, Ely, and Kolb 2013). With these



observations and the positive perceptions reported in this review, the inclusion of career planning may be a prudent addition to WLDPs.

In relation to the *feedback* domain, the mechanisms employed in the studies received mixed levels of reporting regarding utility. Where impact has been made explicit, there were mixed perceptions from participants about the usefulness and value of the psychometric tools used. A further avenue of research presents itself regarding the effective inclusion of feedback mechanisms in WLDPs, as well as value and perceived benefits on the participant.

#### 4.4 | What Are the Outcomes of Programmes and How Are These Measured?

The outcomes of WLDPs can be categorised into human and social capital domains. For human capital, participants reported a heightened sense of awareness of their identities using an intersectional lens, an increased sense of authenticity and enhanced clarity about the direction of their careers. For social capital, participants reported perceived comfort in networking and conflict management techniques. These outcomes and the methodology by which they are captured are congruous; those which focus on human capital, anchored within the intra-personal and the enablement of participants to think and act in new ways (Coleman 1988), employ a qualitative approach to capturing outcomes. Those studies which focus on the shift of behaviour, effectiveness of the WLDP, or comfort in leveraging a particular skill, employ a quantitative approach. Social capital can be measured either qualitatively (i.e., via interviews to capture perspectives about networking) or quantitatively (i.e., via surveys capturing before and after WLDP levels of participant comfort in using these skills). This is in line with previous observations in the literature (Datta 1994).

#### 4.5 | Limitations of the Extant Research

Five limitations of the research have been identified in this review. First, our understanding of WLDPs is limited due to the quality of research completed. For example, only one study in this review (Selzer, Howton, and Wallace 2017) achieved a moderate quality rating. Therefore, there is an urgent need for researchers to improve the quality and transparency of their scholarship in the area of WLDP research. Whilst there is promising evidence in some of the areas this review explores, namely, the content and outcomes of WLDPs, more stringency is required in the areas of selection and design methods. Without this, there is a risk that organisations and practitioners adopt less than ideal—or even counterproductive—methods of participant selection and programme creation.

Second, study design also presents a limitation. Only one quantitative study (Dannels et al. 2008) employed a CT design approach with a longitudinal method to understand the lasting impact of learning. Ford et al. (2021) use a longitudinal method without a control group and two studies (Helitzer et al. 2014; Parker et al. 2018) used a cross-sectional approach. Therefore, without enhanced rigour in the study design, there is an

inability to make causal inferences regarding the impact of the WLDP.

Third, researcher reflexivity is not adequately evidenced in the qualitative studies. Only one (Selzer, Howton, and Wallace 2017), which uses autoethnography as a research methodology, reports on reflexivity. Also, no reference to the reflexivity of the facilitator delivering the sessions was made in any of the studies. Reflexivity affords the opportunity to allow the researcher or facilitator to examine their beliefs and assumptions, as well as the influence these aspects wield on their work (Finlay 1998). The lack of explicit consideration and acknowledgement of the impact of facilitator or researcher actions and decisions on the experience under investigation means the quality of the evidence presented in this review is eroded.

The studies are lacking from a diversity perspective. This is particularly apparent with regard to ethnicity, with only 16% of participants being from ethnic minority backgrounds, and so an ethnicity bias can be inferred. This further accentuates the need to explore the impact of other intersecting identities in the creation of a leadership self-concept and ensure the nuances that arise from these identities are considered and supported.

The homogeneity of the setting of the studies also creates an issue, with 77% of the studies taking place in the realm of academia. Previous scholarship has noted a number of factors which may impede the advancement of women to leadership positions in this sector, and these may explain why this sector has dominated the research in this review. Specifically, women tend to experience a lag in the research aspect of their careers in comparison to their male counterparts (Gardiner et al. 2007). Research is reported to be a key aspect of promotion criteria and, as such, the inability to complete such scholarship due to parenting responsibilities may slow career advancement (McCall et al. 2000). Additionally, there may also be cultural factors at play that inhibit the furthering of women. University faculties may be difficult to enter due to entrenched ‘boys’ club’ traditions (McCall et al. 2000), and these further erode the ability to gain access to important networks and developmental relationships (Mousa et al. 2021). However, whilst there is a compelling case for the domination of academia in the reviewed literature, the lack of heterogeneity in this sector prompts the need for further research outside of this setting.

#### 4.6 | Implications for Future Research

Whilst the heightened recognition of the challenges women face on the path to leadership has prompted a growth in literature about WLDPs, this review highlights that there is a need to explore these further and with greater transparency of reporting to further both academic and practitioner knowledge (Mousa et al. 2021). This review also highlights the apparent disconnect between participant selection and the principal advantages of the deployment of such WLDPs, that being the growth of women and access to leadership positions. With the focus of such selection procedures being predominantly based on experience, tenure or academic achievements, they are lacking a comprehensive and evidence-based structure. Future avenues of

research could look to understand the place of selection methods in such programmes, with guidance created to inform their use and application.

With a lens on the design and delivery of WLDPs, this review highlights two avenues for future research. First, in relation to the feedback domain, the mechanisms employed in the studies received mixed levels of reporting regarding their utility. Where the impact was made explicit, participants had mixed perceptions about the usefulness and value of the psychometric tools used. This indicates a need for further research into the effective inclusion of feedback mechanisms in WLDPs, as well as their value and perceived benefits to participants. Second, the gender of the facilitator(s) is not widely reported, and no studies highlighted facilitator gender as having an impact—either positive or negative—on the delivery and outcomes of the WLDP. Additionally, neither the delivery medium (i.e., face-to-face or virtual) nor the time commitment and length of the WLDP have been evaluated. These components present an opportunity for future research to deepen knowledge and understand their effects on the efficacy of these programmes. Exploring these aspects could provide valuable insights into optimising WLDP delivery and outcomes.

With regard to diversity, this review highlights that more attention needs to be paid to women leaders from ethnic minority backgrounds in WLDP research. This review found a bias towards White women, meaning the applicability of the findings for members of other ethnicities may be limited. The favourable responses and reported outcomes regarding the inclusion of content exploring intersectionality and identity dynamics provides fertile ground to explore identities outside of gender. Indeed, two of the included studies (Nash and Moore 2021; Selzer, Howton, and Wallace 2017) also advocate for such research, with specific recommendations surrounding focus areas of sexuality, race, class, religion, age and disability. Indeed, leadership development has been previously positioned as ‘identity work’ (Ely, Ibarra, and Kolb 2011, 2), and this provides an opportunity to deepen understanding of the processes in which individuals construct their leadership identity (Avolio, Avey, and Quisenberry 2010; Day 2000). Exploration of multiple identities and their intersection with leadership is required, as gender may be too narrow a lens through which to view identity development. There is scope for future research to address this and strengthen understanding regarding leadership identity development of those in possession of other under-represented identities (i.e., sexuality, race, class, religion, age and disability), ensuring that those in possession are supported, not erased.

#### 4.7 | Implications for Practice

Four implications for practice can be identified following this scoping review of the literature. The first implication underlines the importance of sharing and publication of knowledge in WLDP research, and to report findings with greater transparency. This review highlights the opacity in this area, which presents a potential conflict between the desire to grow female talent and making leadership accessible. The second implication, pertinent to practitioners and organisations, concerns the

integration of selection methods with the theoretical foundations of the WLDPs they are implementing. Many of the WLDPs examined in this review are firmly rooted in Positive Psychology and various forms of positive leadership. A fundamental principle of such theories is for individuals to maximise their resources and strengths (Super 1955). However, when non-inclusive selection methods are employed, access to the WLDP is restricted. This presents a contradictory message.

The third implication of this review reinforces previous observations in the literature surrounding the inclusion of networking, conflict management and career planning. By developing networks and networking skills, women may be able to ‘disrupt the patterns of social connectivity at work that have for so long privileged men, and in so doing provide a new way to alter the balance of power between the sexes’ (McCarthy 2004, 11). Biases and societal expectations may contribute to and reinforce stereotypes which identify women with the domestic sphere (Acker 2006; O’Connor 2019). This highlights the need to equip women leaders with the skills of conflict management and career planning to challenge these prevailing views (Ely and Rhode 2010). Finally, the fourth implication highlights the utility of incorporating an intersectional lens into WLDPs. By incorporating an intersectional lens and guided reflection surrounding the convergence and divergence of an individual’s identities, participants may be supported in creating and being comfortable in internalising their leadership ‘self’ (Selzer, Howton, and Wallace 2017) and leading with an enhanced understanding of their purpose (Quinn 2011).

#### 4.8 | Limitations of This Review

There are a few notable limitations to this review. First, and driven by the overarching objective, this review was purposefully narrow in scope. Grey material was not included, and the inclusion of such material may have enhanced the evidence from practice that could have added to the findings. Second, it is recognised that the narrow focus of the search terms employed may have inadvertently excluded pertinent research that may have been useful to this review. Third, researcher bias is also a consideration, though this may have been somewhat mitigated by the involvement of additional researchers and the high coefficients in relation to interrater reliability.

#### 5 | Concluding Remarks

The ‘glass ceiling’, though not a modern metaphor, is a prevailing issue. The introduction of WLDPs highlights a recognition of this predicament. This review endeavoured to identify the selection processes, design methodologies, delivery mechanisms, the salient content and the reporting of outcomes through the extrapolation of the most recent research. In doing so, it reveals some troubling findings. There is a concerning lack of consistent reporting, transparent sharing of knowledge and alarming processes concerning the selection of participants and, as a consequence, this review poses more questions than it has answered. These questions are necessary, as the opaqueness uncovered is likely to hinder individuals in their leadership

journey. Developing a more rigorous and consistent approach in the reporting of these areas will strengthen the ability of organisations to support their leaders. This review advocates for the inclusion of an intersectional lens to support leadership identity development. This lens provides fertile ground to explore leadership identity development through the perspectives of those in possession of other underrepresented identities (i.e., ethnic minorities, those with disabilities and LGBTQ+ individuals). The findings of these explorations could inform other leadership development initiatives and, in turn, accelerate the sustainable representation of diversity in leadership roles.

### Conflicts of Interest

The authors declare no conflicts of interest.

### Data Availability Statement

Data sharing is not applicable to this article as no data sets were generated or analysed during the current study.

### References

Those marked with an asterisk are included in the review.

- Acker, J. 2006. "Inequality Regimes: Gender, Class, and Race in Organizations." *Gender & Society* 20, no. 4: 441–464.
- Adler, P. S., and S. W. Kwon. 2002. "Social Capital: Prospects for a New Concept." *Academy of Management Review* 27, no. 1: 17–40.
- Allen, L. M., C. Palermo, E. Armstrong, and M. Hay. 2019. "Categorising the Broad Impacts of Continuing Professional Development: A Scoping Review." *Medical Education* 53, no. 11: 1087–1099.
- Amagoh, F. 2009. "Leadership Development and Leadership Effectiveness." *Management Decision* 47, no. 6: 989–999.
- Arksey, H., and L. O'Malley. 2005. "Scoping Studies: Towards a Methodological Framework." *International Journal of Social Research Methodology* 8, no. 1: 19–32.
- Armstrong, R., B. J. Hall, J. Doyle, and E. Waters. 2011. "Scoping the Scope" of a Cochrane Review." *Journal of Public Health* 33, no. 1: 147–150.
- Asplund, J., S. J. Lopez, T. Hodges, and J. Harter. 2007. *The Clifton StrengthsFinder 2.0 Technical Report: Development and Validation*. Princeton, NJ: The Gallup Organization.
- Atewologun, D., R. Sealy, and S. Vinnicombe. 2016. "Revealing Intersectional Dynamics in Organizations: Introducing 'Intersectional Identity Work'." *Gender, Work & Organization* 23, no. 3: 223–247.
- Atwater, L. E., S. D. Dionne, B. Avolio, J. E. Camobreco, and A. W. Lau. 1999. "A Longitudinal Study of the Leadership Development Process: Individual Differences Predicting Leader Effectiveness." *Human Relations* 52, no. 12: 1543–1562.
- Avolio, B. J., J. B. Avey, and D. Quisenberry. 2010. "Estimating Return on Leadership Development Investment." *Leadership Quarterly* 21, no. 4: 633–644.
- Avolio, B. J., and W. L. Gardner. 2005. "Authentic Leadership Development: Getting to the Root of Positive Forms of Leadership." *Leadership Quarterly* 16: 315–338.
- Baldwin, T. T., and J. K. Ford. 1988. "Transfer of Training: A Review and Directions for Future Research." *Personnel Psychology* 41, no. 1: 63–105.
- Banks, G. C., K. D. McCauley, W. L. Gardner, and C. E. Guler. 2016. "A Meta-Analytic Review of Authentic and Transformational Leadership: A Test for Redundancy." *Leadership Quarterly* 27, no. 4: 634–652.

Bass, B. M., and R. E. Riggio. 2006. *Transformational Leadership* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Boud, D. 1988. "Assessment in Problem-Based Learning." *Assessment & Evaluation in Higher Education* 13, no. 2: 87–91.

Boud, D., and H. Edwards. 1999. "Learning for Practice: Promoting Learning in Clinical and Community Settings." *Educating Beginning Practitioners: Challenges for Health Professional Education*. 173–179.

Bouty, Isabelle. 2000. "Interpersonal and Interaction Influences on Informal Resource Exchanges Between R&D Researchers Across Organizational Boundaries." *Academy of Management Journal* 43, no. 1: 50–65.

Boyce, L. A., R. Jeffrey Jackson, and L. J. Neal. 2010. "Building Successful Leadership Coaching Relationships: Examining Impact of Matching Criteria in a Leadership Coaching Program." *Journal of Management Development* 29, no. 10: 914–931.

Briner, R. B., and D. Denyer. 2012. "Systematic Review and Evidence Synthesis as a Practice and Scholarship Tool." In *The Oxford Handbook of Evidence-Based Management, Oxford Library of Psychology* (Online ed.), edited by D. M. Rousseau, Oxford Academic. <https://doi.org/10.1093/oxfordhb/9780199763986.013.0007>.

Burbaugh, B., and E. K. Kaufman. 2017. "An Examination of the Relationships Between Leadership Development Approaches, Networking Ability, and Social Capital Outcomes." *Journal of Leadership Education* 16, no. 4: 20–39.

Burke, L. A., and H. M. Hutchins. 2007. "Training Transfer: An Integrative Literature Review." *Human Resource Development Review* 6, no. 3: 263–296.

Calás, M. B., and L. Smircich. 2009. "Feminist Perspectives on Gender in Organizational Research: What Is and Is Yet to Be." *The Sage Handbook of Organizational Research Methods*. 246–269.

Canary, D. J. 1995. *Relationship Conflict: Conflict in Parent-Child, Friendship, and Romantic Relationships*. London, UK: Thousand Oaks.

Chen, T.-L. 2002. "Leadership Behavior for Solution of Conflict as Perceived by Physical Education Chairpersons and Faculty Members in the USA." *弘光學報* 39: 149–157.

Chin, J. L. 2010. "Introduction to the Special Issue on Diversity and Leadership." *American Psychologist* 65, no. 3: 150.

Clarke, M. 2011. "Advancing Women's Careers Through Leadership Development Programs." *Employee Relations* 33, no. 5: 498–515.

Coleman, J. S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94: S95–S120.

Collins, D. B., and E. F. Holton, III. 2004. "The Effectiveness of Managerial Leadership Development Programs: A Meta-Analysis of Studies From 1982 to 2001." *Human Resource Development Quarterly* 15, no. 2: 217–248.

Colquitt, J. A., J. A. LePine, and R. A. Noe. 2000. "Toward an Integrative Theory of Training Motivation: A Meta-Analytic Path Analysis of 20 Years of Research." *Journal of Applied Psychology* 85, no. 5: 678–707.

Conger, J. A. 1993. *Learning to Lead: The Art of Transforming Managers Into Leaders*. San Francisco: Jossey-Bass.

Conrad, C., and M. S. Poole. 2012. *Strategic Organizational Communication: In a Global Economy*. London, UK: John Wiley & Sons.

Cooke, F. L., and M. Xiao. 2021. "Women Entrepreneurship in China: Where Are We Now and Where Are We Heading." *Human Resource Development International* 24, no. 1: 104–121.

Crenshaw, K. 1989. "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics." *University of Chicago Legal Forum* 1989, no. 1: 8.

Cromwell, S. E., and J. A. Kolb. 2004. "An Examination of Work-Environment Support Factors Affecting Transfer of Supervisory Skills



- Training to the Workplace." *Human Resource Development Quarterly* 15, no. 4: 449–471.
- Dannels, S. A., H. Yamagata, S. A. McDade, et al. 2008. "Evaluating a Leadership Program: A Comparative, Longitudinal Study to Assess the Impact of the Executive Leadership in Academic Medicine (Elam) Program for Women." *Academic Medicine* 83, no. 5: 488–495.\*
- Datta, L. 1994. "Paradigm Wars: A Basis for Peaceful Coexistence and Beyond." *New Directions for Program Evaluation* 1994, no. 61: 53–70.
- Day, D. V. 2000. "Leadership Development." *The Leadership Quarterly* 11, no. 4: 581–613.
- Day, D. V., J. W. Fleenor, L. E. Atwater, R. E. Sturm, and R. A. McKee. 2014. "Advances in Leader and Leadership Development: A Review of 25 Years of Research and Theory." *The Leadership Quarterly* 25, no. 1: 63–82.
- Debebe, G., D. Anderson, D. Bilimoria, and S. M. Vinnicombe. 2016. "Women's Leadership Development Programs: Lessons Learned and New Frontiers." *Journal of Management Education* 40, no. 3: 231–252.
- Debebe, G., and K. A. Reinert. 2014. "Leading With Our Whole Selves: A Multiple Identity Approach to Leadership Development." In *Handbook of Race-Ethnicity and Gender in Psychology*, edited by M. L. Miville and A. D. Ferguson, 271–293. New York, NY: Springer New York.
- DeRue, D. S., S. J. Ashford, D. S. DeRue, and S. J. Ashford. 2010. "Who Will Lead and Who Will Follow? A Social Process of Leadership Identity Construction in Organizations." *Academy of Management Review* 35, no. 4: 627–647.
- Eagly, A. H., and L. L. Carli. 2003. "The Female Leadership Advantage: An Evaluation of the Evidence." *The Leadership Quarterly* 14, no. 6: 807–834.
- Eagly, A. H., and L. L. Carli. 2007. *Through the Labyrinth: The Truth About How Women Become Leaders*. Boston, USA: Harvard Business Press.
- Ely, R. J., and D. E. Meyerson. 2000. "Theories of Gender in Organizations: A New Approach to Organizational Analysis and Change." *Research in Organizational Behavior* 22: 103–151.
- Ely, R. J., H. Ibarra, and D. M. Kolb. 2011. "Taking Gender Into Account: Theory and Design for Women's Leadership Development Programs." *Academy of Management Learning & Education* 10, no. 3: 474–493.
- Ely, R. J., and D. L. Rhode. 2010. "Women and Leadership." In *Handbook of Leadership Theory and Practice*, edited by N. Nohria and R. Khurana, 377–410. Boston, USA: Harvard Business Press.
- Equality Act. 2010. c. 15. United Kingdom: The National Archives. <https://www.legislation.gov.uk/ukpga/2010/15/contents>.
- Finlay, L. 1998. "Reflexivity: An Essential Component for All Research?" *British Journal of Occupational Therapy* 61, no. 10: 453–456.
- Ford, A. Y., S. Dannels, P. Morahan, and D. Magrane. 2021. "Leadership Programs for Academic Women: Building Self-Efficacy and Organizational Leadership Capacity." *Journal of Women's Health* 30, no. 5: 672–680.\*
- Frawley, S., D. Favaloro, and N. Schulenkorf. 2018. "Experience-Based Leadership Development and Professional Sport Organizations." *Journal of Sport Management* 32, no. 2: 123–134.
- Frich, J. C., A. L. Brewster, E. J. Cherlin, and E. H. Bradley. 2015. "Leadership Development Programs for Physicians: A Systematic Review." *Journal of General Internal Medicine* 30: 656–674.
- Gardiner, M., M. Tiggemann, H. Kearns, and K. Marshall. 2007. "Show Me the Money! An Empirical Analysis of Mentoring Outcomes for Women in Academia." *Higher Education Research & Development* 26, no. 4: 425–442.
- Garrard, J. 2020. *Health Sciences Literature Review Made Easy*. Burlington, USA: Jones and Barlett Learning.
- Gascoigne, C., and C. Kelliher. 2018. "The Transition to Part-Time: How Professionals Negotiate 'Reduced Time and Workload' i-Deals and Craft Their Jobs." *Human Relations* 71, no. 1: 103–125.
- Gentry, W. A., and J. W. Martineau. 2010. "Hierarchical Linear Modeling as an Example for Measuring Change Over Time in a Leadership Development Evaluation Context." *The Leadership Quarterly* 21, no. 4: 645–656.
- Gibson, S. K. 2008. "The Developmental Relationships of Women Leaders in Career Transition: Implications for Leader Development." *Advances in Developing Human Resources* 10, no. 5: 651–670.
- Goldman, E., N. Manikoth, K. Fox, R. Jurjus, and R. Lucas. 2021. "Faculty Leadership Development: A Case Study of a Synergistic Approach." *Medical Teacher* 43, no. 8: 889–893.
- Guthrie, K. L., and T. B. Jones. 2012. "Teaching and Learning: Using Experiential Learning and Reflection for Leadership Education." *New Directions for Student Services* 2012, no. 140: 53–63.
- Hall, D. T., and K. W. Seibert. 1992. "Strategic Management Development: Linking Organizational Strategy, Succession Planning, and Managerial Learning." In *Career development: Theory and practice*, edited by D. H. Montross and C. J. Shinkman, 255–275. Springfield, IL, USA: Charles C Thomas.
- Harris, C. A., and S. I. Leberman. 2012. "Leadership Development for Women in New Zealand Universities: Learning from the New Zealand Women in Leadership Program." *Advances in Developing Human Resources* 14, no. 1: 28–44.\*
- Harris, S. G., and M. S. Cole. 2007. "A Stages of Change Perspective on Managers' Motivation to Learn in a Leadership Development Context." *Journal of Organizational Change Management* 20, no. 6: 774–793.
- Harris, T. 2002. *Women and Interpersonal Power: Working Toward Change*. New York: Palgrave Macmillan.
- Hay, M., L. William, C. Green, E. Gantwerker, and L. Allen. 2022. "Developing Educational Leadership in Health Professions Education." In *Clinical Education for the Health Professions: Theory and Practice*, edited by D. Nestel, G. Reedy, L. McKenna, and S. Gough, 1–30. Singapore: Springer.
- Helitzer, D. L., S. L. Newbill, P. S. Morahan, et al. 2014. "Perceptions of Skill Development of Participants in Three National Career Development Programs for Women Faculty in Academic Medicine." *Academic Medicine* 89, no. 6: 896–903.\*
- Hersey, P., K. H. Blanchard, and D. E. Johnson. 2008. *Management of Organizational Behavior: Leading Human Resources* (9th ed.). Upper Saddle River, NJ: Pearson.
- Higgins, M. C., and K. E. Kram. 2001. "Reconceptualizing Mentoring at Work: A Developmental Network Perspective." *Academy of Management Review* 26, no. 2: 264–288.
- Higgins, M. C., and D. A. Thomas. 2001. "Constellations and Careers: Toward Understanding the Effects of Multiple Developmental Relationships." *Journal of Organizational Behavior* 22, no. 3: 223–247.
- Hillman, L. W., D. R. Schwandt, and D. E. Bartz. 1990. "Enhancing Staff Members' Performance Through Feedback and Coaching." *Journal of Management Development* 9, no. 3: 20–27.
- Hopkins, M. M., D. A. O'Neil, A. Passarelli, and D. Bilimoria. 2008. "Women's Leadership Development Strategic Practices for Women and Organizations." *Consulting Psychology Journal: Practice and Research* 60, no. 4: 348–365.
- Hunter, J. E. 1980. *Validity Generalization for 12,000 Jobs: An Application of Synthetic Validity and Validity Generalization to the General Aptitude Test Battery (GATB)*. US Department of Labor, Employment Service.
- Ibarra, H. 1993. "Personal Networks of Women and Minorities in Management: A Conceptual Framework." *Academy of Management Review* 18, no. 1: 56–87.

- Ibarra, H., N. M. Carter, and C. Silva. 2010. "Why Men Still Get More Promotions Than Women." *Harvard Business Review* 88, no. 9: 80–85.
- Ibarra, H., and O. Obodaru. 2016. "Betwixt and Between Identities: Liminal Experience in Contemporary Careers." *Research in Organizational Behavior* 36: 47–64.
- Ibarra, H., R. Ely, and D. Kolb. 2013. "Women Rising: The Unseen Barriers." *Harvard Business Review* 91, no. 9: 60–66.
- Jain, N., and S. Mukherji. 2010. "The Perception of 'Glass Ceiling' in Indian Organizations: An Exploratory Study." *South Asian Journal of Management* 17, no. 1. [https://www.semanticscholar.org/paper/The-Perception-of-'Glass-Ceiling'-in-Indian-An-Jain-Mukherji/ae49fadde1ca584c0bfb566b3c79360c82a2067c?utm\\_source=direct\\_link](https://www.semanticscholar.org/paper/The-Perception-of-'Glass-Ceiling'-in-Indian-An-Jain-Mukherji/ae49fadde1ca584c0bfb566b3c79360c82a2067c?utm_source=direct_link).
- Kaye Hart, R., T. A. Conklin, and S. J. Allen. 2008. "Individual Leader Development: An Appreciative Inquiry Approach." *Advances in Developing Human Resources* 10, no. 5: 632–650.
- Kiamba, J. M. 2008. "Women and Leadership Positions: Social and Cultural Barriers to Success." *Wagadu: A Journal of Transnational Women's and Gender Studies* 6: 7–26.
- Kirchner, M. J., and M. Akdere. 2014. "Leadership Development Programs: An Integrated Review of Literature." *Journal of Knowledge Economy & Knowledge Management* 9, no. 1: 1–16.
- Klopper, R., S. Lubbe, and H. Rugbeer. 2007. "The Matrix Method of Literature Review." *Alternation* 14, no. 1: 262–276.
- Kolb, D., and K. McGinn. 2008. "Beyond Gender and Negotiation to Gendered Negotiations 09-064." Harvard Business School NOM Working Paper.
- Kvach, E., B. Yesehak, H. Abebaw, J. Conniff, H. Busse, and C. Haq. 2017. "Perspectives of Female Medical Faculty in Ethiopia on a Leadership Fellowship Program." *International Journal of Medical Education* 8: 314–323.\*
- Ladyszewsky, R. K. 2007. "A Strategic Approach for Integrating Theory to Practice in Leadership Development." *Leadership & Organization Development Journal* 28, no. 5: 426–443.
- Lanaj, K., and J. R. Hollenbeck. 2015. "Leadership Over-Emergence in Self-Managing Teams: The Role of Gender and Countervailing Biases." *Academy of Management Journal* 58, no. 5: 1476–1494.
- Leroy, H., M. E. Palanski, and T. Simons. 2012. "Authentic Leadership and Behavioral Integrity as Drivers of Follower Commitment and Performance." *Journal of Business Ethics* 107: 255–264.
- Levac, D., H. Colquhoun, and K. K. O'Brien. 2010. "Scoping Studies: Advancing the Methodology." *Implementation Science* 5: 69.
- Linley, P., R. Govindji, and M. West. 2007. "Positive Psychology Approaches to Public Services Leadership: An Introduction to Strengths-Based Leadership." *International Journal of Leadership in Public Services* 3, no. 4: 44–55.
- London, M., and E. M. Mone. 1987. *Career Management and Survival in the Workplace: Helping Employees Make Tough Career Decisions, Stay Motivated, and Reduce Career Stress*. San Francisco, USA: Jossey-Bass.
- Lord, R. G., and R. J. Hall. 2005. "Identity, Deep Structure and the Development of Leadership Skill." *Leadership Quarterly* 16, no. 4: 591–615.
- Maddrell, A., N. J. Thomas, and S. Wyse. 2019. "Glass Ceilings and Stone Floors: An Intersectional Approach to Challenges UK Geographers Face Across the Career Lifecycle." *Geografiska Annaler: Series B, Human Geography* 101, no. 1: 7–20.
- Manning, A., and J. Swaffield. 2008. "The Gender Gap in Early-Career Wage Growth." *Economic Journal* 118, no. 530: 983–1024.
- Martin, J., and D. Meyerson. 1998. "Woman and Power: Conformity, Resistance, and Disorganized Coaction." In *Power and Influence in Organizations*, edited by R. M. Kramer and M. A. Neale, 311–348. London, UK: Sage Publications.
- Martínez-Martínez, M., M. Molina-López, R. Mateos de Cabo, P. Gabaldón, S. González-Pérez, and G. Izquierdo. 2021. "Awakenings: An Authentic Leadership Development Program to Break the Glass Ceiling." *Sustainability* 13, no. 13: 7476.\*
- Mayer, J. D., P. Salovey, and D. R. Caruso. 2002. *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) Users Manual*. Toronto, Canada: Multi-Health Systems.
- McAlearney, A. S. 2006. "Leadership Development in Healthcare: A Qualitative Study." *Journal of Organizational Behavior* 27, no. 7: 967–982.
- McCall, L., M. Liddell, J. O'Neil, and G. Coman. 2000. "Strategies to Increase the Representation of women on the Academic Staff of the Faculty of Medicine at Monash University." *Higher Education* 39: 131–149.
- McCarthy, H. 2004. *Girlfriends in High Places: How Women's Networks Are Changing the Workplace*. London, UK: Demos.
- McDade, S. A., R. C. Richman, G. B. Jackson, and P. S. Morahan. 2004. "Effects of Participation in the Executive Leadership in Academic Medicine (ELAM) Program on Women Faculty's Perceived Leadership Capabilities." *Academic Medicine* 79, no. 4: 302–309.
- Mezirow, J. 2000. "Learning to Think Like an Adult." In *Learning as Transformation: Critical Perspectives on a Theory in Progress*. San Francisco, USA: Jossey-Bass.
- Mousa, M., J. Boyle, H. Skouteris, et al. 2021. "Advancing Women in Healthcare Leadership: A Systematic Review and Meta-Synthesis of Multi-Sector Evidence on Organisational Interventions." *eClinicalMedicine* 39: 101084.
- Mumford, M. D., S. J. Zaccaro, F. D. Harding, T. O. Jacobs, and E. A. Fleishman. 2000. "Leadership Skills for a Changing World." *Leadership Quarterly* 11, no. 1: 11–35.
- Munduate, L., J. Ganaza, J. M. Peiró, and M. Euwema. 1999. "Patterns of Styles in Conflict Management and Effectiveness." *International Journal of Conflict Management* 10, no. 1: 5–24.
- Nahapiet, J., and S. Ghoshal. 1998. "Social Capital, Intellectual Capital, and the Organizational Advantage." *Academy of Management Review* 23, no. 2: 242–266.
- Nash, M., and R. Moore. 2018. "An Evaluation of a Leadership Development Programme for Women in STEM in Antarctica." *Polar Journal* 8, no. 1: 110–125.\*
- Nash, M., and R. Moore. 2021. "'When I Look in the Bathroom Mirror, I See all the Women Standing Behind Me': An Evaluation of a Leadership Development Program for Women in STEM." *Journal of Sociology* 57, no. 2: 362–379.\*
- Nirwana, T., and E. Prasjojo. 2021. "Analysis of Merit System in the Open Promotion of High Leadership Positions for Women in the Ministry of Home Affairs." *Journal of Governance and Public Policy* 8, no. 3: 235–247.
- Northouse, P. 2010. *Leadership Theory and Practice*. Thousand Oaks, CA: Sage Publications.
- O'Brien, K., and L. Allin. 2022. "Transformational Learning Through a Women's Outdoor Leadership Course." *Journal of Adventure Education and Outdoor Learning* 22, no. 2: 191–202.\*
- O'Connor, P. 2019. "Gender Imbalance in Senior Positions in Higher Education: What Is the Problem? What Can Be Done?." *Policy Reviews in Higher Education* 3, no. 1: 28–50.
- Onnis, L., M. Hakendorf, and K. Tsey. 2018. "How Are Continuous Quality Improvement (CQI) Approaches Used in Evaluating Management Development Programs?: A Literature Review." *Asia Pacific Journal of Health Management* 13, no. 2: i10.
- Parker, P., B. Hewitt, J. Witheriff, and A. Cooper. 2018. "Frank and Fearless: Supporting Academic Career Progression for Women in an Australian Program." *Administrative Sciences* 8, no. 1: 5.\*



- Peters, M. D., C. M. Godfrey, H. Khalil, P. McInerney, D. Parker, and C. B. Soares. 2015. "Guidance for Conducting Systematic Scoping Reviews." *International Journal of Evidence-Based Healthcare* 13, no. 3: 141–146.
- Peterson, H. 2019. "A Women-Only Leadership Development Program: Facilitating Access to Authority for Women in Swedish Higher Education?," *Social Sciences* 8, no. 5: 137.\*
- Phillips, J. J., and P. P. Phillips. 2016. *Handbook of Training Evaluation and Measurement Methods*. New York, USA: Routledge.
- Pichler, S., A. Varma, and T. Bruce. 2010. "Heterosexism in Employment Decisions: The Role of Job Misfit." *Journal of Applied Social Psychology* 40, no. 10: 2527–2555.
- Popay, J., H. Roberts, A. Sowden, et al. 2006. "Guidance on the Conduct of Narrative Synthesis in Systematic Reviews." *A Product From the ESRC Methods Programme Version 1*, no. 1: b92.
- Quinn, R. E. 2011. *Building the Bridge as You Walk on It: A Guide for Leading Change*. San Francisco, USA: Jossey-Bass.
- Rath, T., and B. Conchie. 2008. *Strengths Based Leadership: Great Leaders, Teams, and Why People Follow*. New York, USA: Routledge.
- Richardson, W. S., M. C. Wilson, J. W. Nishikawa, and R. S. Hayward. 1995. "The Well-Built Clinical Question: A Key to Evidence-Based Decisions." *ACP Journal Club* 123, no. 3: A12–A13.
- Rosenman, E. D., J. S. Ilgen, J. R. Shandro, A. L. Harper, and R. Fernandez. 2015. "A Systematic Review of Tools Used to Assess Team Leadership in Health Care Action Teams." *Academic Medicine* 90, no. 10: 1408–1422.
- Sackett, P. R., C. Zhang, C. M. Berry, and F. Lievens. 2022. "Revisiting Meta-Analytic Estimates of Validity in Personnel Selection: Addressing Systematic Overcorrection for Restriction of Range." *Journal of Applied Psychology* 107, no. 11: 2040–2068.
- Salas, E., and J. A. Cannon-Bowers. 2001. "The Science of Training: A Decade of Progress." *Annual Review of Psychology* 52, no. 1: 471–499.
- Schmidt, F. L., and J. E. Hunter. 1998. "The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 Years of Research Findings." *Psychological Bulletin* 124, no. 2: 262–274.
- Schwartz, K. B. 1991. "Clinical Reasoning and New Ideas on Intelligence: Implications for Teaching and Learning." *American Journal of Occupational Therapy* 45, no. 11: 1033–1037.
- Selzer, R., A. Howton, and F. Wallace. 2017. "Rethinking Women's Leadership Development: Voices from the Trenches." *Administrative Sciences* 7, no. 2: 18.
- Shamir, B., and G. Eilam. 2005. "“What's Your Story?” A Life-Stories Approach to Authentic Leadership Development." *The Leadership Quarterly* 16, no. 3: 395–417.
- Snape, D., C. Meads, A. Bagnall, O. Tregaskis, and L. Mansfield. 2017. *What Works Wellbeing: A Guide to Our Evidence Review Methods (Project Report)*. London, UK: What Works Centre for Wellbeing.
- Stamarski, C. S., and L. S. Son Hing. 2015. "Gender Inequalities in the Workplace: The Effects of Organizational Structures, Processes, Practices, and Decision Makers' Sexism." *Frontiers in Psychology* 6: 135488.
- Straus, S. E., C. Soobiah, and W. Levinson. 2013. "The Impact of Leadership Training Programs on Physicians in Academic Medical Centers: A Systematic Review." *Academic Medicine* 88, no. 5: 710–723.
- Sturm, S. 2004. "Second Generation Employment Discrimination: A Structural Approach." In *Women and the US Constitution: History, Interpretation, and Practice*, 292–313. Columbia University Press.
- Super, D. E. 1955. "Transition: From Vocational Guidance to Counseling Psychology." *Journal of Counseling Psychology* 2, no. 1: 3–9.
- The Economist (2024, March 6). "The Economist's Glass-Ceiling Index." <https://www.economist.com/graphic-detail/glass-ceiling-index>.
- Vinnicombe, S., and V. Singh. 2002. "Women-Only Management Training: An Essential Part of Women's Leadership Development." *Journal of Change Management* 3, no. 4: 294–306.
- World Economic Forum. 2022. *Global Gender Gap Report 2022*. Geneva: World Economic Forum.