



Underrepresentation of Female Drivers in Elite Single-Seater Motorsport: A Narrative Review

Samuel Stallard¹ , Kendra McCoy¹ , Diogo V. Martinho^{2,3} , Hugo Sarmento^{2,3} ,

Nuno André Nunes¹ 

¹School of Health and Sport, Southampton Solent University, Southampton, United Kingdom

²CIPER, Faculdade de Ciências do Desporto e Educação Física, Universidade de Coimbra, Coimbra, Portugal

³CIPER, Faculdade de Motricidade Humana, Universidade de Lisboa, Cruz-Quebrada-Dafundo, Portugal

ABSTRACT

This study examines the underrepresentation of female drivers in elite single-seater motorsport through a theory-informed narrative review. Despite formal equality of participation, women remain significantly underrepresented at the highest levels of competition. The review synthesises interdisciplinary literature to explore how structural, sociocultural, and institutional factors shape access, progression, and experiences within the sport. A narrative review methodology was employed, where relevant literature was identified through academic databases and analysed thematically within an interpretivist framework. The findings indicate that underrepresentation emerges from the interaction of multiple barriers rather than a single cause. Sociocultural norms associated with hegemonic masculinity shape perceptions of legitimacy and competence, reinforcing the positioning of male drivers as the normative standard. Structural constraints, including high financial costs, unequal access to sponsorship, and limited development pathways, contribute to a “leaky pipeline” that restricts progression to elite levels. Institutional practices and fragmented governance further sustain these inequalities. While recent initiatives have improved visibility and early-stage access, their impact remains limited, often reflecting symbolic inclusion rather than structural change. The study concludes that meaningful progress requires systemic transformation across the cultural, economic, and organisational foundations of motorsport. The findings provide practical recommendations for governing bodies, teams, sponsors, and policymakers to support more inclusive and sustainable driver development pathways within elite single-seater motorsport.

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Introduction

Women have historically been underrepresented in motorsport, particularly within elite single-seater categories such as Formula 1. Despite the sport being formally open to participation regardless of sex, female representation at the highest levels remains extremely limited. Since the inception of Formula 1 in 1950, only a small number of women have participated in a Grand Prix weekend, reflecting a persistent gender imbalance within the sport

([Braybrook, 2024](#); [Blackstock, 2025](#)). This underrepresentation extends beyond Formula 1 into key developmental pathways, including Formula 2 and Formula 3, where female participation remains minimal, further constraining progression to elite competition. As a result, the motorsport talent pipeline continues to be overwhelmingly male-dominated.

This disparity is not confined to participation statistics but reflects broader structural patterns within the sport. Factors contributing to this disparity include high financial costs, unequal access to sponsorship, and limited opportunities within established development systems ([Howe, 2022](#); [Matthews & Pike, 2016](#)). These barriers interact to create a “leaky pipeline,” a phenomenon where female talent progressively drops out of the development system at critical transition points rather than advancing ([More Than Equal, 2023](#)). The scale of this attrition is evident across the single-seater ladder; while women comprise approximately 13% of competitors at karting level, representation drops to roughly 7% in junior Formula categories and becomes almost non-existent at the apex of the sport ([More Than Equal, 2023](#)). Indeed, a full-time female Formula 1 driver has not competed since Lella Lombardi in 1976 ([Braybrook, 2024](#)). This structural narrowing is further underscored by the limited representation of women in the contemporary FIA Formula 2 and Formula 3 championships. Since the introduction of the modern FIA Formula 2 Championship in 2017, Tatiana Calderón became the first woman to compete in the series, while Sophia Flörsch became the first woman to score points in the modern FIA Formula 3 Championship (Fédération Internationale de l’Automobile, [2019](#), [2023](#)). Taken together, the available evidence indicates a progressive reduction in female representation from karting through the junior single-seater categories and into the upper levels of the sport. However, comparable participation data are not consistently reported across each stage of the pathway, particularly Formula 4, Formula 3, and Formula 2, limiting the extent to which historical attrition can be quantified precisely. Ultimately, these figures reinforce a severe progression gap, highlighting the need to investigate the underlying structural, sociocultural, and institutional mechanisms driving this systematic attrition.

Beyond structural constraints, sociocultural factors play a critical role in shaping women’s experiences and opportunities within motorsport. Research in sport sociology highlights how gender norms and hegemonic masculinity, the culturally dominant form of masculinity that legitimises male authority ([Connell & Messerschmidt, 2005](#)), influence perceptions of competence, positioning male athletes as the normative standard within high-performance sport ([Fink, 2015](#)). Historically, this framework explains how male drivers are constructed as the default archetype of racing competence, while female drivers are cast as outsiders. This directly challenges the assumption that motorsport operates as a pure meritocracy, suggesting instead that perceptions of ability are dictated by gendered cultural norms. These ideological processes are continuously reinforced through media representation, cultural narratives, and institutional practices that frame the sport as inherently masculine ([Matthews & Pike, 2016](#); [Pflugfelder, 2009](#)). As a result, female competitors are frequently treated as exceptions rather than legitimate contenders, reinforcing their systematic marginalisation.

A Bourdieusian perspective further provides a useful framework for understanding how unequal access to resources and recognition may shape progression within motorsport. [Bourdieu \(1986\)](#) identifies four interrelated forms of capital: economic capital, referring to financial resources that facilitate access to opportunities; social capital, referring to networks and relationships that provide access to information, support, and opportunities; cultural capital, referring to knowledge, skills, dispositions, and forms of competence that are valued within a particular social field; and symbolic capital, referring to the recognition, status, and legitimacy that individuals acquire within that field. Applied to motorsport, these forms of capital highlight how progression may depend not only on driving performance but also on access to financial resources, influential networks, valued knowledge and skills, and institutional recognition. These forms of capital may therefore interact to shape the opportunities available to female drivers throughout the development pathway ([Bourdieu, 1986](#)).

Despite increasing academic attention to gender inequality in sport, motorsport remains comparatively underexplored within sport sociology and gender studies ([Matthews & Pike, 2016](#)). Existing research has largely focused on specific dimensions of inequality, such as media representation or isolated individual experiences, with limited integration of how structural, sociocultural, and institutional factors interact to sustain underrepresentation ([Howe, 2022](#); [Pflugfelder, 2009](#)). This fragmentation has resulted in a lack of comprehensive, theory-informed

analyses that explain why gender disparities persist despite recent initiatives aimed at improving inclusion. This review directly addresses this gap by extending existing scholarship beyond isolated contexts. Rather than focusing on a single dimension of inequality, this study provides a theory-informed synthesis across the elite single-seater development pathway, integrating structural, sociocultural, institutional, and psychological perspectives into a single analytical framework. Consequently, this study aims to critically synthesise the literature to uncover the interconnected factors contributing to the underrepresentation of female drivers. By integrating this interdisciplinary research, this narrative review seeks to offer a more comprehensive explanation of gender inequality within motorsport, ultimately contributing to broader academic discussions surrounding inclusion, equity, and institutional change in elite sport.

Methods and Materials

Research philosophy

This philosophical position is supported by a social constructionist ontological stance, which views social categories such as gender as products of discourse, institutional structures, and everyday interaction rather than inherent or biologically fixed characteristics ([Berger & Luckmann, 1971](#); [Burr, 2015](#); [Crotty, 2020](#); [Grix, 2018](#)). Within this framework, the underrepresentation of women in elite single-seater motorsport is understood not simply as an outcome of individual choice or ability, but as a socially constructed phenomenon shaped by broader cultural, structural, and organisational dynamics. This positioning is critical in moving beyond surface-level explanations of inequality and enables a deeper exploration of how power relations and dominant norms operate within the sport.

Design and review approach

A narrative review design was adopted to critically synthesise existing literature on the underrepresentation of female drivers in elite single-seater motorsport. Narrative reviews allow the integration of diverse forms of evidence, including qualitative and quantitative research, theoretical contributions, grey literature, and applied industry reports ([Grant & Booth, 2009](#); [Sukhera, 2022](#); [Hall & Leeder, 2024](#)).

This approach is especially appropriate for the present study, as the research area spans multiple disciplines, including sport sociology, gender studies, and motorsport-specific scholarship, and involves a heterogeneous evidence base. The aim is not to quantify effect sizes or produce generalisable findings, but to develop a theory-informed understanding of how structural, sociocultural, and institutional factors interact to shape women's access, progression, and experiences within motorsport.

Search strategy

A structured and iterative search strategy was undertaken to identify literature relevant to gender inequality and elite single-seater motorsport. Searches were conducted using the Southampton Solent University library catalogue, Google Scholar, and SPORTDiscus, ensuring access to peer-reviewed research across sport sociology, sport management, gender studies, and motorsport-related fields. The primary phase of searching and screening was conducted during the 2025/26 academic year, with sources systematically recorded in a literature review table to support organisation and transparency.

Search terms were developed iteratively to reflect both motorsport-specific and broader theoretical literature. Key terms included “women in motorsport,” “female drivers AND single-seater,” “hegemonic masculinity AND sport,” and “gender inequality AND sport.” Boolean operators were used to refine search results, with “AND” narrowing the scope and “OR” broadening it ([Pearce, 2025](#)). This approach enabled the identification of both motorsport-specific studies (e.g., [Howe, 2022](#); [Matthews & Pike, 2016](#)) and wider theoretical contributions relevant to the study.

The primary timeframe for inclusion was 1990 to 2026, reflecting the expansion of gender and sport scholarship during this period. Earlier seminal works were included where theoretically relevant, including [Berger and Luckmann \(1971\)](#) and [Connell and Messerschmidt \(2005\)](#). In addition, backward snowballing was used to identify further relevant studies through reference lists of key articles ([Greenhalgh & Peacock, 2005](#)).

The overall literature identification, screening, eligibility assessment, and inclusion process is summarised in Figure 1. Following this process, 27 sources were retained for inclusion within the narrative synthesis, comprising peer-reviewed journal articles, academic books, and selected grey literature considered relevant to the review objectives.

Eligibility criteria

The review prioritised peer-reviewed journal articles, academic books, and scholarly texts within sport sociology, gender studies, sport management, and motorsport. Studies were required to demonstrate clear relevance to themes of gender, power, representation, and structural inequality within sport. In addition, selected industry reports, such as those produced by governing bodies and research organisations, were included where they provided contemporary empirical data and contextual insights.

Exclusion criteria included non-scholarly sources, opinion-based material lacking empirical or theoretical grounding, and studies not directly related to the research focus. Non-English language publications were excluded to maintain interpretive consistency and avoid translation bias ([Pieper & Puljak, 2021](#)). These criteria ensured that the final dataset was both relevant and methodologically robust, while remaining aligned with the interpretive aims of the study.

Consistent with the interpretive aims of a narrative review, a formal methodological quality appraisal of the included studies was not undertaken. Rather than evaluating studies using standardised quality assessment tools, emphasis was placed on selecting literature that demonstrated conceptual relevance, theoretical contribution, and methodological credibility. This approach is consistent with narrative review methodology, where the objective is to develop an interpretive and theory-informed synthesis of the available evidence rather than to statistically compare study quality ([Grant & Booth, 2009](#)).

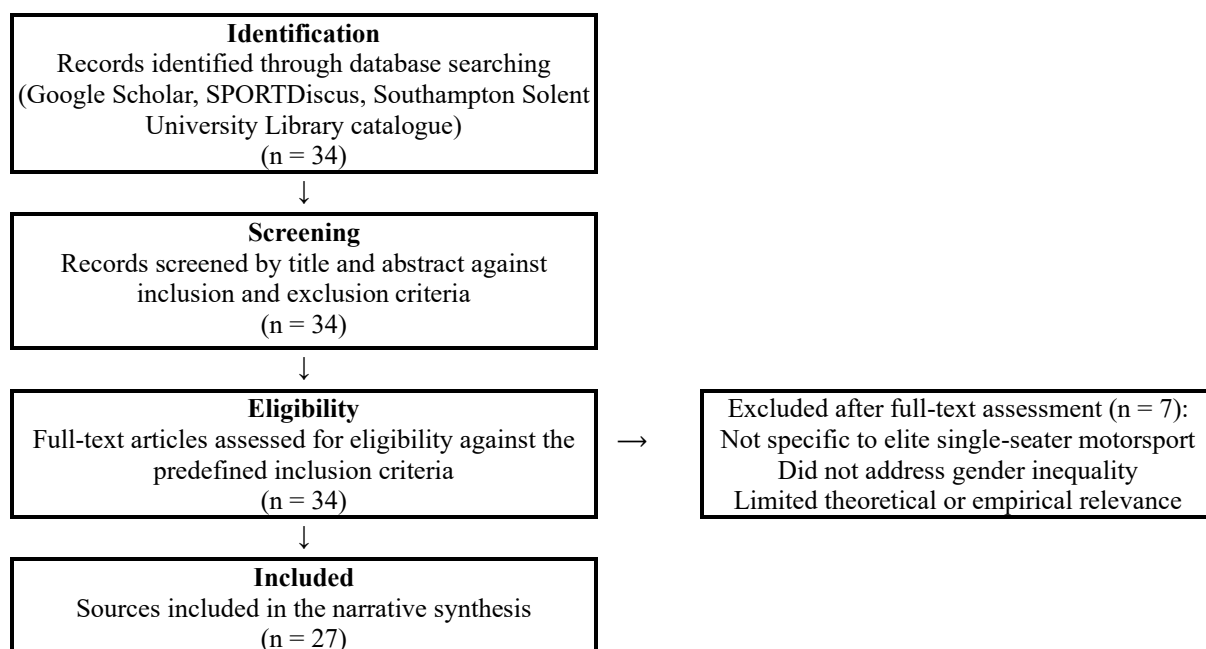


Figure 1. Flow Diagram of Literature Identification and Selection

Data analysis and synthesis

The synthesis process involved iterative reading, coding, and comparison across studies, enabling the identification of recurring patterns and themes ([Braun & Clarke, 2006](#); [Popay et al., 2006](#)). Studies were grouped into key thematic categories, including sociocultural influences, structural and institutional barriers, psychological and interpersonal dynamics, and governance-related factors. This thematic structuring reflects the multidimensional nature of gender inequality in motorsport and allows for the integration of diverse forms of evidence.

Rather than statistical aggregation, the analysis prioritised interpretive synthesis and conceptual integration. Emphasis was placed on how different studies frame and explain women's underrepresentation, as well as the theoretical perspectives employed. This approach enables a deeper understanding of the underlying mechanisms sustaining inequality, moving beyond descriptive accounts to develop a more comprehensive, theory-informed interpretation of the literature ([Greenhalgh et al., 2018](#)).

Results and Discussion

This section addresses the research objectives by synthesising literature on female participation and progression in elite single-seater motorsport, critically examining the sociocultural frameworks used to interpret underrepresentation, and evaluating the effectiveness of initiatives aimed at improving gender inclusion. Consistent with the interpretivist framework outlined in the methodology, the purpose of this section is not simply to describe existing research, but to critically analyse how gender inequality within motorsport is conceptualised and explained within the literature.

Drawing on the studies identified through the search strategy and documented within the literature review table (Table 1), the literature is synthesised across several interconnected themes. The included studies encompass a range of methodological approaches, theoretical perspectives, and motorsport contexts, providing the evidence base for the thematic synthesis presented in the following sections. The themes include the historical and cultural construction of motorsport as a masculine domain, sociocultural barriers shaping perceptions of female drivers, structural and institutional barriers embedded within motorsport, psychological and interpersonal challenges experienced by female drivers, and contemporary initiatives designed to address gender inequality. The conceptual framework presented in Figure 2 provides an overview of the relationships between these interconnected dimensions and the principal themes identified within the review, illustrating how they collectively shape women's participation and progression within elite single-seater motorsport.

Table 1. Characteristics and key findings of included studies (newest to oldest).

Study	Type	Theme	Key Findings	Motorsport Focus
Ross et al. (2025)	Peer reviewed journal article	Initiatives & Progress	Formula E integrates gender inclusion within sustainability agenda. Gender initiatives primarily symbolic rather than structural “Girls on Track” central to engagement strategy. Inclusion framed as secondary to commercial/environmental priorities	Formula E
Jessen (2025)	Grey literature (industry article)	Structural & Institutional Barriers	High costs and early sponsorship bias limit female progression. Investors less likely to fund female drivers at early stages.	Industry-Wide

			Women required to repeatedly prove legitimacy. Mentorship, visibility, and early investment critical for change.	
<u>Fédération Internationale de l'Automobile (2024)</u>	Grey literature (institutional report)	Initiatives & Progress	FIA promotes gender inclusion through structured programmes. "Girls on Track" targets early-stage participation. Focus on education, STEM engagement, grassroots access. Emphasis on visibility and entry pathways rather than elite progression.	Grassroots/ Youth participation
<u>More Than Equal (2023)</u>	Grey literature (research report)	Structural & Institutional Barriers	Female participation declines from 13% (karting) to 7% (elite levels) "Leaky pipeline" evident across development pathway. Key barriers: financial costs, limited track time, stereotypes, lack of role models Motorsport culture often perceived as unwelcoming.	Karting to Formula 1 pathway
<u>Lezotte (2023)</u>	Book chapter	Initiatives & Progress & Historical-Context	Women-only racing provides access to competition. Simultaneously risks reinforcing gender segregation. Highlights tension between inclusion and separation. Reflects limits of structural change.	W Series
<u>Howe (2022)</u>	Peer reviewed journal article	Structural & Sociocultural Barriers	F1 operates as structurally unequal despite formal openness. Gender inequality sustained through cultural beliefs and financial barriers. Women positioned as "outsiders" within elite pathways. Women-only series provide access but risk reinforcing separation.	Formula 1 / W Series
<u>Kochanek et al. (2021)</u>	Peer reviewed journal article	Psychological & Interpersonal Barriers	Female drivers face stereotyping and heightened scrutiny. Mistakes interpreted as gender based rather than individual. Strong link to tokenism and representational pressure. Coping strategies (e.g. "just a driver") may reproduce norms.	Professional Motorsport
<u>Sturm (2021)</u>	Book chapter	Sociocultural Barriers	F1 portrays men as "real drivers" and women as decorative. Media reinforces traditional gender roles. Motorsport spectacle sustains gender hierarchy.	Formula 1
<u>Cunningham (2019)</u>	Book	Structural & Institutional Barriers	Inequality reproduced through informal networks and recruitment. Definitions of "talent" reflect dominant group norms.	Sport in General

			Limits access for underrepresented groups. Reinforces male-dominated progression pathways.	
<u>Waltemeyer (2018)</u>	Grey literature (doctoral thesis)	Psychological & Interpersonal Barriers	Women experience exclusion and bias. Required to work harder to prove competence. Persistence driven by resilience and support networks. Highlights need for cultural change.	Industry-Wide
<u>Matthews & Pike (2016)</u>	Peer reviewed journal article	Historical & Sociocultural	Media historically frames women as novelty or exception. Emphasis on gender difference over performance. Reinforces motorsport as masculine domain. Sustains perception that female participation requires justification.	Industry-Wide
<u>Fink (2015)</u>	Peer reviewed journal article	Sociocultural Barriers	Female athletes underrepresented and sexualised in media. Coverage prioritises appearance over ability. Reinforces gender stereotypes Limited sponsorship and legitimacy	Elite Sport Media
<u>Burton (2015)</u>	Peer reviewed journal article	Structural & Institutional Barriers	Inequality operates across macro, meso, and micro levels. Concepts: Homologous reproduction, Social Capital Requires systemic organisational reform	Sport in General
<u>Fielding-Lloyd & Meân (2011)</u>	Peer reviewed journal article	Psychological & Interpersonal Barriers	“Lack of confidence” is socially constructed. Frames women as deficient while obscuring structural inequality. Shifts responsibility for inequality onto individuals. Confidence better understood as socially produced, not inherent.	Women’s Sport
<u>Stichman et al. (2010)</u>	Peer reviewed journal article	Psychological & Interpersonal Barriers & Tokenism	Tokenism increases visibility and scrutiny. Minority individuals judged as group representatives. Explains heightened scrutiny of female drivers. Reinforces perception of women as exceptions.	N/A
<u>Pflugfelder (2009)</u>	Peer reviewed journal article	Sociocultural Barriers	Motorsport constructs the “ideal driver” as implicitly male. Male bodies framed as naturally suited to racing. Female bodies positioned as anomalous. Produces symbolic exclusion beyond formal rules.	Industry-Wide

<u>Ross et al. (2009)</u>	Peer reviewed journal article	Sociocultural Barriers	Advertising sexualises female drivers. Attractiveness prioritised over competence. Undermines sporting legitimacy.	Motorsport Advertising
<u>McNamee & Miller (2009)</u>	Book	Structural & Institutional Barriers	Sport not a true meritocracy. Success shaped by unequal access to resources. Meritocratic narratives obscure structural inequality. Applies directly to motorsport progression pathways.	Sport in General
<u>Connell & Messerschmidt (2005)</u>	Peer reviewed journal article	Sociocultural Barriers	Hegemonic masculinity defines dominant sporting norms. Masculinity positioned as ideal athlete standard. Reproduces gender hierarchy.	N/A
<u>Sloop (2005)</u>	Peer reviewed journal article	Sociocultural Barriers	Women framed as symbolic representatives. Performance interpreted collectively. Reinforces exceptionalism and scrutiny.	Industry-Wide
<u>Hargreaves (1994)</u>	Book	Historical & Cultural Context	Sport developed as male-dominated institution. Masculine traits define legitimacy. Women enter male structured systems	Women's Sport
<u>Messner (1988)</u>	Peer reviewed journal article	Sociocultural Barriers	Sport reproduces male dominance. Female athletes challenge but also reinforce hierarchy. Visibility does not equal equality.	N/A
<u>Bryson (1987)</u>	Peer reviewed journal article	Historical & Cultural Context	Sport maintains masculine hegemony. Values aggression and dominance. Legitimises gender hierarchy.	N/A
<u>Bourdieu (1986)</u>	Book Chapter	Structural & Institutional Barriers	Economic capital (funding) determines access to motorsport. Social capital (networks) shapes progression opportunities. Reinforces unequal driver development pathways. Explains structural inequality beyond performance.	N/A
<u>Berger & Luckmann (1971)</u>	Book	Sociocultural Barriers	Reality is socially constructed. Gender roles become normalised. Explains perception of motorsport as male.	N/A

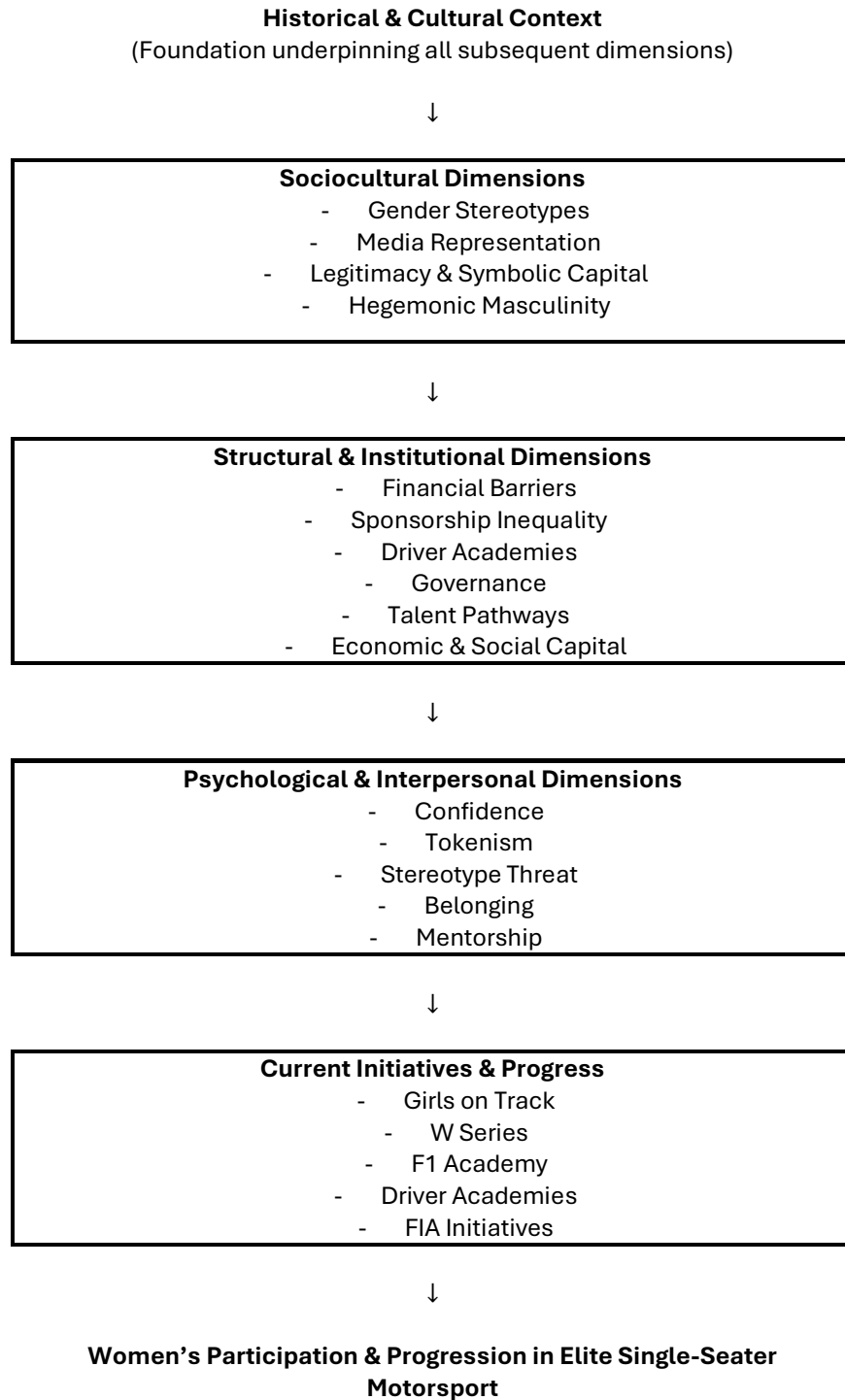


Figure 2. Conceptual Framework of Women's Underrepresentation in Elite Single-Seater Motorsport

Historical Context

Understanding the contemporary underrepresentation of women in elite single-seater motorsport requires examining the historical development of sport as a gendered social institution. Feminist sport sociology consistently argues that organised sport has historically functioned as a site in which masculine dominance is

reproduced and legitimised. [Bryson \(1987\)](#) conceptualises sport as a mechanism through which masculine hegemony is maintained, arguing that sporting cultures celebrate aggression, competitiveness, and physical superiority, traits traditionally associated with male authority. Similarly, [Messner \(1988\)](#) describes sport as a central arena in which gender hierarchies are both constructed and contested, positioning female athletes as “contested ideological terrain” whose presence challenges historically embedded gender norms. Building on these arguments, [Hargreaves \(1994\)](#) demonstrates that even when women gain access to sporting spaces, they frequently enter institutions historically structured around male participation and values. Consequently, women’s inclusion often occurs within systems that continue to privilege masculine ideals of athletic competence. Together, these foundational studies demonstrate that sport is not a neutral arena, but a gendered institution shaped by hegemonic masculinity, where masculine traits are normalised as a standard of athletic legitimacy ([Connell & Messerschmidt, 2005](#)). This provides an important theoretical basis for understanding why women’s participation in motorsport is often perceived as atypical rather than expected.

These theoretical insights are particularly relevant within motorsport, where the cultural symbolism of racing has historically reinforced associations between masculinity, technological expertise, and risk-taking behaviour ([Matthews & Pike, 2016](#); [Pflugfelder, 2009](#)). Motorsport emerged alongside industrial modernity in the early twentieth century, a period during which technological mastery and mechanical skill were strongly associated with masculine identity ([Matthews & Pike, 2016](#)). As a result, the figure of the racing driver became culturally constructed as a symbol of masculine bravery, mechanical knowledge, and physical endurance. [Sturm \(2021\)](#) argues that Formula 1 has historically reproduced this cultural narrative by portraying male drivers as heroic risk takers while simultaneously positioning women within decorative or promotional roles, most notably the grid girl. Similarly, [Pflugfelder \(2009\)](#) demonstrates that motorsport culture constructs the “ideal driver” as implicitly masculine, framing male bodies as naturally suited to the demands of racing while presenting female bodies as anomalous within the sport. This construction reflects hegemonic masculinity in practice, where competence is implicitly gendered and male dominance is normalised. Female drivers are therefore positioned not only as underrepresented but as culturally misaligned with the identity of the sport itself, reinforcing marginalisation beyond formal barriers to entry.

Historical analysis of motorsport media further supports the argument that gendered narratives have long shaped perceptions of female participation. [Matthews and Pike \(2016\)](#) show that media coverage of women in motorsport has frequently emphasised novelty and gender difference rather than sporting performance. Through analysis of newspaper reporting across more than a century of motorsport history, female drivers were often framed as unusual or entertaining exceptions rather than legitimate competitors. This contributed to a broader cultural narrative positioning motorsport as inherently masculine, reinforcing the perception that women’s participation requires explanation or justification.

Importantly, these historical patterns suggest that women’s underrepresentation extends far beyond contemporary participation levels. Instead, motorsport’s evolution within a broader sporting culture of hegemonic masculinity meant that traits like competitiveness, bravery, and technical competence were naturalised as inherently masculine attributes of the elite athlete ([Messner, 1988](#)). This directly undermines the meritocratic myth of the sport, exposing how perceptions of driving ability are fundamentally mediated by gendered cultural norms. Ultimately, the scarcity of female drivers is not a reflection of a lack of interest or talent, but a manifestation of deeper structural and ideological processes embedded within the sport's foundation.

Attempts to address gender imbalance in motorsport have historically reflected the tensions created by this masculinised culture. Women-only racing initiatives have periodically emerged as mechanisms for increasing female participation, ranging from mid-twentieth century “powder puff” races to more recent championships such as the W Series ([Howe, 2022](#)). As [Lezotte \(2023\)](#) argues, these initiatives occupy a contested position within feminist debates; while segregated competitions risk reinforcing the essentialist perception that women require separate categories to compete, they simultaneously provide vital development opportunities and resource access within a system that has historically barred their entry ([Howe, 2022](#)).

This tension highlights a fundamental contradiction in sports governance, where efforts to increase inclusion can inadvertently reproduce existing gender divisions by accommodating women within patriarchal structures rather than challenging the masculine norms that underpin them. Ultimately, these historical dynamics continue to govern contemporary attitudes toward female drivers, mirroring wider patterns across elite sport where inequality is sustained through deeply embedded ideological assumptions of who constitutes a “legitimate” athlete. Unpacking these foundations is therefore essential to explaining the persistent structural and sociocultural barriers examined in the subsequent sections of this review.

Sociocultural barriers

A central theme across the literature concerns persistent assumptions regarding women’s competence within elite racing environments. Although motorsport regulations formally permit participation regardless of gender, cultural attitudes often frame women as less suited to the physical and psychological demands of competitive racing ([Pflugfelder, 2009](#); [Messner, 1988](#)). [Howe \(2022\)](#) argues that Formula 1 cannot be considered a genuinely gender-neutral sporting environment, identifying entrenched cultural beliefs surrounding female inferiority as a key mechanism sustaining gender inequality. These beliefs frequently centre on assumptions regarding physical strength, emotional resilience, and competitiveness qualities culturally associated with masculinity within elite sport ([Hargreaves, 1994](#); [Messner, 1988](#)). Together, these studies suggest that perceptions of ability in motorsport are socially constructed rather than objectively determined, reflecting hegemonic ideals of masculinity that position male drivers as inherently more capable.

Empirical studies examining the experiences of female drivers reinforce this interpretation. [Kochanek et al. \(2021\)](#) highlight, through qualitative interviews with professional female drivers, that they frequently encounter scepticism regarding their competence and legitimacy within the sport. Participants reported that mistakes or poor performances were often interpreted as evidence of women’s general unsuitability for racing rather than individual variation in performance ([Kochanek et al., 2021](#)). This heightened scrutiny reflects dynamics associated with tokenism, where individuals representing a small minority group experience increased visibility and performance pressure within male-dominated environments ([Stichman et al., 2010](#)). As Kanter’s theory of tokenism suggests, minority group members may face exaggerated attention and stereotyping precisely because of their numerical underrepresentation ([Stichman et al., 2010](#)). In the context of motorsport, tokenism helps explain why female drivers are often judged as representatives of their gender rather than as individual competitors, reinforcing the perception that their performance carries broader symbolic significance.

These findings align with research examining the cultural construction of the racing driver as a masculine figure. [Matthews and Pike \(2016\)](#) demonstrate that historical representations of women in motorsport reinforce perceptions of difference and exceptionality, indicating that gender stereotypes continue to influence evaluations of racing ability. Together, these studies suggest that cultural expectations shape how female drivers are assessed, requiring them to continually demonstrate legitimacy within the sport.

Media representation plays an influential role in reproducing these sociocultural dynamics. Research across media studies shows that female athletes are frequently framed through narratives of attractiveness, femininity, or novelty rather than athletic performance ([Fink, 2015](#)). Within motorsport, similar patterns are evident. [Matthews and Pike \(2016\)](#) demonstrate that media coverage often emphasises the rarity of female participation rather than competitive achievement. Likewise, [Ross et al. \(2009\)](#) found that marketing campaigns featuring female drivers frequently prioritised physical attractiveness and femininity, reinforcing traditional gender stereotypes. While such strategies may increase visibility, they may simultaneously undermine perceptions of competence by positioning women as promotional figures rather than elite competitors. This creates a paradox in which increased visibility does not necessarily translate into legitimacy.

The cultural consequences of these representations extend beyond individual media portrayals. [Sloop \(2005\)](#) argues that women in motorsport are frequently positioned as symbolic representatives of their gender rather than evaluated as individual athletes. As a result, the success or failure of female drivers may be interpreted as evidence

of women's collective suitability for the sport. This dynamic intensifies scrutiny and reinforces the perception that female participation is exceptional rather than routine, further reinforcing tokenism.

Despite these barriers, the literature also highlights forms of agency through which female drivers navigate gendered expectations. [Kochanek et al. \(2021\)](#) found that many women adopt strategies aimed at minimising gender difference, such as emphasising their professional identity as “just a driver.” While these strategies may facilitate inclusion within a masculine environment, they can also reproduce existing norms by encouraging adaptation rather than structural change. This reflects a broader tension within gender integration in sport, where individual strategies may enable participation but do not necessarily challenge underlying inequalities.

Overall, the literature demonstrates that sociocultural barriers remain a significant factor shaping female participation within motorsport. Persistent gender stereotypes, media representations, and cultural expectations surrounding femininity continue to influence how female drivers are perceived and evaluated. These dynamics reinforce the perception of motorsport as a masculine domain, contributing to an environment in which women's participation is treated as unusual and subject to greater scrutiny. More broadly, this highlights how gender inequality is sustained through cultural norms and everyday practices, reinforcing the need for both structural and cultural change.

Structural and institutional barriers

While sociocultural factors shape how female drivers are perceived within motorsport, structural and institutional conditions play a decisive role in determining who can enter, progress, and ultimately succeed within elite single-seater pathways. Across the literature, there is strong agreement that motorsport cannot be understood as a purely meritocratic system, as access to opportunities is heavily mediated by financial resources, institutional structures, and governance arrangements ([More Than Equal, 2023](#); [Howe, 2022](#); [Matthews & Pike, 2016](#)). These structural constraints interact with gendered cultural norms to produce a talent pipeline that remains overwhelmingly male-dominated. This challenges the belief that motorsport operates as a meritocracy, instead supporting [McNamee and Miller's \(2009\)](#) argument that sporting success is shaped by unequal access to resources rather than purely individual ability.

A major structural barrier identified across both academic and industry literature is the high financial cost of participation, particularly at early stages of driver development. Motorsport is widely recognised as one of the most expensive sports to enter, with progression through karting and junior Formula categories requiring sustained financial investment ([More Than Equal, 2023](#); [Howe, 2022](#)). These financial barriers are reflected in the escalating costs associated with progression through the FIA single-seater pathway. Although exact costs vary according to championship, team, and geographical location, estimates suggest that a competitive Formula 4 campaign may require between US\$195,000 and €250,000 per season, while FIA Formula 3 and Formula 2 budgets have been estimated at approximately US\$1.2 million and US\$3 million per season, respectively. Importantly, these figures should not be interpreted as a direct cumulative cost of reaching Formula 1, as progression can involve team-funded development programmes, sponsorship, and other forms of financial support, while Formula 1 drivers may ultimately receive professional contracts rather than personally funding their seats ([Howe, 2022](#)). Reliable estimates for competitive international karting are less consistent due to substantial variation in competition level and private expenditure, highlighting a significant gap within the existing evidence base ([Hew, 2026](#)). The importance of financial backing is further illustrated by the case of Williams Racing Driver Academy member Zak O'Sullivan, who was forced to withdraw from the 2024 FIA Formula 2 Championship despite securing two race victories, citing insufficient funding to complete the season. This example demonstrates that progression through the junior single-seater pathway remains contingent not only upon sporting performance but also upon sustained financial support, reinforcing critiques of motorsport as a meritocratic system ([Hew, 2026](#)). The influence of financial capital can also extend into Formula 1, where financially backed drivers have historically secured opportunities partly through family wealth or external sponsorship. Drivers such as Lance Stroll, Nicholas Latifi, Sergey Sirotkin, and Nikita Mazepin have attracted particular attention in this context, illustrating how access to substantial financial backing can influence entry into the highest level of the sport, even where drivers have demonstrated competitive credentials ([Campbell & Davis, 2026](#)). From a Bourdieusian perspective, this reflects

unequal access to economic capital, referring to the financial resources required to access and progress within elite motorsport. Cultural capital may also influence progression through familiarity with motorsport norms, technical knowledge, professional behaviours, and the forms of competence valued by teams and development programmes. Drivers who acquire these resources through early and sustained exposure to established motorsport environments may therefore possess advantages when navigating the expectations and selection processes of elite motorsport. More broadly, [Bourdieu's \(1986\)](#) framework suggests that economic, social, cultural, and symbolic forms of capital interact to shape individuals' opportunities, recognition, and progression within a given social field. In the context of motorsport, unequal access to these forms of capital, including financial resources, professional networks, culturally valued knowledge and recognition, can contribute to cumulative disadvantages experienced by female drivers, reinforcing the progression barriers identified throughout this review.

These inequalities should also be understood through an intersectional lens, recognising that gender does not operate independently of other social and structural characteristics. Female drivers may experience different barriers depending on their socioeconomic background, nationality, race or ethnicity, disability, geographic location, and access to established motorsport networks. These intersecting factors may shape access to financial resources, development opportunities, social networks, and institutional support in different ways, meaning that experiences of progression cannot be assumed to be uniform among female drivers. An intersectional perspective therefore extends the analysis beyond gender alone and highlights the importance of considering how multiple and overlapping forms of inequality may influence participation and progression within elite single-seater motorsport.

The importance of financial capital is reinforced by [Howe \(2022\)](#), who identifies funding and sponsorship as critical determinants of progression within Formula 1 pathways. Unlike many other sports where talent identification systems are centrally managed, motorsport relies heavily on private investment, sponsorship backing, and personal financial resources. As a result, early career progression is contingent not only on performance but also on the ability to secure sustained financial support. Similarly, [Jessen \(2025\)](#) notes that sponsors may be less willing to invest in young female drivers due to perceived commercial risk, reinforcing a cycle in which limited representation reduces visibility, which in turn restricts future investment. This illustrates how economic capital and symbolic perceptions of value intersect, where underrepresentation itself becomes a barrier to opportunity.

Beyond financial constraints, structural barriers are embedded within driver development systems and talent pipelines, which play a crucial role in determining progression to elite levels such as Formula 1. Driver academies operated by Formula 1 teams are widely regarded as the primary pathway into elite single-seater racing, providing access to funding, training, and competitive opportunities ([Howe, 2022](#); [Cunningham, 2019](#)). However, existing research suggests that these systems may unintentionally reproduce gender inequality through recruitment practices and informal selection criteria. [Cunningham \(2019\)](#) argues that sport organisations often rely on established networks and culturally embedded notions of “talent,” reinforcing existing demographic patterns and excluding underrepresented groups. Within motorsport, where female participation is already low, this can create a self-reinforcing cycle in which male drivers are more likely to be identified, supported, and progressed.

This process can be further understood through Bourdieu's concept of social capital, where access to networks and relationships becomes a key determinant of progression ([Bourdieu, 1986](#)). Individuals who possess stronger connections within the sport are more likely to access opportunities, often privileging those who already align with dominant group norms. This is reinforced by the concept of homologous reproduction, whereby individuals in positions of power tend to select and support others who resemble themselves in terms of background and identity ([Burton, 2015](#)). In the context of motorsport, where leadership positions are predominantly occupied by men, recruitment and development decisions may unintentionally favour male drivers who align with existing norms of the “ideal driver” ([Burton, 2015](#); [Pflugfelder, 2009](#)). This reflects how structural inequality operates through institutional practices, reproducing gender hierarchies without requiring overt discrimination.

Institutional governance structures further contribute to these inequalities. Formula 1 operates through a fragmented system involving the Fédération Internationale de l'Automobile (FIA), Formula One Management (FOM), and individual teams. This multi-layered structure creates a complex distribution of power, where

responsibility for driver development and diversity initiatives is dispersed across multiple actors ([Grix, 2018](#)). [Cunningham \(2019\)](#) highlights how fragmented governance can limit the effectiveness of diversity initiatives, as meaningful organisational change requires coordinated action across different levels of authority. As a result, approaches to gender inclusion may be inconsistent, reducing accountability and limiting the likelihood of systemic reform.

The limitations of institutional approaches are evident in the evaluation of current initiatives. [Ross et al. \(2025\)](#) note that within Formula E, gender inclusion is often positioned within broader sustainability agendas but remains secondary to environmental and commercial priorities. Similarly, while programmes such as the FIA's "Girls on Track" and the introduction of F1 Academy represent important steps toward increasing participation, their long-term impact on elite progression remains uncertain ([More Than Equal, 2023](#); [Howe, 2022](#)). These initiatives may improve visibility and access at grassroots levels but do not address deeper structural barriers related to funding, recruitment, and institutional culture.

Importantly, the literature suggests that gender inequality within motorsport is best understood as arising from a combination of interrelated structural, sociocultural, institutional, and psychological constraints rather than any single barrier. Financial limitations restrict access to early development opportunities, institutional practices shape progression within talent pipelines, and governance structures influence the extent to which change can be implemented ([Ross et al., 2025](#); [Howe, 2022](#); [Cunningham, 2019](#)). [McNamee and Miller \(2009\)](#) argue that meritocratic narratives obscure these structural inequalities by attributing success solely to individual talent and effort. Within motorsport, the belief that the "fastest driver wins" masks the extent to which access to resources, networks, and institutional support determines progression. This highlights how meritocratic discourse functions ideologically, legitimising unequal outcomes.

Overall, the literature demonstrates that structural and institutional barriers play a central role in sustaining the underrepresentation of women in elite single-seater motorsport. High costs of entry, unequal access to sponsorship, exclusionary development pathways, and fragmented governance structures collectively shape a system in which opportunities are unevenly distributed. These findings reinforce the argument that increasing female representation requires not only cultural change but also fundamental structural reform within the sport's economic and organisational systems.

While the evidence reviewed largely supports structural and sociocultural explanations for women's underrepresentation, alternative perspectives frequently appear within public and motorsport discourse. One common argument is that lower female participation simply reflects individual preferences or career choices rather than structural inequality. However, from a social constructionist perspective, preferences are themselves shaped by cultural expectations, opportunities, and lived experiences, meaning they cannot be considered entirely independent of the social environment ([Burr, 2015](#)). Similarly, biological explanations often emphasise differences in physical strength or physiological characteristics. Although certain physical attributes may influence aspects of sporting performance, motorsport is a technologically mediated sport in which driver success depends upon a complex interaction of technical skill, cognitive performance, physical conditioning, team support, engineering expertise, and strategic decision-making. Biological differences alone provide an insufficient explanation for the persistent gender disparities observed across the elite single-seater pathway. Meritocratic arguments suggest that progression is determined solely by talent and performance. However, as demonstrated throughout this review, unequal access to funding, sponsorship, development programmes, and professional networks means that opportunities to demonstrate talent are themselves unevenly distributed, challenging this assumption.

Psychological and interpersonal barriers

While structural and sociocultural factors shape access to and progression within motorsport, psychological and interpersonal dynamics play a critical role in influencing how female drivers experience and navigate the sport at an individual level. The literature suggests that issues of confidence, belonging, stereotyping, and access to social support are not isolated personal challenges, but are shaped by the broader gendered environment in which female athletes operate ([Kochanek et al., 2021](#); [Waltemeyer, 2018](#); [Fielding-Lloyd & Meân, 2011](#)). As such, these factors

should be understood as socially produced rather than individually determined. This perspective challenges individualised explanations of performance and instead situates psychological experiences within broader structural and cultural conditions.

A key theme concerns the role of confidence and self-perception in shaping women's participation within male-dominated sports. [Fielding-Lloyd and Meân \(2011\)](#), in their study of women in football, argue that discourses surrounding female "lack of confidence" are socially constructed within sporting environments. Rather than reflecting inherent psychological differences, these narratives position women as deficient while obscuring structural inequalities. This argument is reinforced by [Kochanek et al. \(2021\)](#), who demonstrate that professional female racing drivers often internalise the need to continually prove themselves within sceptical environments. However, their findings suggest that participants display high levels of resilience and self-belief, indicating that perceived confidence deficits are better understood as responses to external scrutiny rather than inherent traits. Together, these findings illustrate how confidence operates as a socially constructed concept within sport.

These insights align with broader psychological research on stereotype threat. [Steele and Aronson \(1995\)](#) argue that individuals who are aware of negative stereotypes about their social group may experience increased anxiety and performance pressure, which can undermine performance. In motorsport, this framework helps explain how female drivers may experience heightened pressure to avoid confirming stereotypes about perceived inferiority. This contributes to the intensified scrutiny described by [Kochanek et al. \(2021\)](#), reinforcing cycles of pressure and evaluation that are not equally experienced by male drivers. Psychological barriers are therefore produced through the interaction between individual awareness and broader cultural stereotypes.

Closely linked to confidence is the concept of belonging, which has been identified as a critical factor influencing participation and retention in sport. Research suggests that individuals are more likely to persist in environments where they feel accepted and socially integrated ([Baumeister & Leary, 1995](#)). However, in male-dominated contexts, women frequently report feelings of isolation and marginalisation ([Shaw & Hoeber, 2003](#)). [Waltemeyer \(2018\)](#) found that women in motorsport often experience exclusionary behaviours, limited support, and a lack of acceptance within the industry. Similarly, the [More Than Equal \(2023\)](#) report highlights that many women perceive motorsport culture as unwelcoming, citing experiences of sexism, inadequate facilities, and limited representation.

These experiences can also be understood through the lens of tokenism. When women represent a small minority, they are more likely to experience heightened visibility and social isolation ([Stichman et al., 2010](#)). Within motorsport, this may manifest in the positioning of female drivers as exceptions rather than integral participants, undermining feelings of belonging. This reinforces how interpersonal experiences of exclusion are structurally produced, linking psychological barriers directly to demographic imbalance within the sport.

Another important interpersonal factor is the role of mentorship and social support in facilitating progression. Access to supportive networks, role models, and mentoring relationships has been shown to influence career development, particularly within male-dominated fields ([Cunningham, 2019](#); [Burton, 2015](#)). However, women often have reduced access to these networks due to underrepresentation within motorsport ([Fielding-Lloyd & Meân, 2011](#)). From a Bourdieusian perspective, this reflects unequal access to social capital, where networks function as key resources for progression.

Within motorsport, these dynamics are particularly pronounced due to the sport's reliance on personal connections and informal networks. [Kochanek et al. \(2021\)](#) found that many female drivers rely heavily on family support, particularly from fathers, to enter and remain within motorsport pathways. While beneficial, this highlights the lack of formalised development structures available to women. Similarly, [Jessen \(2025\)](#) emphasises the importance of visible role models and structured mentorship programmes, suggesting that the absence of support systems contributes to ongoing inequality.

Importantly, psychological and interpersonal barriers are not independent of broader structural and sociocultural dynamics but are produced through their interaction. Experiences of stereotype threat are linked to cultural narratives that question women's competence, while limited access to mentorship reflects structural inequalities

within organisational networks. As a result, individual-level experiences such as confidence, belonging, and resilience should be understood as outcomes of the wider gendered environment rather than purely personal characteristics.

Overall, the literature suggests that psychological and interpersonal barriers play an important role in shaping many women's experiences within motorsport. Issues of confidence, belonging, stereotyping, and access to social support are deeply interconnected and reflect broader cultural and structural conditions. Addressing these barriers therefore requires not only individual-level interventions but also wider changes to the social and institutional environment in which female drivers operate.

Current initiatives and progress

In response to the persistent underrepresentation of women in motorsport, a range of initiatives have emerged aimed at increasing participation, visibility, and progression opportunities for female drivers. These include governing body programmes such as the FIA Women in Motorsport Commission and Girls on Track, as well as competitive and developmental structures such as the W Series and F1 Academy ([More Than Equal, 2023](#); [Howe, 2022](#)). While these initiatives are often presented as evidence of progress toward gender equality, the literature offers a more complex and contested evaluation of their effectiveness. This reflects a broader tension within sport policy, where initiatives may signal progress without addressing the underlying structural and cultural conditions that sustain inequality.

A key strength of contemporary initiatives lies in their ability to increase visibility and access at grassroots and developmental levels. Programmes such as Girls on Track aim to introduce young girls to motorsport through education, karting experiences, and STEM engagement, addressing early-stage participation gaps ([Fédération Internationale de l'Automobile, 2024](#)). Increased media exposure, including the accessibility of F1 Academy through free-to-view platforms, has also contributed to raising the profile of female drivers and expanding audience engagement. [Ross et al. \(2025\)](#) argue that such initiatives are significant in broadening access and aligning motorsport with wider diversity and sustainability agendas. From this perspective, these initiatives can be understood as important entry-point interventions that expand the pool of potential participants and challenge perceptions of motorsport as exclusively masculine.

However, while these programmes may improve initial access, their capacity to facilitate progression to elite levels remains contested. [Howe \(2022\)](#) argues that without addressing financial barriers, sponsorship inequalities, and institutional bias, initiatives aimed at increasing participation are unlikely to produce substantial long-term change. This is reinforced by the [More Than Equal \(2023\)](#) report, which demonstrates that participation declines significantly as drivers progress through the motorsport pipeline. These findings suggest that many initiatives operate primarily at the level of access rather than progression and may therefore be insufficient to disrupt the structural conditions influencing advancement to elite competition.

The emergence of women-only racing series, particularly the W Series, further illustrates the tensions surrounding gender inclusion initiatives. Established in 2019, the W Series was created as a free-to-enter championship designed to remove one of the most significant barriers to female progression in motorsport: the financial cost of competition. By covering driver participation costs and providing access to high-level single-seater racing, the series sought to create opportunities for talented female drivers who may otherwise have been unable to progress through conventional development pathways. In addition to increasing competitive experience, the championship aimed to enhance the visibility of female drivers and demonstrate that women could compete successfully at an elite level when financial barriers were reduced ([Howe, 2022](#)). Despite these ambitions, the W Series experienced significant financial difficulties, ultimately entering administration during the 2022 season before ceasing operations. Although the championship provided valuable competitive opportunities and increased media exposure for many participants, relatively few drivers progressed directly into Formula 2 or Formula 1 development programmes. This suggests that while the W Series addressed important economic barriers, it was less successful in overcoming the wider structural and institutional constraints that continue to shape progression within elite single-seater motorsport.

On the one hand, such initiatives have been praised for removing financial barriers and providing competitive opportunities for female drivers who may otherwise be excluded from elite pathways ([Howe, 2022](#)). On the other hand, [Lezotte \(2023\)](#) argues that segregated competitions risk reinforcing the perception that women require separate categories to compete, thereby reproducing gender divisions within the sport. This reflects a fundamental contradiction, where initiatives designed to promote inclusion may simultaneously legitimise separation, limiting their long-term impact on structural equality.

Similar debates surround the introduction of F1 Academy, which represents a more integrated approach through direct affiliation with Formula 1 teams. Unlike the W Series, F1 Academy operates with direct support from Formula One Management and, from the 2024 season onwards, each driver has been backed by a Formula 1 team or commercial partner. This closer integration with Formula 1 is intended to strengthen the connection between junior driver development and the sport's highest level, while also increasing commercial visibility and access to professional support networks. The integration of Formula 1 team-affiliated driver academies, including those operated by Ferrari, Mercedes, and Red Bull, further strengthens this development model by providing female drivers with access to elite coaching, engineering expertise, simulator programmes, and professional support networks that have traditionally been available primarily to male drivers. While these academy partnerships represent an important step towards improving access to elite development environments, evidence regarding their long-term effectiveness in facilitating progression through the FIA single-seater ladder remains limited. The championship therefore represents a potentially more sustainable and institutionally embedded approach to developing female talent than its predecessor. Increased visibility and institutional support suggest a stronger commitment to gender inclusion compared to previous initiatives. Furthermore, F1 Academy has sought to establish clearer progression pathways by aligning drivers with Formula 1 teams and increasing opportunities to compete alongside major Formula 1 race weekends. These developments have enhanced media exposure and strengthened links between junior development and elite motorsport. However, given the relative infancy of the championship, there remains limited evidence regarding its long-term effectiveness in facilitating progression to Formula 3, Formula 2, or ultimately Formula 1. Consequently, evaluations of its impact should remain cautious until longer-term outcomes become available. Collectively, these initiatives illustrate an important shift in the approach to gender inclusion within motorsport. Whereas the W Series primarily sought to remove financial barriers through a standalone women-only championship, F1 Academy places greater emphasis on integration within existing Formula 1 structures and development pathways. Nevertheless, both initiatives continue to face the broader structural, sociocultural, and institutional barriers identified throughout this review, meaning that increased visibility alone is unlikely to translate into sustained progression to the highest levels of the sport. Existing literature cautions against equating visibility with substantive change. [Fink \(2015\)](#) argues that increased media representation does not necessarily translate into improved legitimacy, particularly when coverage continues to frame female athletes through narratives of novelty or difference. In this context, F1 Academy may function as a form of symbolic inclusion, enhancing visibility without fundamentally altering structural barriers to progression.

Indeed, the limited number of female drivers progressing to elite levels suggests that current motorsport initiatives have yet to reach the critical mass necessary to challenge existing gender hierarchies ([Kochanek et al., 2021](#)). The lack of structural progression demonstrates that such programmes often address the surface-level symptoms of inequality, such as visibility, without transforming the underlying power structures that sustain gender imbalance. At the same time, it is important to recognise that these initiatives may contribute to incremental progress. Increased visibility, improved access to early-stage opportunities, and the emergence of female role models can influence cultural perceptions and encourage participation over time ([More Than Equal, 2023](#); [Howe, 2022](#)). However, such progress is likely to be gradual and contingent on sustained change, rather than the result of isolated interventions.

It is equally important to acknowledge that recent years have produced examples of successful female drivers whose achievements demonstrate that progression is possible when talent is supported by sustained investment and structured development opportunities. Jamie Chadwick's success in the W Series, followed by her progression into Indy NXT, and Abbi Pulling's dominant 2024 F1 Academy Championship illustrate the calibre of female talent emerging through contemporary development programmes ([Baldwin, 2024](#); [Howe, 2022](#)). However, neither example represents a direct progression through the traditional FIA single-seater ladder towards Formula 1.

Chadwick pursued opportunities outside the Formula pathway, while Pulling's championship prize resulted in a funded GB3 seat rather than progression into FIA Formula 3 ([Baldwin, 2024](#)). These examples therefore reinforce, rather than contradict, the central findings of this review: although opportunities for female drivers have expanded, progression remains constrained by fragmented development pathways and continued structural barriers beyond the entry level.

Overall, the literature presents a nuanced and often critical evaluation of current initiatives aimed at improving gender inclusion in motorsport. While programmes such as Girls on Track, the W Series, and F1 Academy have made important contributions in increasing visibility and access, their effectiveness in addressing deeper structural inequalities remains limited. The persistence of financial barriers, exclusionary development pathways, and gendered cultural norms suggests that many initiatives operate within, rather than transform, existing systems of inequality. This raises a critical question as to whether current initiatives are restructuring opportunity structures within motorsport, or merely rebranding existing inequalities in more inclusive terms. The effectiveness of such initiatives should therefore be evaluated using a consistent framework that considers recruitment, retention, progression between competition levels, and longer-term outcomes, rather than participation and visibility alone.

Limitations

This study is subject to several limitations that should be acknowledged when interpreting the findings. First, as a narrative review, the study does not claim exhaustive coverage of all available literature. Although a structured search strategy was performed, the absence of fully systematic protocols introduces the potential for selection bias and limits replicability. The interpretive nature of narrative synthesis means that thematic analysis and conceptual emphasis are influenced by the researcher's theoretical positioning within feminist sport sociology. The review may also be subject to publication and availability bias, as studies reporting more prominent or accessible findings may be more likely to be represented within the available evidence base.

Second, the scope of the review introduces further limitations. The restriction to English-language publications may have excluded relevant international research, potentially narrowing the global perspective ([Pieper & Puljak, 2021](#)). Moreover, the focus on elite single-seater motorsport, while necessary for analytical clarity, limits the generalisability of findings to other motorsport disciplines or sporting contexts. While gender remains the central dimension of inequality examined in this review, the analysis also recognises that gender may intersect with other social and structural characteristics. However, the limited motorsport-specific evidence available means that these intersections could not be examined in depth.

A further limitation relates to the nature of the available evidence. Motorsport-specific academic research remains relatively limited, with many studies relying on qualitative data, small sample sizes, or context-specific analysis. As a result, broader sport sociology literature and selected grey literature were incorporated to support the analysis and theoretical interpretation. While this strengthens the conceptual depth of the review, it also introduces variation in methodological transparency and evidential quality across sources and may limit the extent to which findings can be considered fully motorsport-specific. The review also does not incorporate primary perspectives from drivers, teams, governing bodies, sponsors, or other stakeholders, limiting direct insight into organisational decision-making and lived experiences within contemporary motorsport.

Finally, the lack of longitudinal and large-scale empirical studies restricts the ability to assess long-term trends in female participation and progression. This limitation is particularly relevant to recent initiatives, including F1 Academy and other contemporary interventions, for which evidence of longer-term effectiveness remains limited and rapidly developing. Consequently, conclusions regarding the sustained impact of these initiatives should be interpreted cautiously as further longitudinal and empirical evidence emerges.

Future Research Directions

Future research should address several gaps identified within the existing evidence base. First, longitudinal research is needed to examine whether contemporary initiatives produce sustained progression through the elite

single-seater pathway, rather than short-term increases in participation or visibility. Evaluating driver progression across multiple stages of the development pathway would provide greater insight into where and why attrition occurs.

Second, larger empirical studies should investigate how structural, sociocultural, institutional, and psychological factors interact to influence participation and progression. Particular attention should be given to the role of funding, sponsorship, talent identification, professional networks, mentoring, and institutional support. Future research should also adopt an intersectional approach by examining how gender interacts with race, ethnicity, socioeconomic background, disability, nationality, and other relevant characteristics, recognising that female drivers may experience barriers differently.

Finally, further research should evaluate the effectiveness of current inclusion initiatives, including women-only and Formula 1-affiliated development programmes, using transparent and measurable indicators of progression. Comparative and longitudinal evaluation would help determine whether such initiatives produce meaningful changes in access, retention, and progression to higher levels of single-seater competition or primarily improve visibility and participation at earlier stages. Greater engagement with drivers, teams, governing bodies, sponsors, and other stakeholders would also strengthen understanding of how future interventions can address the structural conditions underlying persistent underrepresentation.

Conclusion

This narrative review examined the underrepresentation of women in elite single-seater motorsport through a synthesis of interdisciplinary literature. By integrating structural, sociocultural, institutional, and psychological perspectives, the review demonstrates that women's underrepresentation is not the result of isolated barriers but of interconnected systems that shape access to resources, opportunities, legitimacy, and progression throughout the driver development pathway. While recent initiatives have improved visibility and participation, the available evidence suggests that their long-term impact on progression to the highest levels of the sport may remain limited. Consequently, meaningful progress requires structural and cultural transformation that extends beyond increasing participation to creating transparent, equitable, and sustainable pathways for female drivers to progress and succeed within elite motorsport.

Practical recommendations to address gender inequality in motorsport require a systemic and coordinated approach that targets both structural and cultural barriers. While initiatives such as F1 Academy have increased visibility and participation opportunities, greater emphasis must now be placed on facilitating progression through the elite single-seater pathway.

Governing bodies

The FIA and other governing organisations should establish measurable diversity and progression targets, accompanied by regular evaluation of inclusion initiatives. They should also promote transparent and inclusive talent identification processes to reduce reliance on informal networks and ensure that opportunities are accessible to drivers from diverse backgrounds.

Formula One Management and teams

Formula One Management (FOM) could fund a full FIA Formula 3 season for the F1 Academy Champion by financially supporting a Formula 3 team to field the driver. This would establish a clear and transparent progression pathway between F1 Academy and FIA Formula 3, helping to address the financial barriers that contribute to the “leaky pipeline” identified throughout this review. Subsequent progression to FIA Formula 2 should remain performance-based, ensuring that opportunities continue to be earned on sporting merit while providing female drivers with equitable access to demonstrate their ability at the next stage of the development pathway. Teams

should also strengthen driver development programmes and expand structured mentoring opportunities to reduce reliance on informal networks.

Sponsors and commercial partners

Long-term investment in female driver development should be prioritised rather than short-term sponsorship linked primarily to visibility. Sustained financial support could help address the economic barriers that restrict progression through the junior single-seater pathway and provide greater continuity for drivers demonstrating competitive potential.

Media and commercial stakeholders

Efforts to improve visibility should be accompanied by changes in media representation, ensuring female drivers are consistently portrayed as legitimate elite competitors rather than exceptional cases. Increasing visibility should therefore be linked to competitive achievement and progression rather than treated as an end in itself.

Development and grassroots programmes

Early-stage initiatives should provide structured opportunities for girls to enter and remain within motorsport, supported by mentoring, competitive experience, and clear progression routes into higher levels of competition. Their effectiveness should be assessed through measurable outcomes including participation, retention, progression, and movement into higher-level championships.

Without coordinated action across these interconnected areas, progress is likely to remain incremental, limiting the long-term impact of current inclusion efforts.

Disclosure statement

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Ethical Approval

Ethical approval was not required for this study because it is a narrative review based solely on published literature and did not involve human participants or the collection of primary data.

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