A COMPREHENSIVE REVIEW ON STATUS AND READINESS OF BANGLADESHI READY MADE GARMENTS INDUSTRY IN ADOPTING GREEN HUMAN RESOURCE MANAGEMENT TO MITIGATE SUSTAINABILITY CHALLENGES

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Abstract: The review explores Green Human Resource Management (GHRM) within the Ready Made Garments (RMG) Industry of Bangladesh, highlighting its significance in relation to human resource management, sustainability, corporate social responsibility, green management, and environmental stewardship. The focus is on export-oriented RMG enterprises of varying sizes—small, medium, and large—across different geopolitical regions of Bangladesh. Utilizing a qualitative analysis approach, the study reviews existing literature to derive its findings. Insights gathered from management personnel at various RMG companies contribute to produce results aimed at improving GHRM practices, such as green recruitment, training, performance management, compensation, and employee engagement. The analysis reveals seven primary review agendas concerning Green Human Resource Management (GHRM) from the perspective of the Bangladeshi RMG industry.
Keywords: Green Human Resource Management (GHRM); Ready Made Garments (RMG); Review agenda; Environmental management; Sustainability

1 INTRODUCTION

Numerous organizations are adopting sustainability strategies due to their benefits, leading to efforts to reduce environmental damage through Environmental Management (EM) Systems or Green Management (GM) that primarily focus on the reduction of carbon emissions and promoting recycling [1-2]. While EM extends the triple bottom line concept, encompassing social, environmental, and financial aspects, Haden et al. [3] advocated it as a comprehensive process that leverages innovation to enhance sustainability, reduce waste, and foster social responsibility, requiring alignment with organizational goals. Successful implementation of EM systems relies on support from Human Resource Management (HRM) practices, particularly in recruitment, training, performance evaluation, and employee incentives [4]. There is increasing recognition of the need to integrate HRM practices with EM [4-7]. Review on this link began in the 1990s, highlighted by Wehrmeyer's 1996 book "Greening People: Human Resources and Environmental Management." The formal acknowledgment of the HRM-EM connection emerged in 2008 with Renwick et al.'s identification of the relationship.

Furthermore, the success of Environmental Management (EM) and sustainable development policies relies on their integration with Human Resource Management (HRM) practices [4, 7-9]. HRM plays a crucial role in promoting EM through recruitment, training, performance evaluation, and reward systems, as well as fostering team collaboration, organizational culture, and learning [4, 8]. To effectively implement EM, organizations must align their HRM practices—such as recruitment, performance management, training, compensation, and employee engagement—with EM goals [10]. This alignment has given rise to the field of Green Human Resource Management (GHRM) [4, 9-10].

The primary motivations for choosing this industry as the central focus of this review are dual in nature: firstly, it serves as a significant driver of socio-economic development in Bangladesh, and secondly, it remains an underexplored sector concerning review on Green Human Resource Management (GHRM). These aspects will be elaborated upon in the following sub-sections. Such as:

• The economy of Bangladesh, traditionally reliant on agriculture, is undergoing a transformation towards an industrial framework [8-9], with the ready-made garment (RMG) sector playing a pivotal role in this shift [16]. Consequently, the sustainable advancement of this sector is crucial, necessitating the implementation of various sustainability-focused initiatives, such as green human resource management (GHRM) practices and environmentally responsible corporate social responsibility (CSR), to foster the country's sustainable development [16,27]. The subsequent subsections will elucidate key aspects of its significance.

• The ready-made garment (RMG) sector stands as the foremost industry in Bangladesh in terms of foreign currency generation and ranks as the second largest exporter of garments globally, following China. This sector accounts for approximately 4-5% of the global export market [27].

• Furthermore, it contributes over 13% to the nation's overall GDP [42, 43], establishing itself as a critical component of the national economy. Given Bangladesh's high population density, providing employment opportunities for all eligible citizens poses a significant challenge.

• The RMG industry is therefore essential in creating substantial job opportunities for workforce with limited-skilled, semi-skilled, along with skilled labour forces, thus aiding in the reduction of poverty in the country [33].

• Currently, it employs approximately 4 million individuals, representing a significant segment of the total labor force [42]. Additionally, this sector has made remarkable contributions to women's empowerment, with nearly 60% of its workforce comprising female employees, the highest percentage in Southeast Asia [9].

The notion of sustainability, initially introduced by Brundtland in 1987 and previously by Buller and McEvoy, emphasizes the importance of long-term optimization in business performance through the lens of the triple bottom line (TBL). This framework (Figure 1) encompasses economic, environmental, and social dimensions, serving as a means to navigate a complex array of performance challenges. Consequently, sustainability transcends mere financial metrics, such as return on assets, equity, earnings per share, and investment; it also incorporates the environmental and social welfare of employees, customers, communities, and all stakeholders [45]. For instance, review by Yong et al. [18] has identified economic sustainability in relation to how organizations implement Green Human Resource Management (GHRM) practices to consistently produce goods and services while maintaining profitability for survival. Environmental sustainability focuses on the repercussions of business activities on the natural environment [45], whereas social sustainability pertains to the humanitarian aspects of business operations [20]. Over the past twenty years, the growing emphasis on sustainability and environmental consciousness has compelled both practitioners and scholars to explore the role of Human Resource Management (HRM) as a strategic instrument for promoting ecological responsibility within organizations, thereby benefiting the broader economy and society [21]. In this context, GHRM, which merges HRM with Environmental Management (EM), plays a vital role in fulfilling sustainability objectives related to social equity, health, wellness, and the overall well-being of the organization and its employees, while also striving for economic stability and environmental equilibrium [46].
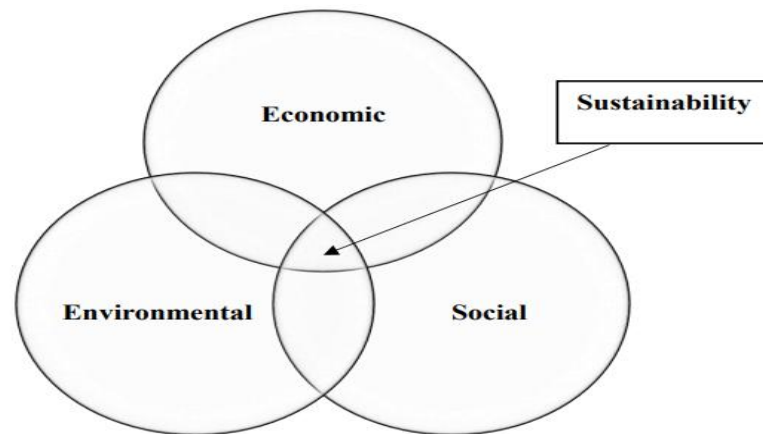
Figure 1 The Triple Bottom Line for Sustainability by Carter and Rogers (2008)

The literature review indicates that a significant number of studies have focused on the connection between Green Human Resource Management (GHRM) practices and employee performance (EP). This trend may be attributed to the relative ease of quantifying environmental impacts, whereas the human and social dimensions of organizations tend to be less tangible and more qualitative in nature [46]. Consequently, the link between GHRM and social sustainability remains underexplored, resulting in a comparatively weaker foundation for this aspect of the Triple Bottom Line (TBL). Conversely, there are various other sustainability dimensions associated with GHRM, which may function as predictors, outcomes, or both. For instance, institutional sustainability refers to the capacity of institutions to effectively assist firms in advancing environmental initiatives such as GHRM; legal sustainability pertains to the existence and enforcement of laws that promote green practices; and political sustainability relates to the stability of the political framework that supports environmentally friendly practices. Thus, it is imperative to conduct additional review on GHRM to better understand its relationship with and contributions to these sustainability dimensions, both as antecedents and outcomes. Refer to Figure 2 below for an initial representation of the areas or aspects of GHRM in relation to organizational performance.
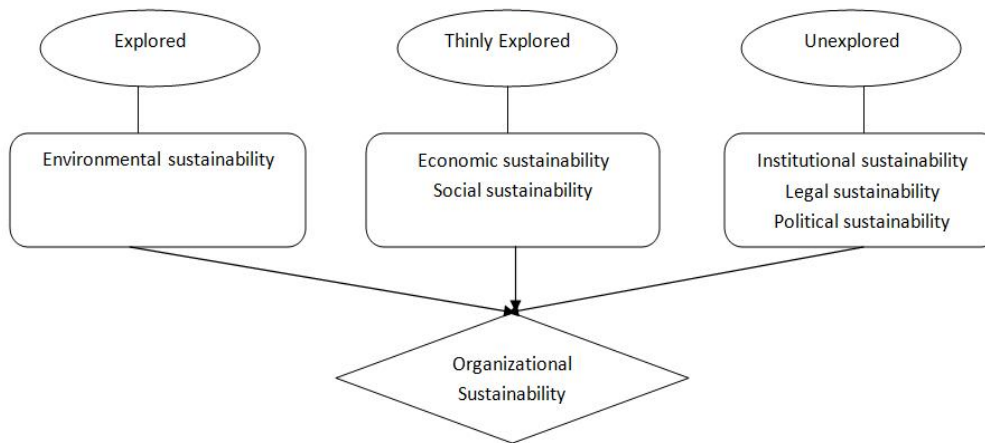
Figure 2 Theoretical Propositions on Sustainable Organisational Performance

2 LITERATURE REVIEW ON GHRM

2.1 GHRM Aspects

Renwick et al. [11] identified three key human resource dimensions in environmental management (EM): developing green competencies, promoting employee involvement in green initiatives, and including employees in environmental activities. Key components include green recruitment and selection (GRS), green training and development (GTD), green performance management (GPM), green compensation and reward (GCR), and green employee involvement (GEI) [9]. GRS attracts individuals with the right skills for EM, while green selection focuses on candidates committed to environmental issues [3]. GTD provides employees with essential knowledge for effective EM and GPM evaluates employee performance against environmental goals. GCR links compensation to green behaviors to promote eco-friendly practices. GEI engages employees in developing environmental strategies and gathering feedback, fostering accountability and teamwork [12]. Despite previous studies indicating factors influencing organizational sustainable performance [10-13], there remains a gap in identifying the most critical elements for enhancing individual and organizational performance sustainably. Additionally, the literature lacks clarity on which specific Green Human Resource Management (GHRM) practices effectively contribute to these outcomes. This study aims to explore various GHRM practices to identify the most significant ones, using expert insights analyzed through linguistic scales.

2.2 Why Does GHRM Matter Now

The climate of the Earth has experienced significant negative changes over recent decades, with scientists asserting that this trend is likely to persist in the near future [13-15]. Current discussions emphasize that the alarming pace of climate change can only be alleviated through the swift and resolute implementation of sustainability-oriented initiatives, such as Green Human Resource Management (GHRM) practices [8, 15-17]. These detrimental alterations to our climate can be partially linked to the rapid growth of economic and business activities, which have expanded not only from developed to developing nations but also increasingly from developing to developed economies [9, 16]. While the negative effects of such developments on the environment have been documented in various review studies and literature [18-19], there is now a pressing demand for both large and small businesses and organizations to embrace more environmentally friendly initiatives and strategies [9, 17] to ensure the long-term viability of the environments in which they operate [19-22]. The call for environmental sustainability has gained traction and has been integrated into the Human Resource Management literature, now commonly referred to as Green Human Resource Management (GHRM) [3, 5, 7].

GHRM has been identified as a strategic instrument for enhancing organizational competitiveness by improving corporate image, reducing costs, fostering better customer relations, gaining acceptance from local authorities and communities, and increasing employee satisfaction, loyalty, and motivation . According to Amrutha and Geetha [23], GHRM practices can significantly contribute to the sustainability goals related to social equity, health, wellness, and the overall well-being of both the organization and its employees, while also promoting economic stability and environmental sustainability. Furthermore, GHRM can offer a competitive edge to organizations [24-27, 2] by enhancing environmental performance [1-3] and operational efficiency [15]. Consequently, to fully leverage the diverse advantages associated with GHRM, it is essential to implement clearly defined GHRM practices at all organizational levels, thereby enhancing the organization's sustainable performance across environmental, economic, and social dimensions [22, 24, 27].

2.3 How is GHRM Facilitated

Predictors or drivers of Green Human Resource Management (GHRM) refer to the elements that facilitate the successful execution of GHRM practices. Previous review has identified several key predictors, including the organizational environmental culture [28-30], individual personality and upbringing, personal knowledge, the digital divide, education and training [19-21], normative pressures from stakeholders [27], managers' environmental concerns [18], commitment and support from top management [9,18,20], and internal environmental orientation. Nevertheless, the systematic literature review (SLR) indicates that while various studies have pinpointed different factors influencing the implementation of GHRM practices, most have overlooked the analysis of inter-causal relationships based on prominence and influence scores. This oversight limits the ability to prioritize or identify the key elements influencing the overall execution procedure, which could inform the development of GHRM or environmental policy guidelines. To fill this gap, the present study has examined these factors to identify the most significant drivers of effective GHRM implementation, utilizing insights from academic and practitioner experts gathered through linguistic scales. This analysis employs a novel hybrid technique known as 'fuzzy DEMATEL,' marking its inaugural application in GHRM review. Additionally, this study evaluates the drivers from the perspectives of various internal and external stakeholders, applying stakeholder theory for the first time within the context of GHRM review.

2.4 What Do Pose Challenges on GHRM?

The complexity of implementing Green Human Resource Management (GHRM) practices is underscored by numerous challenges, particularly concerning the availability of skilled human resources and effective management [11, 15]. Additional obstacles include insufficient support from senior management, substantial initial investment costs [30], a general lack of awareness among both managers and employees [30-32], inadequate skills for adopting green technologies, employee resistance to green initiatives [31-32], challenges in transforming the existing organizational culture, and difficulties in altering employees' attitudes and behaviors towards environmental issues [29-30]. Notably, while the literature on GHRM identifies various barriers to effective implementation, most studies have overlooked the analysis of inter-relationships among these challenges, particularly in terms of their prominence and influence, which is essential for prioritizing the most critical issues that require immediate attention. Consequently, this study aims to analyze these factors to identify the most pressing challenges to the effective implementation of GHRM practices, drawing on insights from academic and professional experts through the application of linguistic scales, a novel approach in GHRM review. Furthermore, akin to the examination of drivers, this study evaluates challenges from the perspectives of various internal and external stakeholders, utilizing stakeholder theory as a framework. The subsequent subsections will elaborate on GHRM challenges in relation to both organizational and individual sustainable performance.

2.4.1 Challenges on social, environmental and economic performance

Reviewers suggest that organizations adopting GHRM practices—such as Green Performance and Compensation Management, Green Recruitment and Training Management, and Employee Involvement etc.—may experience greater benefits than those that do not [33]. However, implementing GHRM poses challenges, including environmental concerns like emissions and waste management [18, 24], as well as social issues related to community health and job creation. Economic barriers also exist for organizations and employees [21]. Despite these challenges, empirical review indicates that GHRM positively impacts organizational performance across environmental, social, and economic dimensions [27, 34].

The empirical investigation conducted by Gilal et al. [35] found a positive link between Green Human Resource Management (GHRM) practices and employee performance (EP), as GHRM shapes employee attitudes and behaviors. Similarly, Ghouri et al. [36] identified that elements of GHRM, including green recruitment, training, performance management, compensation, empowerment, and culture, correlate positively with EP. Mensah et al. [37] highlighted GHRM's role in enhancing business performance, especially in the oil and gas sector. Additionally, Acquah et al. [38] noted that GHRM practices significantly impact organizations' sustainability performance, improving their environmental reputation and fostering health and safety for employees and society.

In conjunction with various tangible advantages, the previous studies on Green Human Resource Management (GHRM) highlight benefits such as improved efficiency, cost reduction, increased employee engagement, and better retention, all contributing to higher productivity [16,28,33]. GHRM also reduces employees' carbon footprints, promotes work-life balance, and supports environmental conservation [21, 28]. Additionally, it encourages eco-friendly behaviors and waste reduction, leading to efficiency and cost savings [1, 21, 25]. These practices are vital for customer loyalty, market expansion, and organizational competitiveness, ultimately enhancing sustainability [1-3, 22]. Despite existing review, gaps remain in understanding specific elements that promote sustainability at individual and organizational levels. This study aims to assess GHRM practices using a four-quadrant Importance-Performance Analysis (IPA) matrix to identify key factors for enhancing sustainable performance.

2.4.2 Challenges on individual performance

Existing literature indicates that employees' engagement in environmentally responsible practices enhances organizational performance [8-10]. Individual performance stems from employees' collective actions and behaviors. While challenges exist in adoption of green practices—such as integrating new technologies and embracing green values [39, 40]—implementing these practices yields direct and indirect benefits for individual performance, including environmentally friendly behavior, job satisfaction, and green creativity. For instance, Chaudhary, [8] discovered that GHRM has a positive impact on both task-oriented and voluntary environmentally friendly behaviors, with recognition

of organisation, serving as a mediator in this connection.. Similarly, Shen et al. [39] reported a positive link between perceived GHRM and employee task performance and organizational citizenship behavior, while also reducing turnover intentions. Shafaei et al. [34] highlighted a connection between GHRM and job satisfaction, with 'meaningfulness through work' as a key mediator. Ahmad et al. [41] noted GHRM's positive impact on green creativity. However, a gap remains in review focusing on the effects of GHRM on extra-role employee green behavior.

## 3 LITERATURE REVIEW ON THE BANGLADESHI RMG CONTEXT

This study focuses on the Bangladeshi ready-made garment (RMG) sector, particularly export-driven manufacturing companies. It begins with an introduction to Bangladesh and explains the socio-economic significance of the RMG industry, along with the methodological rigor of the review. An overview of the RMG sector includes its history, economic contributions, workforce demographics, global market participation, challenges, and environmental issues. The discussion highlights the importance of Green Human Resource Management (GHRM) and examines the feasibility of its implementation. Additionally, RMG factories are analyzed by product type, size, location, and output, as these factors influence GHRM practices. Previous studies indicate that larger factories typically have more structured GHRM practices than smaller ones. Thus, understanding these differences is essential for developing prioritized, context-specific GHRM strategies to enhance organizational and individual performance sustainably.

3.1 An Overview of RMG Industry

The ready-made garment (RMG) industry has been crucial to Bangladesh's economic growth, with the "Made in Bangladesh" label gaining global recognition. Once considered a "bottomless basket," the country has transformed into a "basket full of wonders," achieving an average annual GDP growth rate of 6% despite resource constraints [9, 41]. After gaining independence in 1971, Bangladesh faced significant challenges due to a lack of robust industries and biased policies from the West Pakistani government. The RMG sector now accounts for 83% of the country's total export revenue [42]. Nurool Quader Khan is recognized as a key figure in developing the RMG sector, having organized training for 130 individuals in South Korea in 1978, which led to the establishment of "Desh Garments," the first export-focused factory. Other notable contributors include Akhter Mohammad Musa, Mohammad Reazuddin, Md Humayun, Engineer Mohammad Fazlul Azim, Major (Retd) Abdul Mannan, M Shamsur Rahman, and AM Subid Ali, all of whom played significant roles in the sector's growth. Inspired by these pioneers, a wave of dynamic entrepreneurs subsequently established RMG factories across the nation. Since that pivotal moment, the Bangladeshi RMG industry has consistently advanced, overcoming numerous challenges to carve out a significant presence in global markets and achieve remarkable growth [42]. Currently, the RMG sector stands as Bangladesh's largest source of export revenue, generating over $27.9 billion in exports during the 2019-20 fiscal year.

3.2 How Does it Contribute

The economy of Bangladesh, which has historically relied on agriculture, is currently experiencing a significant shift towards an industrial model, with the ready-made garment (RMG) sector being a key driver of this change [8]. This sector contributes more than 13% to the country's overall Gross Domestic Product (GDP) [41-42]. Moreover, it is the leading industry for foreign currency earnings, accounting for 83% of total export revenues [16]. Bangladesh the world's second-largest garment exporter after China [41], with its share of the global RMG export market estimated at around 4-5% [2, 9]. In recent years, over the Chinese RMG market, the U.S. and EU have turned their focus to Bangladesh's RMG market due to competitive labor costs [24]. This sector is also vital for job creation and poverty reduction in the country [44]. Both Figure 3 & 4 illustrates the Bangladehsi RMG contributes through export earnings.
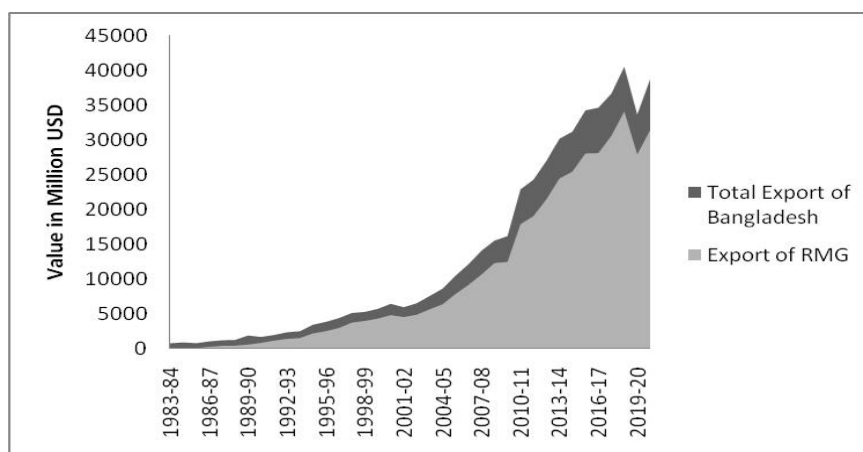
Figure 3 Comparisons Between Export of RMG & Total Export of Bangladesh
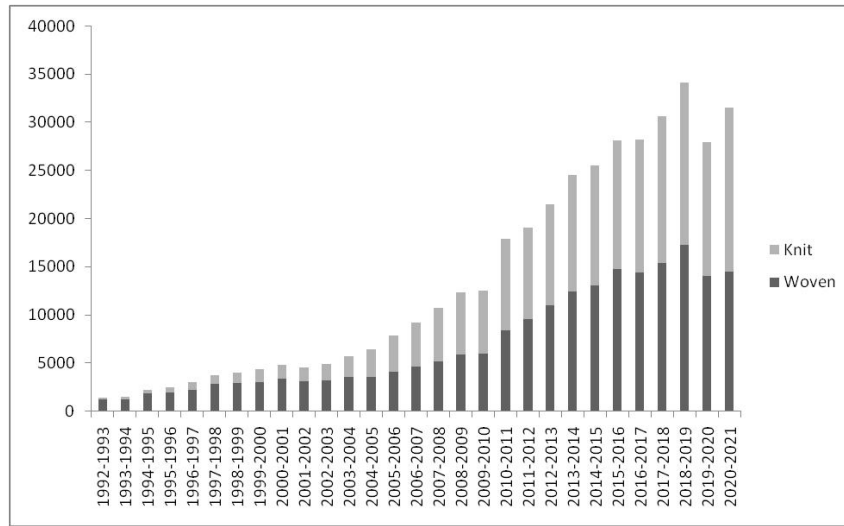
Figure 4 RMG Exports-Bangladesh (in Million USD)

Additionally, this sector has significantly contributed to job creation, particularly for the impoverished, uneducated, and female segments of the workforce in the country. Consequently, it plays a vital role in the empowerment of women, with nearly 60 percent of its workforce being female, the highest proportion in Southeast Asia (Islam et al., 2016). Hence, it emphasizes to promote economic growth while also enhancing workforce potential by empowering women [42-43]. This has led to a demand for sustainable approaches, such as Green Human Resource Management (GHRM) practices, to facilitate sustainable human capital development through initiatives like Green Recruitment Strategies (GRS), Green Training and Development (GTD), and Green Performance Management (GPM). However, the systematic literature review (SLR) indicates a gap in previous GHRM review regarding the critical aspects and practices necessary for enhancing human capital development. Thus, a primary aim of this study is to evaluate GHRM aspects and practices to identify the most critical ones for advancing human capital through the implementation of GHRM practices. The significant socio-economic impacts of the Ready-Made Garment (RMG) industry are illustrated in Figure 5.
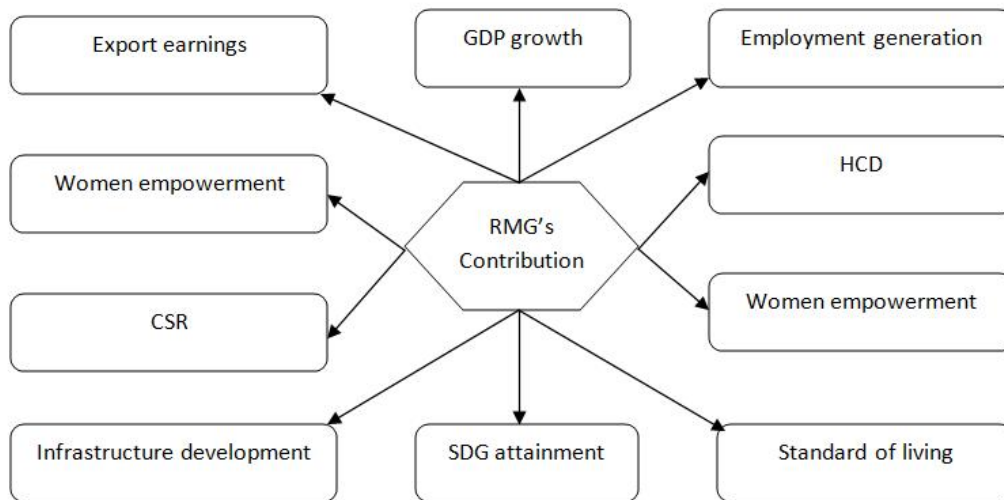

Figure 5 RMG-Bangladesh: Socio-Economic Impact

3.3 Underexplored Area in GHRM Review

The ready-made garment (RMG) sector in Bangladesh has been instrumental in the nation's socio-economic progress; however, it remains an area that is insufficiently explored in the context of Green Human Resource Management (GHRM) review [9,17]. Furthermore, there is a notable scarcity of human resource studies that examine the relationship between HRM practices and sustainability issues within this sector [27, 33], despite assertions that sustainable HRM can significantly contribute to the effective management of various organizational resources [6, 23, 41]. To date, only two studies focusing on GHRM within the Bangladeshi RMG industry have been identified. Additionally, an analysis of the industry background has uncovered several pertinent insights regarding HR and GHRM review.

The existing body of review on Human Resource Management (HRM) or Green Human Resource Management (GHRM) within the context of the Bangladeshi Ready-Made Garment (RMG) industry predominantly consists of literature reviews or empirical studies that lack comprehensive analysis. Consequently, these studies do not yield clear

or dependable insights for managerial decision-making. This indicates a pressing need for further empirical investigations to fill this contextual void.

To date, there has been no empirical review that evaluates GHRM practices and their implications for enhancing both individual and organizational performance in a sustainable manner. Additionally, similar studies from other national contexts are also absent. Furthermore, there has been no investigation into the degree of implementation of GHRM practices within the industry. No review has been conducted that systematically analyzes and ranks the factors influencing the implementation of GHRM practices, whether they serve as drivers or obstacles. Only two studies focusing on GHRM have been identified within the Bangladeshi RMG sector. For instance, Rubel et al. [17] investigated the mediating role of green work climate perceptions in the relationship between GHRM and pro-environmental behavior using a quantitative review approach.

In contrast, Islam et al. [16] examined the challenges and solutions associated with the application of GHRM practices for sustainable workplaces through qualitative interviews, yet they did not analyze the interrelationships among these challenges to identify the most critical factors affecting implementation. To address these gaps, the present study aims to explore and prioritize the factors that either facilitate or hinder the effective implementation of GHRM practices, employing a quantitative review design.

Additionally, this study introduces a hybrid methodology, specifically the fuzzy DEMATEL approach, to analyze expert opinions gathered through a linguistic scale, marking a novel contribution to GHRM review.

The industry analysis has identified additional review that concentrates on various facets of Human Resource Management (HRM). Notable areas of focus include job satisfaction [13], working conditions [7], remuneration [26], and adherence to labor regulations [17]. Furthermore, certain empirical studies have investigated Corporate Social Responsibility (CSR) [8]. In contrast to these HRM studies, the present review explores how various functional elements of HRM can be approached in an environmentally sustainable way to enhance both individual and organizational performance over the long term.

3.4 Green Issues

The rising global interest in sustainable products and services has placed considerable pressure on ready-made garment (RMG) companies to adopt environmentally friendly practices, enhance their production systems, and actively work towards reducing pollution and their ecological impact [47]. Evidence suggests the consumption of energy and natural resources for RMG is not sustainable, resulting in the emission of significant amounts of ozone-depleting substances. This situation contributes to a range of environmental, economic, and social issues, including climate change and escalating waste management challenges [17, 47]. As a result, RMG sectors in Asia are striving to leverage the green movement to attract environmentally aware consumers from Western markets. In this regard, Bangladeshi RMG companies are initiating various environment friendly steps, such as adopting clean production techniques and setting up sustainable treatment facilities for water distribution, while the government is introducing new regulations and encouraging these producers to adopt green practices [9, 47]. Additionally, with consumers increasingly seeking eco-friendly options, RMG firms that focus on sustainability are likely to gain a competitive advantage in the marketplace.

Bangladesh holds a prominent position as the second largest ready-made garment (RMG) exporting nation globally, distinguished by its substantial number of environmentally sustainable RMG factories [42, 48]. Review conducted by Kaizer [48] identified several key factors driving the transition to green garment manufacturing, including environmental safety, the provision of safe working conditions, reduced energy consumption, enhanced factory reputation, and the ability to attract buyers. Additionally, the study highlighted that fair pricing, prioritization of green practices by buyers, tax incentives, and government support for green infrastructure are significant influences on the industry's shift towards sustainability. Furthermore, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) has launched a range of initiatives focused on enhancing sustainability in the industry. These efforts include aligning with the Sustainable Development Goals (SDGs), implementing decarbonization strategies, obtaining the Green Button certification, participating in the Partnership for Cleaner Textile (PaCT) II, developing green policies, and improving waste management practices. Figure 6 highlights the primary green initiatives and challenges faced by the ready-made garment (RMG) sector.
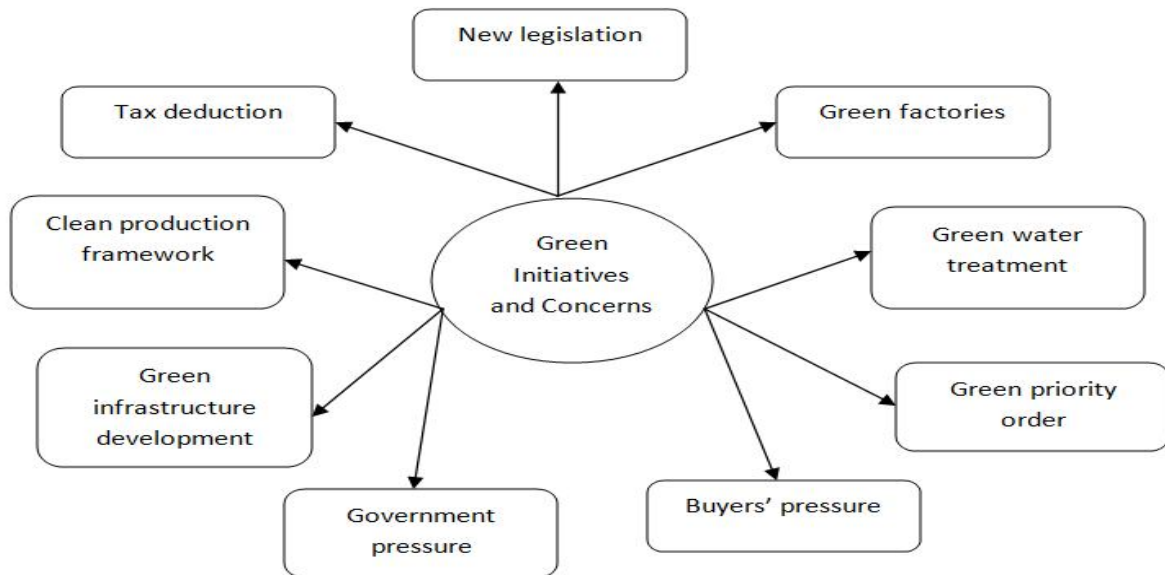
Figure 6 Sustainable Green Concerns in RMG - Bangladesh

Bangladeshi garment entrepreneurs have begun to heed the call for "Going Green" as part of the industry's sustainable development efforts. Nevertheless, there is a notable lack of review that offers a comprehensive examination of green business strategies within the context of the Bangladeshi ready-made garment (RMG) sector. Consequently, this study aims to assess the degree of implementation of Green Human Resource Management (GHRM) practices in the industry and their role in fostering a sustainable workplace. Additionally, it identifies the HR practices in which firms are performing well, as well as those areas that require greater attention for further enhancement.

3.5 Significance of GHRM in RMG Sector

The ready-made garment (RMG) industry in Bangladesh has seen remarkable expansion; however, it is simultaneously facing growing challenges related to sustainability. These challenges encompass climate change, the depletion of groundwater resources, and concerns regarding operational efficiency, among others. Reports indicate that the fashion industry ranks as the second most environmentally damaging sector globally, surpassed only by the oil and gas industry [41, 42]. This significant pollution is largely due to the extensive use of numerous chemicals and the intricate processes necessary to achieve the vibrant colors typical of fast fashion. Additionally, several critical issues have underscored the pressing need for the adoption of Green Human Resource Management (GHRM) practices within the RMG sector, as elaborated in the subsequent section (see Figure 7).

The series of tragedies in the Bangladeshi ready-made garment (RMG) sector has raised significant awareness and concern among both domestic and international stakeholders regarding essential issues such as sustainable working conditions, job security, worker safety, and minimum wage regulations. A prominent example is the Rana Plaza collapse in 2013, which led to substantial changes within the RMG industry, resulting in the adoption of various health and safety improvements [29-31]. Following the initiatives of the Accord and Alliance, Bangladeshi manufacturers were required to invest in compliance with (i) building codes and (ii) safety protocols for both workers and work environments. Additionally, the industry has encountered mounting pressure from global partners to enhance its labor standards to create a more sustainable working atmosphere [25].
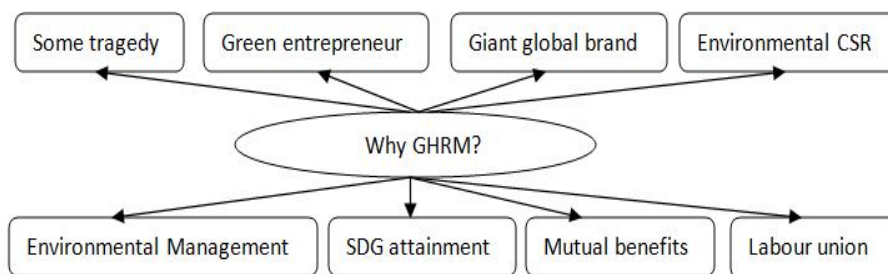

Figure 7 GHRM in RMG- Bangladesh

The emergence of numerous green entrepreneurs within the industry has significantly contributed to the implementation of Green Human Resource Management (GHRM) practices. Bangladesh ranks as the second-largest exporter of ready-made garments (RMG) globally and boasts the highest concentration of green RMG factories worldwide [50]. Currently, there are 160 LEED-certified green garment factories in Bangladesh, accredited by the US Green Building Council,

with an additional 500 factories pursuing LEED certification. Furthermore, green investors are actively engaging in various environmentally sustainable initiatives, including corporate social responsibility (CSR) focused on environmental issues and environmentally conscious human resource management, aimed at mitigating adverse environmental impacts and addressing sustainability challenges.

Major international brands are increasingly making commitments to their consumers to provide fashion products that have a reduced environmental footprint. There is a growing chorus of concern from global policymakers, environmental advocates, and civil society organizations regarding the ecological consequences of the fashion industry. Besides, the labor unions within this sector are robust and gaining strength. They are advocating for workers' rights and exerting pressure on management to enhance governance, create environmentally sustainable workplaces, ensure safety, and improve job security and benefits for employees. Moreover, achieving the Sustainable Development Goals (SDGs) is a primary objective for the government of Bangladesh, and the involvement of the private sector is essential for the timely realization of these goals. The implementation of Green Human Resource Management (GHRM) practices can play a significant role in this endeavor by addressing environmental challenges in the development of human capital.

3.6 Spectrum of GHRM Practices

Bangladeshi export-oriented ready-made garment (RMG) manufacturing companies can leverage the implementation of Green Human Resource Management (GHRM) practices to address sustainability-related challenges through various dimensions, including Green Recruitment and Selection (GRS), Green Training and Development (GTD), Green Performance Management (GPM), Green Compensation and Rewards (GCR), and Green Employee Involvement (GEI) [8, 17, 24]). For instance, by employing GRS, RMG firms can attract candidates who possess pro-environmental values and select individuals who demonstrate a commitment to environmental sustainability, thereby exhibiting both in-role and extra-role green behaviors [1, 28]. This approach can lead to improved sustainable performance, both directly and indirectly. Furthermore, GTD can provide education to unskilled and semi-skilled workers regarding environmental management values, train them in energy-efficient practices, minimize waste, promote environmental awareness within the organization, and create opportunities for employee engagement in solving environmental issues. These initiatives are instrumental in effectively addressing sustainability challenges [50-53].

Leaders and managers in the Ready-Made Garment (RMG) sector can incorporate environmental management (EM) responsibilities into their performance evaluation and management frameworks through Green Performance Management (GPM). This approach motivates employees to consistently adopt eco-friendly work practices, such as conducting green workplace assessments, participating in recycling programs, managing waste effectively, and implementing energy-saving measures [53]. Such efforts contribute to the overall sustainability of organizations [10]. By introducing Green Compensation and Rewards (GCR) that align with the environmental, economic, and social performance of employees, RMG companies can encourage timely completion of tasks, promote collaboration, and improve service delivery, thereby boosting the organization's sustainable performance [54]. Offering both financial and non-financial incentives communicates to employees that environmentally responsible behaviors are appreciated and acknowledged [53]. Additionally, the implementation of Green Employee Initiatives (GEI) can provide three key advantages for RMG manufacturing companies: it allows for the utilization of employees' tacit knowledge acquired through their direct involvement in production [2]; it promotes employee engagement and empowerment in proposing environmental enhancements [37]; and it cultivates a workplace culture that champions environmental initiatives [23]. Nevertheless, a review of existing literature reveals a gap, as no prior studies have quantified the implementation of Green Human Resource Management (GHRM) practices within the industry. Additionally, there is a lack of review investigating which specific aspects and practices of GHRM are crucial for enhancing the industry's sustainable performance. Consequently, the present study aims to evaluate GHRM aspects and practices utilizing the Fuzzy Interpretive Priority Analysis (FIPA) method to assess the extent of GHRM implementation and to identify significant practices for improving both individual and organizational sustainability.

4 DISCUSSION ON FUTURE REVIEW AVENUES

The comprehensive literature review indicates that while Green Human Resource Management (GHRM) practices possess the potential to address environmental challenges [53-56], organizations are not fully implementing GHRM strategies [54]. This underutilization hampers their effectiveness in enhancing environmental management [25, 56]. Furthermore, reviewers assert that the GHRM domain is still in its nascent stages, necessitating further investigation from various perspectives to foster its development and maturation [35-36]. The systematic review of literature, coupled with an analysis of industry contexts, has identified seven thematic and contextual review gaps. The subsequent subsections will elaborate on these seven gaps, including those addressed in this study.

The systematic literature review offers several agendas, along with a contextual analysis of the Bangladeshi Ready-Made Garment (RMG) sector, has identified seven thematic and contextual review gaps. The first three of these gaps represent novel areas of inquiry, as previous review on Green Human Resource Management (GHRM) has not focused on analyzing or prioritizing the aspects and practices of GHRM, nor the factors that facilitate or hinder the effective implementation of these practices. The remaining four gaps build upon earlier studies, aiming to evaluate both the direct and indirect effects of GHRM on social performance, economic performance, green competitive advantage, and non-

green behaviors. Notably, none of these seven gaps have been explored within the specific context of Bangladesh or the RMG industry. Each of these gaps will be elaborated upon in the subsequent sections.

Gap One: Despite the increasing interest in the implementation of GHRM, there has yet to be a study that evaluates the various aspects and practices of GHRM to identify which are critical for enhancing both individual and organizational performance in a sustainable manner. Furthermore, such review has not been conducted within the context of an emerging economy like Bangladesh or within the labor-intensive RMG sector.

Gap Two: While existing review on Green Human Resource Management (GHRM) indicates that its implementation significantly impacts various aspects of organizational and individual performance—namely environmental, economic, and social dimensions—there remains a lack of studies that systematically analyze and prioritize the key factors influencing the effective execution of GHRM practices. Although various scholars have identified certain antecedents, predictors, and enablers, they have largely overlooked the examination of interrelationships among these factors or the prioritization of them based on their significance or influence in relation to GHRM implementation. Furthermore, there is a notable absence of review focusing on this issue within the context of emerging economies such as Bangladesh, particularly in labor-intensive sectors like the Ready-Made Garment (RMG) industry.

Gap Three: There is a dearth of empirical review that thoroughly investigates the factors necessary to prioritize the critical challenges faced in the effective implementation of GHRM practices from the perspectives of various stakeholders. Despite the acknowledgment that implementing GHRM is fraught with difficulties, only a limited number of studies have sought to identify barriers, and these have typically failed to assess or prioritize them in a manner that highlights the most significant challenges to GHRM implementation. Additionally, no such review has been conducted within the framework of a developing nation like Bangladesh or specifically within the RMG industry.

Gap Four: There exists a notable deficiency in empirical review concerning the social aspects of sustainable performance, as well as the comprehensive integration of social, environmental, and economic dimensions. Additionally, there is a lack of studies investigating the mediating factors between Green Human Resource Management (GHRM) and social performance, which are essential for understanding the dynamics of their influence. Furthermore, such review is particularly absent in the context of emerging countries like Bangladesh and within the Ready-Made Garment (RMG) industry. Gap Five: While previous studies have moderately examined the effects of GHRM practices on economic performance, there remains a significant gap in review regarding the mediating mechanisms between GHRM and economic outcomes. This gap is particularly pronounced in the context of emerging nations such as Bangladesh and within the RMG sector.

Gap Six: Although scholars have posited that GHRM can facilitate the attainment of a green competitive advantage both directly and indirectly, the exploration of the relationship between GHRM and green competitive advantage, along with the associated mediating mechanisms, is an under-reviewed area. This lack of investigation is evident in the context of emerging countries like Bangladesh and specifically within the RMG industry.

Gap Seven: Despite a substantial body of review examining the effects of GHRM on employee green behavior, the connections between GHRM and other facets of individual performance—such as job satisfaction, employee commitment, and green creativity—have not been sufficiently explored. This gap is particularly relevant in the context of emerging countries like Bangladesh and within the RMG sector.

5 CONCLUSION

This review delves into the key practices and elements that either promote or obstruct the effective adoption of Green Human Resource Management (GHRM) within the Bangladeshi Ready-Made Garment (RMG) sector, particularly among export-focused manufacturing companies. The study culminates in a presentation of its main findings, accompanied by a detailed process framework. The structure of the review is organized as follows: it begins with a brief overview, followed by a summary of the significant review outcomes and insights derived from an extensive review of GHRM, highlighting the important implications. The aim of this study is to enhance the understanding of GHRM by investigating and evaluating the practices and factors that are crucial for prioritizing and recommending those that either promote or impede the implementation of GHRM in the context of the Bangladeshi RMG industry, ultimately striving for sustainable improvements in both individual and organizational performance.

This review examines the elements and practices of Green Human Resource Management (GHRM) within the Bangladeshi Ready-Made Garment (RMG) sector, focusing specifically on export-oriented companies. Through a comprehensive analysis, it identifies two pivotal GHRM elements: green recruitment and selection, as well as green performance management. Additionally, it outlines six fundamental practices that are crucial for enhancing sustainable performance. These practices encompass: training employees on environmental principles, perceiving environmental training as a valuable investment, incorporating environmental criteria into performance assessments, providing feedback regarding environmental performance, acknowledging eco-friendly behaviors in promotion decisions, and offering financial incentives for environmental achievements. The review further emphasizes potential competitive advantages and proposes two structured assessment frameworks for GHRM elements and practices, thereby addressing a gap in the current literature.

Additionally, the review identified key drivers for effective Green Human Resource Management (GHRM) implementation: governmental influence, buyer pressure, strong environmental legislation, top management commitment, green transformational leadership, environmental concerns in the mission statement, an environmentally focused organizational culture, and environmental audits. The study also categorized challenges to GHRM

implementation into cause and effect groups, highlighting seven critical issues: inadequate governmental pressure, poor regulation enforcement, limited awareness of GHRM benefits, weak buyer pressure, insufficient top management support, lack of a comprehensive environmental strategy, and absence of environmental audits.

Overall, current review has effectively highlighted its significant contributions to the literature on Green Human Resource Management (GHRM) within the Bangladeshi Ready-Made Garment (RMG) sector; however, it is important to recognize several limitations. For example, one key limitation pertains to the transferability of the findings, which are influenced by specific contextual challenges. The study reveals that the aspects, practices, drivers, and challenges associated with GHRM implementation in export-oriented RMG manufacturing firms are indeed context-dependent. Although the sample used in this review allowed for better control over contextual factors, the results are confined to the Bangladeshi RMG industry and its related institutional environment. Therefore, it is essential to exercise caution, as the conclusions drawn from this study may not be entirely applicable to other contexts and institutional frameworks which eventually direct the scope of future studies.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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