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Review

A systematic review on green human resource management: Implications for social sustainability

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ABSTRACT

This article identifies current progressions and research gaps in Green Human Resource Management literature and investigates the future of green practices in meeting the social sustainability requirements of an organisation. Considering the growing awareness on greening and sustainability, a systematic review of the domain specific literature was carried out using the Scopus and Google Scholar databases which resulted in a set of 174 scientific articles between 1995 and 2019. NVivo Plus software version 12 was used for quantitative processing as well as qualitative analysis of data. Content coding and cluster analysis were performed, the results of which exhibited three clusters namely, green human resource management practices, employee green behaviour at workplace and organisational sustainability. Further manual analysis revealed social sustainability to be the least explored area than economic and environmental pillars of sustainability. From this, the authors conceptually explored a theoretical model suggesting the mediational role of 'employee green behaviour at workplace' in the relationship between 'green human resource management practices' and 'social sustainability' of organisations using grounded theory approach. Therefore, prioritising social equity, health, wellness and well-being, this work examines the state-of-the-art in green human resource management research to unravel the enormous potential of core green practices envisioning social sustainability, which has not been established till date. Based on the content coding, clustering, and further analysis, propositions, future paths and implications are also presented.

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1. Introduction

Green human resource management (GHRM) practices

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contribute to the sustainability requirements of social equity, health, wellness and well-being of organisation and its employees in addition to the achievement of economic stability and environmental balance. Previous studies have explored the effects of GHRM on employee behaviour (Pham et al., 2019a, 2019b), environmental performance (Kim et al., 2019), and financial performance (O'Donohue and Torugsa, 2016) of organisations. However, the state-of-the-art of GHRM shows lack of studies relating to social sustainability dimension of organisations. This study, therefore, tries to explain the conceptual relationship between GHRM practices and social sustainability of organisations. Additionally, the work attempts to bridge GHRM and Sustainability literature by proposing the mediating role of employee green behaviour at work place using Ability, Motivation, Opportunity (AMO) theory and Social Identity theory.

Growing awareness of sustainability and corporate social responsibility has led to the mounting importance of human resources in most of the organisations, along with the financial, legal and other aspects of cleaner production in business. While finance is widely accepted as 'the lifeblood of business' (Renwick et al., 2008), human resource is gaining position as 'the soul of business', especially in the environmental context (Jabbour and Santos, 2008a). A place of business can be reconstructed from the ruins with exactly similar structure as before and may still continue to perform well, while the loss of essential human capital may lead to a decline in the pace of business (Lange, 2009). Human resources, thus, forms the knowledge base (Iqbal, 2018) of a firm, motivating more companies to invest further into its future prospects.

Top notch business practices, providing unique advantage for a firm in the midst of global competition calls for development and management of world-class human resource competencies (Khandekar and Sharma, 2005; Ambec and Lanoie, 2008) to ensure that the values underlying their strategic intent supports the accomplishment of sustainable development goals. Improved organisational productive performance (De Prins et al., 2014), profitability, long-term growth and development are guaranteed to all organisations that follow best resource utilisation practices (Jackson et al., 2011). But the factual problem recounts in identifying the benchmarks and implementing best practices. Moreover, the values, beliefs, attitude and behaviour of human resources towards achievement of the sustainable development goals of their organisation remain a serious question. In fact, concepts like "Going Green" and "Sustainability" are recurrently being used in the contemporary corporate world, demanding every company to follow the best 'eco-friendly' and 'resource-efficient' benchmark practices.

'Go-Green Movement' across globe has created 'Green Jobs' in organisations (government, semi-government and non-government), by promoting most efficient production policies that reduce harmful consequences of industrial pollution, waste, and other toxic chemicals. According to the (Green Jobs: U.S. Bureau of Labour Statistics, p. 1), "green jobs consist of either producing goods and services that benefit the environment and preservation of natural resources or those jobs where the organisational workforce is involved in making their firms' production process more reliable, sustainable and eco-friendly, thereby reducing its negative impact on the planet". Green resource capital and cleaner production technologies have reduced the negative impact on environment (Wilkinson et al., 2001) and to some extent, even reverse the destruction of natural resources as a whole (Ahmad, 2015).

The 'Green wave' (Esty and Winston, 2009) across societies, along with the massive structural and technological transformation in business has upgraded the role of human resources in creating better opportunities, especially in companies with long-term vision and leadership strategies. Subsequently, strategic human resource management, e-human resource management and increased concern for environmental protection have triggered the evolution of 'Green human resource management' (GHRM) as a separate field (Renwick et al., 2013), both in theoretical and practical perspectives (Opatha and Arulrajah, 2014; Shah, 2019). Employers readily deploy money in retaining and developing a knowledge capital base for transforming their business into more sustainable one through 'eco-innovation' (Huang et al., 2016) and 'people empowerment' (Kazlauskaite and Buciunien, 2008). GHRM helps an organisation preserve its knowledge base through best eco-friendly practices leaving no carbon-tracks of environmental imbalance (Mehta and Chugan, 2015), thereby providing complementary business solutions to meet long-term sustainability targets (Jabbour and Santos, 2008b).

Even though GHRM research has gained considerable attention now, much of the previous work in this field (Lee, 2009; Lin and Ho, 2011) relates to awareness, adoption (Yong and Mohd-Yusoff, 2016) and implementation (Chan et al., 2014) of green human resource management practices in organisations (Guerci and Carollo, 2016; Dagiliūtė et al., 2018). A systematic review of literature, therefore, is necessary to explore the possible outcomes of adopting GHRM practices in organisations. An in-depth review helps a researcher classify and reduce large amount of data collected over the past through qualitative data analysis tools that use explicit and reproducible selection criteria to identify relevant gaps in the literature (Nolan and Garavan, 2016). Through a systematic review, this paper attempts to find out the possible research gaps in GHRM literature, assessing the current trends and key elements underlying GHRM domain, using peer reviewed journal publications from the Scopus and Google Scholar databases.

This article is divided into two sections. The first section discusses the state-of-the-art in green human resource management domain using extensive literature review. Beginning with definitions of GHRM suggested by eminent researchers in this field, this review presents various functional dimensions of HRM where green philosophy is applied. Most frequently occurring words were identified to understand the underlying structure of the contents in selected articles on GHRM from 1995 to 2019. Codes were created accordingly and a cluster analysis was performed to classify the implicit content of articles, transforming the latent information into meaningful results through further analysis, supporting the decision-making process. Based on further manual analysis, the second section of this article presents the concepts of employee green behaviour at work place and eco-friendly practices for greening the human resource management functions, that contribute to social sustainability of organisations. Thus, this novel work tries to relate human resource practices with one of the 2030 sustainable development goals of better health, wellness and well-being. Exploring the current global trends in GHRM, the authors have identified and structured the main contents of 174 selected articles to develop a comprehensive model for GHRM and social sustainability, stating the major external influencers and barriers to implementation of green human resource practices in organisations, from an employee perspective.

2. Method

In view of the growing awareness and importance of greening the human resource management functions, articles from 1995 to 2019 were considered for review as environmental protection and promotional activities gained importance during this period. The current paper has adopted Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) standard, a method of literature review suggested by Moher et al. (2010) to address the objectives outlined in the introduction. Scopus and Google Scholar

databases, which are the most commonly used search databases, were considered for this study. Initial advanced search in Google Scholar as on July 2019, with the exact phrase 'Green human resource management' resulted in 1660 articles for the period 1995 to 2019. A parallel search in Scopus database using the same keywords retrieved 1449 articles on GHRM. Further search using the key words 'Sustainability' and 'Sustainable Development' showed 573 articles in Scopus and 1050 articles in Google scholar that elicited sustainable outcomes of GHRM. Articles on big data analytics, biofuels, medicines etc. did not mention the human involvement in sustainability. Hence, these were considered outside the scope of this study and were excluded from further search. Refining GHRM under the context of 'Business and Management', 148 scientific articles were considered from Scopus and 138 from Google scholar, excluding subjects like 'Agricultural and Biological Sciences', 'Engineering', 'Environmental Science', Decision Sciences', etc. These refined sets of 148 and 138 articles were then consolidated using Mendeley reference software to remove duplicates as well as the articles which appeared to give advice without supportive evidences. Subsequently, the Scimago Journal Ranking for each of the journals was manually searched to ensure that the data used for this current review appeared in peer reviewed journals. This also helped the authors to overcome the discrepancies of selecting articles from Google scholar database. Thus, the final sample set for the current review comprised a corpus of 174 top-rated scientific articles. A summary of the selection process is represented in Fig. 1, considering Moher et al. (2010) style of systematic literature review. Search bases like Elsevier-Science Direct, Pro-Quest and JSTOR were used with keywords such as Green Recruitment, Green Training, Green Rewards, Organisational Sustainability, Social Sustainability, and Environmental Sustainability for retrieving the full content of articles wherever necessary.

The selected abstracts were then sorted and organised into specific folders using NVivo plus software version 12. This is the latest and one of the most powerful tools developed for qualitative and mixed method data analysis (Edhlund and McDougall, 2019). It supports analysis of qualitative content of interviews, scientific articles, text, audio, video, emails, images, spreadsheets, online surveys, etc. to extract the structure of underlying concepts. Using NVivo plus, sentiments, themes and attributes can be sorted and the results may be visualised to explore connections between different projects, to map new models for forthcoming work.

Using 'word frequency query' tool of the software, hundred most frequently occurring words were identified from 174 core publications in GHRM and the outputs were generated in the form of wordclouds and tree maps. As represented in Fig. 2, the words 'environmental', 'management', 'green', 'practices', 'performance', 'organisational', 'sustainability' and 'employees' were found to be repeatedly used throughout the selected articles. Subsequently, the authors identified major themes in these data using auto code wizard provided by the software. NVivo 12 Plus supports automatic processing of large volume data by single user interface, reducing the subjectivity of manual coding by the researchers as compared to traditional content analysis (Edhlund and McDougall, 2019). The results generate a set of coded items with the words similar to those identified by wordclouds, which can further be segregated and created as new nodes by the researcher. Unlike manual coding, the auto coding feature of this software helps users identify patterns, texts, themes and sentiments which are beyond the imagination of human capacity. However, this has to be reworked, segregated and recoded to generate meaningful results.

The authors identified auto generated themes like 'green', 'environment', 'management', 'practices', sustainability, 'performance' and 'employees' and these were created as new nodes. Manual classification was then done to create sub-codes which formed the basis of cluster classification. As an example, 'Green management practices', 'human resource management practices' were coded to the node 'green'; 'business performance', 'firm performance', 'organisation performance' were coded to 'performance'. Since employee behaviour at work was identified as a prevalent theme, separate codes were created under 'employee' node.

A cluster analysis was then carried out to confirm the manually coded phrases. The results of clustering are generally presented through a dendrogram, revealing the similarity and dissimilarity between the objects classified (Hair et al., 2010). The cluster analysis, carried out by the NVivo 12 software, suggested three main categories, based on which further manual analysis was done using MS Excel tool package, to identify the relevant gaps in GHRM literature. Subsequently, GHRM-social sustainability gap was identified, from which a comprehensive model for GHRM has been proposed. This work was carried out in line with the grounded theory approach that involves identifying relevant research

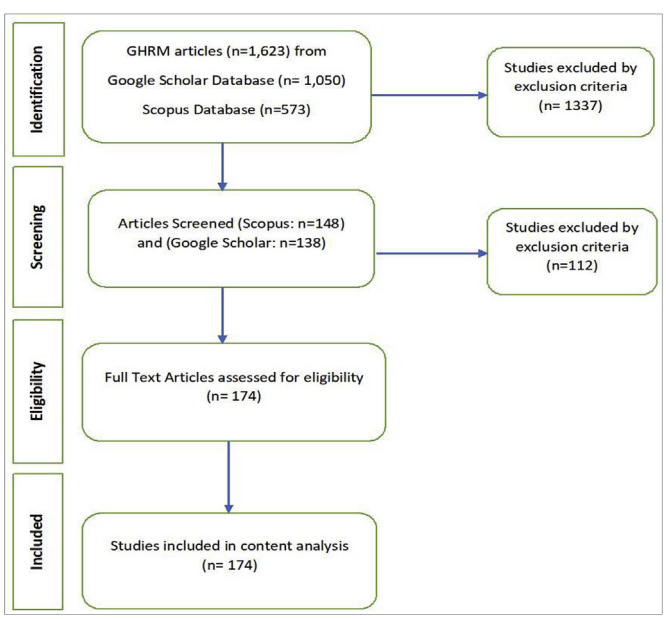

Fig. 1. Summary of the selection process.

Fig. 2. Wordcloud of GHRM literature review.

questions, theoretical sampling, data collection, coding concepts, segregating into categories and sub-categories and finally developing a theoretical model for further analysis (Glaser and Strauss, 2017). Grounded theory approach explains the reality through inductive analysis and let the substantive theory develop from the analysis. The results derived through such analysis form the basis of empirical testing of variables contributing to the domain specific literature, practically and theoretically.

3. Systematic review of GHRM literature

3.1. Outline of GHRM practices

The method of systematic review used in this article shows wide-ranging assumptions about the concept, usage, points of agreement and arguments on GHRM as represented using diversified definitions in Table 1. The point of agreement is that managing individuals at employee level starts when they enter a particular organisation, take part in each and every activity, develop, expertise themselves and grow rich along with the organisational development until they move out from the positions served. According to Ren et al. (2018), when the general human resource management practices of organisations are aligned with their environmental protection policies and preservation practices, a new dimension emerges from the field of 'Human Resource Management' known as 'Green Human Resource Management' (GHRM). Greening the human resources involves a set of policies and practices of protecting the organisational workforce for preserving the abundant knowledge capital through best eco-friendly and cost-efficient ways (Masri and Jaaron, 2017; Tang et al., 2018). Greening applies to all functional activities of human resource management throughout their career using sustainable practices (Mustapha et al., 2017) and policies to deploy the scarcely available resources most efficiently, promoting the source of employee morale and satisfaction which is environmentalism. Policies and practices (Renwick et al., 2013) in the field of human resource management like recruitment, selection, training, appraisal, pay, compensation, rewards, and employee relations have become a powerful tool for aligning employees to organisational environmental strategies leading to long term sustainable performance (Zaid et al., 2018b).

3.2. Analysis of results

Business organisations at present are adopting more integrated approach towards environmental-friendly management programs (Florida and Davison, 2001) that help in building up a sustainable organisation culture (Liebowitz, 2010; Baumgartner & Rauter, 2017; Luu, 2018). However, achieving this would require changing the overall mental outlook and behaviour of employees towards green initiatives (Cui, 2017). It is an established fact that the employees having an opportunity to make a direct environmental impact through their jobs report higher levels of satisfaction at work compared to those who do not (Guerci et al., 2016b). Studies related to job hunting practices also indicate that many potential candidates search for jobs having societal impact and prefer to work with greener companies offering green jobs (Brekke and Nyborg, 2008; Grolleau et al., 2012). Practices like job sharing, telecommunicating, teleconferencing, online training, energy efficient use of office space, transportation pooling, flexible work schedule, employee assistance program, wellness programme, employee's participation in environmental protection programmes that encourage 'reduce, reuse, recycle' motto have been proven to reduce the negative environmental impact resulting from business operations across sectors (Gast et al., 2017).

A review of 174 articles on GHRM for a period of 25 years (1995–2019), revealed a skyward trend citing the relevance of further research in this field as represented in Fig. 3. The required articles included peer reviewed journals that published conceptual as well as empirical papers of worldwide research on "Green human resource management" and "sustainability". The years 1995–2005 do not show significant work on greening the human resources (14 papers; 8.05%) but it ignited the minds of people with the need for environmental protection and concern for future generation requirements. From 2006 to 2015 (66 papers; 37.93%) the need for an environmental revolution in business was experienced in all functional areas like production, finance, operations, marketing, systems, and human resources. As a result, concepts like sustainability, corporate social responsibility, sustainable human resource management, and green human resource management gradually gained importance. Fig. 3 depicts the development of GHRM as an inevitable field of research from the year 2016 as a result of improved go-green awareness among people and their

Table 1
Definitions of Green human resource management (GHRM) identified in literature review.

Author, Year and Page	Definitions
Renwick et al. (2013, p. 1)	"Green human resource management (GHRM) can be defined as the Human Resource Management aspects of environmental management"
Opatha and Arulrajah (2014, p. 104)	"Green HRM refers to all the activities involved in development, implementation and ongoing maintenance of a system that aims at making employees of an organisation green. It is the side of HRM that is concerned with transforming normal employees into green employees so as to achieve environmental goals of the organisation and finally to make a significant contribution to environmental sustainability"
Masri and Jaaron (2017, p. 1)	"Green Human Resources Management (GHRM) refers to using Human Resources Management (HRM) practices to reinforce environmentally sustainable practices and increase employee's commitment on the issues of environmental sustainability"
Nejati et al. (2017, p. 2)	"Green HRM equips organisations with environmentally conscious, committed and competent employees which can help the organisation to minimise its carbon footprints through the efficient and effective use of existing resources, including telecommunication tools, less printing of papers, job sharing, and video conferencing"
Zaid et al. (2018a, p. 3)	"GHRM bundle can be considered as a cohesive set of human resource practices, which has consequences for the performance of manufacturing firms through: green hiring (GH); green training and involvement (GTI) and green performance management and compensation (GPC)"
Ren et al. (2018, p. 10)	"GHRM can be defined as phenomena relevant to understanding relationships between organisational activities that impact the natural environment and the design, evolution, implementation and influence of HRM systems"
Tang et al. (2018, p. 33)	"Greening the human resources involves a set of policies and practices for protecting the environment such as green recruitment and selection, green training, green performance management, green pay and rewards, green involvement"
Wikhamn (2019, p. 1)	"GHRM is the adoption of HRM strategies and practices that enable the achievement of financial, social and ecological goals, with an impact inside and outside of the organisation and over a long-term time horizon while controlling for unintended side effects and negative feedback"
Kim et al. (2019, p. 84)	"GHRM includes top management communication of the environmental policy, plan, and other pertinent information to employees, training employees to understand new environmental practices, empowering employees to engage in environmental activities and giving rewards that can stimulate employees to be environmentally responsible"

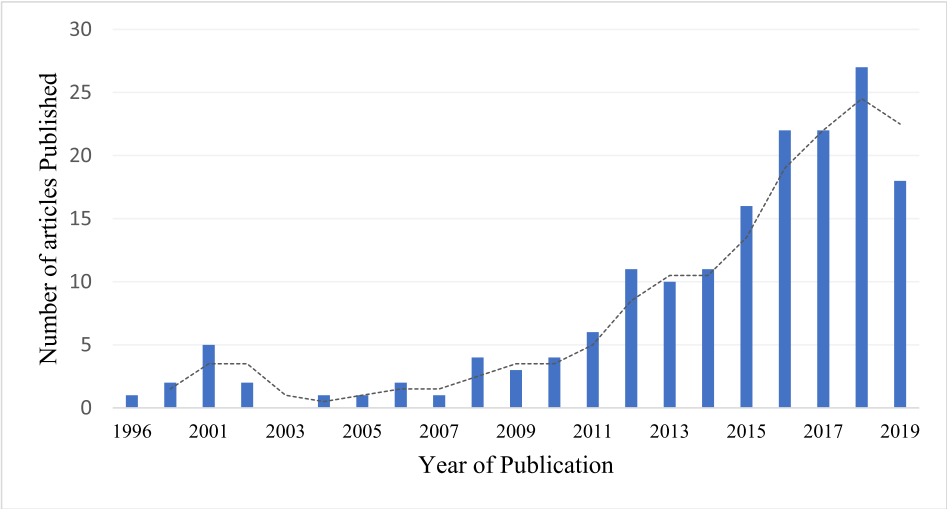

Fig. 3. Year wise publication of Articles on Green Human Resource Management

bourgeoning concern for environmental protection and sustainability. As many as 94 articles (54%) considered for the review were published between 2016 and 2019.

Analyzing the geographical trend in past GHRM research, it was found that adoption and implementation of green human resource management practices took place more in Europe: 33.33% (58 papers) and Asia: 31.61% (55 papers). Research and development in the field of green human resource management practices were found more in European countries, among which most prominent were in UK: 9.77% (17 papers); Italy: 3.45% (6 papers); France: 2.3% (4 papers); Spain: 2.3% (4 papers) and Belgium: 1.72% (3 papers) due to extremely rigid government rules and regulations for waste management and environmental protection. The waste management and environmental protection measures adopted by Europe date back to the second world war with the emergence of "German Green Party", which supported the promotion of healthier, greener and safer technologies (Wenk, 2006). The modern firms in Europe have established associations with "The European Union's Eco-management and Audit Scheme (EMAS)", enabling certification and implementation of 'Environmental Management Systems' within the European Union, promoting company-wide green policies and industry-wide environmental protection programmes, according to Clause 9 of the DIRECTIVE 2014/95/EU (Parliament, 2014). The directive principles of the European Union also require mandatory practice of green initiatives for social and environmental protection as per the DIRECTIVE 2014/95/EU, Clause 7(Parliament, 2014).

According to the trend analysis, highly populated countries of Asia like India: 8.62% (15 papers), Malaysia: 6.3% (11 papers) and China: 4.6% (8 papers) also have significant scholarly research in GHRM, that explores better ways of avoiding pollution and health related problems so as to ensure sustainability. For example, most of the Indian companies at present, increasingly go for ISO 14001 certification to undertake sustainability initiatives that minimise the detrimental hazards to human beings, animals and other living and non-living creatures to protect the human environment, acting within the framework of the provisions contained in the Environmental Protection Act, 1986. Similarly, the State Environmental Protection Administration (SEPA) of China directly undertakes the country's environmental protection initiatives like 'green labelling' and 'environmental certification', spreading 'environmental protection awareness' through their international environmental protection treaty negotiations. The 'Green China Forum', which has been developed recently to spread environmental protection awareness for achieving the goal of 'ecological civilisation' and the 'China National Environmental Monitoring Centre' which was formed to carry out extensive research to minimise the use of pollutants in China, also support the SEPA in improving their national environmental quality.

The results of the trend analysis revealed that next to Europe and Asia, South America: 21.82% (38 papers) had a greater number of valuable contributions to the GHRM field than that of North America: 6.91% (12 papers). The rules, regulations and laws of specialized bodies like 'United States Environmental Protection Agency' provide policy and guidance to all government, semi-government and non-government regulated entities to meet the federal sustainability requirements, and hold them accountable in case of any violation of the environmental laws. Being one of the world's richest economies, the US has set action plans like 'The 2018 U.S. Cities SDGs Index' to overcome the sustainable development challenges relating to the enhancement of economic opportunities, quality of life, and environmental management objectives of US Sustainable Development. Very limited studies relating to the relevant literature was done in Australia: 5.18% (9 papers), possibly due to its comparatively less density of population and lower amount of environmental toxicity. However, Africa: 1.15% (2 papers) had the least number of articles in greening of human resources for the past two decades, probably due to the lack of proper green awareness and training.

Thus, the geographical location wise trend analysed in this study examined the relevance of GHRM research around the globe, the results of which point towards the future scope of GHRM literature. It also demands exploration of more 'green and lean' practices, both at the individual and organisational level, especially in developing countries, to overcome the subsequent glitches in technological advancement and pollution nexus.

Considering the journals of publication, the research found 31 articles in Journal of Cleaner Production (17.82% of the total articles), 14 articles in Journal of Business Ethics (8.05%), 10 papers in International Journal of Human Resource Management (5.75%), 6 studies in Sustainability (3.45%), 4 (2.29%) papers each in Advances in Developing Human Resources, Business Strategy and the Environment, Industrial and Commercial Training and International Journal of Operations and Production Management, 3 (1.72%) articles each in Academy of Management, Human Resource Management, Industrial Management and Data Systems, Resources,

Conservation and Recycling, International Journal of Hospitality Management and International Journal of Production Economics. From Asia Pacific Journal of Human Resources, Cogent Business and Management, German Journal of Research in Human Resource Management, Human Resource Management Review, International Business Research, Journal of Business and Psychology, Journal of Internet Banking and Commerce, Personnel Psychology, and Tourism Management 2 publications each (1.15%) were considered for the review. Rest of the 59 articles (33.95%) were from 59 different journals considering one publication each.

Most prominent studies in this domain (6.32%) were undertaken by Jabbour et al. (11 papers), 1.72% of studies by Renwick et al. (3 papers), 1.72% by Guerci et al. (3 papers), 2 papers (1.15%) each by Boiral et al. Daily et al., Longoni et al. Paillé et al., Teixeira et al. and Wagner et al. Remaining articles were contributed by different authors. The analysis revealed that most dominant authors in this field are Jabbour, C.J.C, Renwick, D.W.S and Guerci, M., whose works were repeatedly cited in 80% of the articles assessed.

The so extracted, organised and analysed 174 articles were clustered using NVivo 12, on the basis of coding similarities, and were further analysed manually to create a meaningful platform for theoretical model building. Cluster analysis classifies object similarities based on user selected characteristics. It then generates an underlying structure of the contents implied in the data by reducing large volume into fixed number of clusters or classes similar to Factor Analysis (Hair et al., 2010) The 'cluster analysis' tool in NVivo Plus version 12 was used to generate a distance tree with 3 main categories as represented in Fig. 4.

The distance tree or the dendrogram, showed 'employee workplace green behaviour' and 'green employee workplace performance' to be different from other objects coded, which formed the first cluster. Green awareness, increasing concern on pollution prevention and massive reduce, reuse, recycle motto are now prevalent among employees motivating them to develop green workplace practices. The practices like video conferencing and other green commute alternatives reduce travel time and money leading to cost-efficient use of resources. Further, activities like making the workspace green with plants, reduce electricity consumption, use of stairs instead of elevators, use of reusable cups instead of paper cups, reducing the amount of water consumption, actively participating in environmental protection workshops and seminars to spread green awareness are all considered as voluntary green practices by employees in their workplace. Such practices are different from the normal GHRM practices in the sense they are not imposed on employees rather this green culture is formed as a result of voluntary routine green initiative of employees (Dumont et al., 2017). Therefore, the first cluster generated was renamed 'Employee Green Behaviour at Workplace' to differentiate employee workplace practices from GHRM practices, which seemed necessary. This was used in further analysis to identify the influence on organisational sustainability.

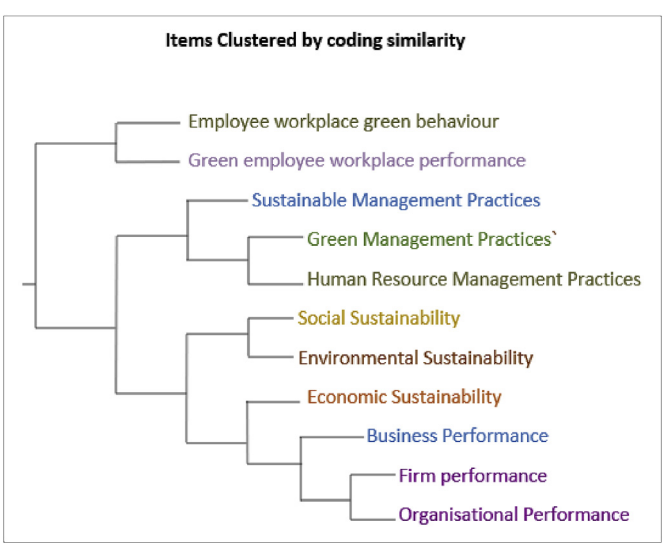

Fig. 4. Classes identified in Cluster Analysis – NVivo Software.

The second cluster showed sustainable management practices, green management practices and human resource management practices under one major category. This was categorised as 'Green Human Resource Management Practices'. The broad framework of human resource management consists of planning, organising, staffing, directing, controlling, receiving feedback and grievance redressal. When aligned with environmental protection policies and objectives of an organisation, it becomes Green Human Resource Management (Renwick et al., 2008; Arulrajah and Opatha, 2016). Researchers often interchange GHRM with Sustainable HRM (Wagner, 2011) and therefore the second cluster showed an acceptable classification of the three concepts together under 'Green Human Resource Management Practices'.

The final cluster formed was categorised as 'Organisational Sustainability'. A sub-cluster was generated under this class with economic sustainability, business performance, firm performance and organisation performance showing slight dissimilarity from other objects like social sustainability and environmental sustainability. Researchers till date have considered the role of GHRM in sustainability with diverse goals and assumptions, stating "Sustainability" as "that development which meets the requirements of present organisations without compromising the ability of future generations to meet their needs" (Brundtland, 1987). It universally encompasses the three major pillars of Social, Economic and Environmental Sustainability in development that are frequently recognised as the creation of balance between the 'People', 'Profits' and 'Planet' (Gupta, 2018). The concept of sustainability has transformed business organisations (Ones and Dilchert, 2012) from single-bottom-line of profit maximisation to the triple bottom line (People, Profit and Planet) for the benefit of society and the environment as a whole (Garavan and McGuire, 2010; Ehnert and Harry, 2012). Sustainability programs are globally considered as key factors of strategic development (Amui et al., 2017; Khandekar and Sharma, 2005) by many leading corporations for building up a unique competitive advantage (Kazlauskaite and Buciuniene, 2008; Siegel, 2009), giving concern to environmental protection and social well-being in addition to economic performance. For example, in 'State of Green Business, 2019', it is said that corporate sustainability has gained importance over the past decade (The GreenBiz report, 2019), beginning with the eco-innovative sustainability strategies (Hellström, 2007; Lee et al., 2018) and eco-imagination marketing initiatives of world-class business organisations like Walmart, General Electric and McDonald's. Such green innovative management practices enhance employee creativity leading to increased job satisfaction and organisational productivity, reducing harmful consequences on the environment. These practices also enhance company brand image, attract and retain top green talents, and increase further business opportunities contributing positively to an organisation's sustainability strength (Santos et al., 2013).

The content analysis performed by the software showed environmental sustainability and economic sustainability to be more explored than social sustainability pillar. To further analyse this gap, and to overcome the discrepancies in auto coding and clustering procedure, the authors manually reassigned and classified the corpus of 174 GHRM articles using MS Excel tool package, the results of which are graphically presented in Fig. 5. The titles and

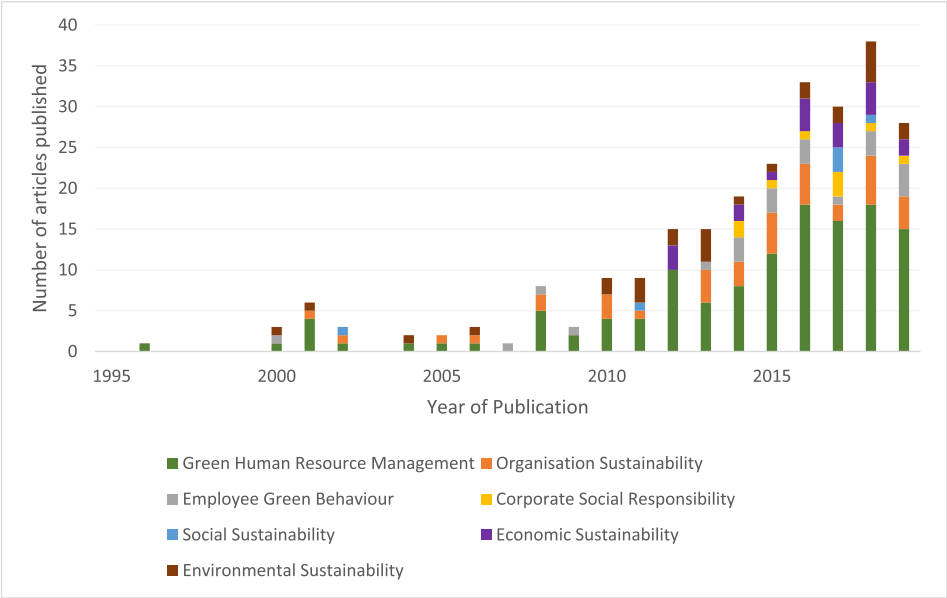

Fig. 5. Green Human Resource Management linkage to Sustainability

abstracts of the selected data set were analysed to identify the number of articles on GHRM and sustainability. It was found that 73.56% (128 papers) of the articles mentioned either green human resource management or sustainable human resource management, awareness about the concept and the need for implementation of green human resource management practices in business. Among 174 articles, 39 papers (22.41%) mentioned GHRM link towards triple-bottom line of sustainability, whereas 22 papers (12.64%) established the role of employee workplace green behaviour and 9 papers (5.17%) linked GHRM to Corporate Social Responsibility. The analysis revealed that 28 papers (16.1%) contributed to environmental sustainability dimension alone and 19 papers (11%) among 174 GHRM studies contributed to achievement of economic sustainability dimension. However, the least contribution of GHRM articles was found regarding social sustainability (6 papers; 3.4%) dimension. This finding in fact helped the authors to confirm the clusters developed previously and to analyse the gap from the systematic analysis.

Evidently, the interface between GHRM and Sustainability is a rapidly emerging area of research. Since, human resource arranges and facilitates the functioning of all other departments, it becomes important for humans to go green (Wilkinson et al., 2001) integrating organisational goals with the environmental goals for organisation's environmental sustainability (Govindarajulu and Daily, 2004; Zoogah, 2018). Established GHRM practices have proven to improve environmental commitment (Menguc and Ozanne, 2005; Zoogah, 2011) of employees through best human resource management practices that reduce the harmful consequences on natural environment (Daily et al., 2012) creating an environmentally sustainable business (Paillé et al., 2014). Researches conducted over a decade revealed significant contributions to environmental sustainability (Jabbour, 2013) initiatives through GHRM practices across organisations, reducing adverse environmental impact (Jabbour and de Sousa, 2016).

Even though less explored, a few studies empirically proved the impact of GHRM practices on economic side of sustainability, suggesting that, increased concern for green imperatives and GHRM contribute to economic sustainability (O'Donohue and Torugsa, 2016) of organisations reflecting in higher levels of income, wealth, profit (Maletič et al., 2018) and better pay scale to employees. Such sustained economic activities of organisation in turn contributes to GDP and the economic growth of the country. Digitalization and e-Human Resource management have changed the face of traditional HRM activities to online recruitment, e-training and development, enterprise resource planning and online grievance redressal, transforming it to a faster business world with better inflows. Companies investing in corporate social responsibility (Bučiūnienė and Kazlauskaitė, 2012; Sheehan et al., 2014) and green activities expecting the best and quicker payback, also foster other benefits such as lower cost of production, higher efficiency (Roy and Khastagir, 2016) and increased profitability. Research evidence supports that higher levels of GHRM practices lead to improved efficiency (Harvey et al., 2013), financial performance (Perramon et al., 2014; Miroshnychenko et al., 2017) and profitability (Obeidat et al., 2018), making stronger the economic pillar of sustainability.

The third facet of organisational sustainability covers one of the '2030 Sustainable Development goals' of achieving healthy lives, promoting the wellness and wellbeing of each and every human being at all ages, which is known as social sustainability. Unlike economic and environmental pillars, social sustainability includes qualitative dimensions that make it a difficult to measure construct in academic research (Staniškienė and Stankevičiūtė, 2018). The most interesting finding of this manual classification was the negligible number of studies concerning the societal impact of GHRM adoption and implementation, which might possibly due to ambiguities and tensions prevailing regarding measurement scale of the construct. This major gap provides academicians and researchers a choice for exploring the social side of sustainability in forthcoming green human resource management research.

4. Discussion: a proposed model on GHRM

The systematic review of GHRM research revealed that much importance was given to adoption and implementation of green hr practices from 2016, mostly in European and Asian countries. As many as 31 articles of the selected corpus were published in the Journal of Cleaner Production. The meta analyses provided the relevance of further research in GHRM. The review also found that green activities were implemented in most of the organisations as a

mandatory practice under corporate social responsibility agenda. GHRM research, so far, has conceptually and scientifically, established the role of green human resources management in enhancing organisational productive performance, reducing the harmful consequences on environment. However, laying of an empirical foundation for the possible social, economic and environmental outcomes of human resource greening is at its evolving stage envisioning the need for extensive research in this field. The human side of sustainability is at its infant stage and subsequently, questions like "Do green human resource management practices in organisations contribute to better health, wellness and well-being of employees?" and "What is the role of employee green behaviour at workplace in achieving the triple bottom-line sustainability of their organisation ?" remain yet to be addressed, balancing social context of business sustainability in line with ecological and financial sustainability.

As identified, human resource departments play a major role in greening the policies and practices from entry to exit processes like recruitment and selection, training and development, performance appraisal, rewards, compensation management and exit policies that are collectively termed GHRM practices, within the framework of Ability Motivation Opportunity (AMO) Theory (Renwick et al., 2013). Further, the literature review carried for current article revealed that activities like employee relations, discipline management, green teams, green culture management, career planning and development, green job description and specification, green employee engagement, health and safety assurance can also be included under GHRM practices bundle. The AMO theory applied in greening context emphasis on the hr policies and practices relating to environmental protection that enhance human capabilities, resulting in sustainable outcomes through increase in human capital and environmental values. Through a systematic review of literature, the following were identified as green human resource management practices, in line with the AMO theory framework suggested by Renwick et al. (2016).

Green Employee Acquisition: Right quantity and quality of resources are essential forces behind the success of any business. The need for environmental protection and preservation programs have led organisations to search for personnel with green values who can contribute to creation of environmentally oriented workforce (Renwick et al., 2013; Bowen et al., 2018). It has been widely noticed that not only organisations look for green employees (Gully et al., 2013) but also the applicants hunt for greener companies (Dagiliūtė et al., 2018). People choose firms that offer them green culture and green values at work upon the perception that such companies would provide job security, better career prospects, and long-term sustainability. However, it is the responsibility of organisations to attract and retain human resources by expressing their concern for environmental values (Gast et al., 2017) in the advertisements, giving special priority to the required potential talents (Bauer and Aiman-Smith, 1996) with green values (Aiman-Smith et al., 2001; Hunter et al., 2012). It will, in turn, help the companies become environmental champions (Chaudhary, 2018) by building up a green brand image (Wehrmeyer, 1996). Thus, acquisition and retention of top green talents that comes under 'Ability' aspect of AMO theory has become one of the most important tools for any organisation to achieve sustainability targets through green and online (paperless) recruitment procedures, video conferencing, virtual interviews etc.

Green Employee Training: Acquisition of green talent becomes more meaningful when followed by green training for environmental protection activities to develop and retain top green talents and overcome the challenges (Gardas et al., 2019) of the global business world (Aragão and Jabbour, 2017; Longoni et al., 2018). Developing the green abilities through training also forms under the 'Ability' aspect of AMO theory. Retention of high-performance workforce with green values require specific environmental related training and education (Madsen and Ulhoi, 2001; Teixeira et al., 2012). Green training and development enhance an organisation's ethical culture (Guerci et al., 2015), increase employee engagement and commitment to their organisation thereby contributing to Corporate Social Responsibility (Batista and Francisco, 2018) and Sustainability (Garavan and McGuire, 2010; Cheema and Javed, 2017). Environmental awareness workshops and seminars form the major green initiatives in organisations for creating eco-sensitive, resource efficient and socially responsible workforce (Ulus and Hatipoglu, 2016), but the real effects of such programmes still remain under-explored.

Green Employee Appraisal: Greening of performance management system, employee appraisal and development of green leadership competencies (Jia et al., 2018) can lead to employee satisfaction, better creativity and eco-innovation, reducing the negative consequences on eco-system by adhering to meet the requirements of Corporate Social Responsibility (Barakat et al., 2016). Appraisal and support of workplace green practices by the supervisors and top management form the 'Motivation' aspect of AMO framework. Performance appraisal for green activities help develop a sense of belongingness and satisfaction among employees (Temminck et al., 2015), creating a high-performance workforce. It is also essential for motivating green staff to improve performance efficiency and organisational effectiveness. Such approaches to performance management balance the financial goals of an organisation with the socio-environmental goals and benefits multinational corporations with sustained unique competitive advantages through employee empowerment and employee well-being (Maley, 2014).

Green Employee Rewards: Green appraisal and monetary rewards contribute to better employee performance when coupled with green rewards (Wagner, 2013) such as flexible work schedules and work from home facilities. Green commute alternatives like free cycles and van-pooling also reduce carbon emissions and facilitate eco-efficiency (Longoni et al., 2014). Green rewards motivate employees to engage in green activities at work and therefore, come under 'Motivation' aspect of AMO theory. Even though green rewards enhance employee engagement (Ramus and Steger, 2000), there is lack of proper evidence to show that indirect compensation benefits directed towards sustainability initiatives attract senior management's commitment and attention to such activities (Ramus, 2001).

Green Employee Involvement: Engaging and empowering employees to undertake green initiatives (Hanna et al., 2000) at work is an inevitable part of greening the human resources of a firm. Through employee participation in green initiatives, organisations are providing opportunities to employees, as regarded under 'Opportunity' aspect of AMO framework. The process of decision making becomes a much simpler task when people are given green opportunities and the end result would be a competitive workforce with high green values that benefit forward-thinking organisations (Daily et al., 2012). Green empowered employees better understand the need for eco-initiatives (Ramus and Steger, 2000) and the importance of concern for environmental protection. An empirical investigation (Javed and Cheema, 2017) on the importance of GHRM adoption in agriculture industry revealed that green farming activities like organic farming, reduced use of pesticides, reduced greenhouse gas emissions, etc., are better understood among 'pro-green' employees. Therefore, more open communication and green practice encouragement from the top officials are necessary for forward-thinking organisations to promote employee empowerment (Daily and Huang, 2001; Yin et al., 2019).

Other Green HR Practices: Special teams for encouraging environmental protection initiatives are becoming common in environmentally oriented organisations (Daily and Huang, 2001; Jose Chiappetta Jabbour, 2011). Such teams, known as 'Green Teams' (Jabbour et al., 2013), may be formed either voluntarily or as per the organisational policy requirements (Al Kerdawy, 2018) to promote the reduce, reuse and recycle motto. Green teams encourage organisational members to practice eco-friendly activities on a routine basis (Lapiņa et al., 2014), thereby creating better and healthy workplace. Most of the employees prefer healthy and safer workplaces which ensures job security and job satisfaction. Organisational objectives of a better workplace (Norton et al., 2014) can be made possible through 'Green Health and Safety' management practices like wearing helmet, gloves, and glasses wherever necessary, proper waste management at workplace, etc. Practices like 'Green Employee Discipline Management' and 'Green Employee Succession Planning' (Florea et al., 2013), also form green 'Opportunities' under GHRM initiatives that any environmentally concerned organisations can adopt for meeting their future sustainability requirements.

The results of content analysis using NVivo 12 and manual analysis using MS Excel carried out in this study identified little or no research conducted to explore the contribution of green human resource management practices to social sustainability. As represented earlier in Fig. 2, the relationship between green practices and environmental management as well as organisational performance were more explored than social aspect. Further analysis (Fig. 5) also showcased GHRM-Social sustainability link to be less studied than economic and environmental sustainability. This is in line with the findings that the social aspect is not much explored and remains the weakest pillar (Saeed et al., 2019) due to the ambiguities existing regarding this difficult to measure qualitative construct (Staniškienė and Stankevičiūtė, 2018) among researchers and practitioners, whereas, economic sustainability and environmental sustainability dimensions can easily and clearly be expressed through quantitative indicators. The results of cluster analysis (Fig. 4) revealed that 'employee green behaviour' need to be studied as a separate variable. In case of environmentally concerned organisations, green attitude and behaviour of employees at work are the outcomes of daily green practices and policies. Empirical evidences also suggest that GHRM practices are positively related to employee green behaviour and citizenship behaviour (Pinzone et al., 2016, 2019; Pham et al., 2019b), contributing to the multi-dimensional view of organisational sustainability. Even though GHRM practices have recently been conceptualised to promote green work-life balance (Muster and Schrader, 2011; Celma et al., 2018), GHRM link, from an employee perspective, to the dimensions of social sustainability via employee green behaviour at workplace is not established till date, which is a major finding in this literature.

Greening the traditional human resource practices would add value to the sweltering field of sustainable development (Haddock-Millar et al., 2016; Bombiak and Marciniuk-Kluska, 2018) and contributes social benefits to the society and stakeholders. Considering this, authors have built a model, as given in Fig. 6, showcasing how green human resource management practices contribute to an organisation's social sustainability dimension from the perspective of employees, meeting the corporate sustainability requirements. This model also suggests the mediating role of employee green behaviour at workplace in the above relationship, as it was formed as a separate cluster during analysis and identified as an outcome of GHRM practice implementation from the past studies. Further, the contextual influencers and barriers of GHRM-Sustainability relationship are also highlighted.

A study on GHRM-sustainability link by Yong et al. (2019) using resource-based view (RBV) theory revealed that green recruitment and green training positively contributes to sustainability. However, green selection, job description, performance and rewards were not found to be significant predictors. From the perspective of employees, cleaner production along with green recruitment, training, performance appraisal, rewards and autonomy develop 'Abilities', increase 'Motivation' and enhance 'Opportunities' (AMO), contributing to the triple bottom line of organisational sustainability through employee commitment and behaviour (Pham et al., 2019a). Environmental management becomes an easy task when environmentally responsible behaviour of employees result from green hr practices that create green abilities (A) through environmental training and provide them green motivation (M) in the form of green rewards. When the employees are provided sufficient opportunities (O) to practice what they acquire from the firm, achievement of organisational objectives would be much closer (Guerci et al., 2015), experiencing better performance, ecological stability, health, wellness and wellbeing. Empirical evidence by Staniškienė and Stankevičiūtė (2018) put forward health, safety, wellness and wellbeing to be the most relevant determinants of social sustainability. Achievement of health, wellness and wellbeing may be possible when every single organisation implements green human resource management practices, transforming normal employees into green employees. Accordingly, this article tends to bridge the gap in GHRM literature by conceptually linking specific GHRM practices to social sustainability and propose that:

Proposition 1. *Green human resource management practices like green hiring, green training, green appraisal, green rewards and green employee involvement in an organisation significantly contribute to the achievement social sustainability goals of that organisation, in terms of employee health and safety, equity, wellness and well-being, from an employee perspective.*

Corporate Social Responsibility (CSR) policies (Lapiņa et al., 2014; Jamali et al., 2015) demand all functional departments to undertake green initiatives (Bansal and Roth, 2000; Sheehan et al., 2014), and for any organisation, observance of such CSR activities cannot be imagined without the active participation of human resources. Employee's pro-environmental behaviour (Graves et al., 2019) or sustainability-related behaviour in a firm (Boiral, 2009), their attitude, values, believes, skills and motivation will, to some extent, be based on the GHRM practices framed under the AMO theory. Employee green behaviour involves the degree to which employees take personal initiatives in acting eco-friendly ways in an organisation, which will be influenced by the degree of 'Ability', 'Motivation' and 'Opportunity' provided to them by their employer. Green behaviour of employees comprises task related green behaviour such as double-sided printing, conserving electricity, video conferencing instead of travelling, etc., on the one hand, and non-task related green behaviour like segregation of waste, green commute, use of stairs instead of elevators, etc. on the other hand. Bissing-Olson et al. (2013) suggested that employee's daily affect, pro-environmental attitude and daily task-related pro-environmental behaviour will enhance their daily proactive pro-environmental behaviour. Dumont et al. (2017) conducted an empirical survey of GHRM, linking it with employee workplace green behaviour. They found that 'psychological green climate' mediates 'GHRM' and 'employee green behaviour', and that the 'individual green values' moderate the relation between 'psychological green climate' and 'employee green behaviour'. GHRM practices thus tend to create green employees (Nishii et al., 2008) who understand the green values of their organisation, adhering to the corporate social responsibility (Backhaus et al., 2002; Rayner and Morgan, 2018) requirements. Therefore, in line with the

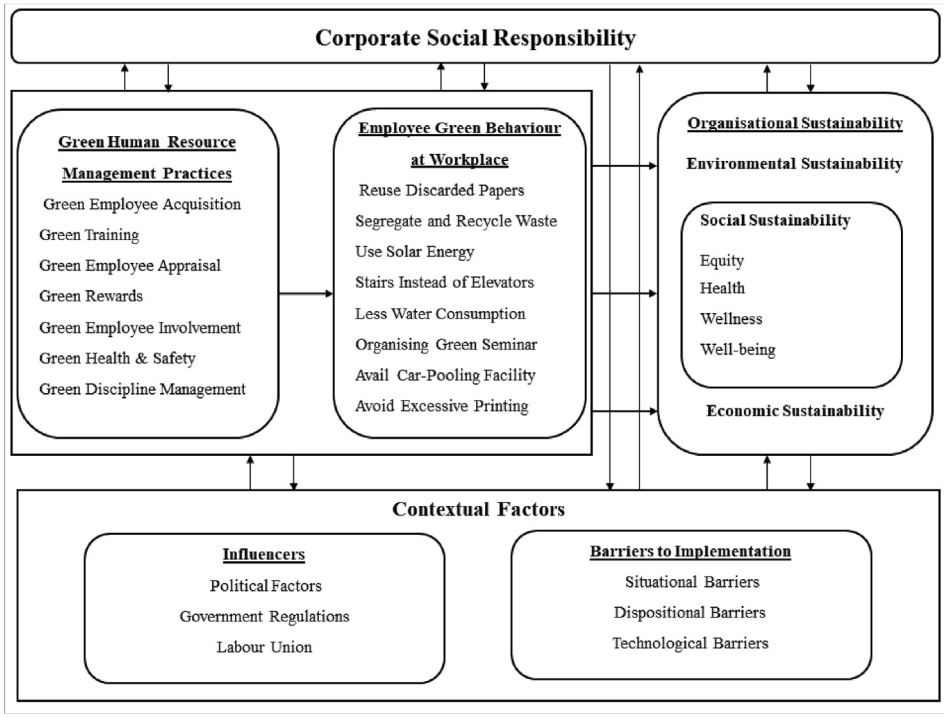

Fig. 6. Proposed model linking Green Human Resource Management and Social Sustainability.

above, but from the perspective of employees, we propose that:

Proposition 2. *Specific green human resource management practices like green hiring, green training, green appraisal, green rewards, and green employee involvement in an organisation will have a significant influence on routine green behaviour of employees at workplace in that organisation.*

Proactive and protective environmental management practices of organisations reduce the negative carbon trails through employee pro-environmental behaviour (Bamberg and Möser, 2007; Kim et al., 2019) and help them reap the long-term benefits of ecological balance (Paillé et al., 2017). When employees are motivated, giving sufficient opportunities to practice greening, they will better understand the company's green strategies and need for environmental protection which helps them develop a sense of green identity. According to Social Identity theory (Tajfel, 2010) when individuals develop a sense of identity, it will have influencing effect on their personal and group behaviour. As a result of this green identity, they work, act and behave in eco-friendly ways, creating a green climate within the organisation. Subsequently, green learning, green team work and green innovations take place under green organisational climate contributing to organisational sustainability. The current article strongly put forward that green human resource management practices create green identity and enhance pro-environmental behaviour of employees, which in the long run will lead to social equity, health, wellness and well-being of employees and their organisation as well. Till date, no research has been undertaken to examine the effect of employee green behaviour on social sustainability dimension, from the insight of employees, in the context of Social Identity Theory. Therefore, in line with the findings of Social Identity Theory we propose that:

Proposition 3. *Employee green behaviour at workplace significantly contributes to organisations social sustainability dimensions of better health, wellness, equity and well-being, from an employee perspective.*

Green human resource management practices are mostly framed within the context of Ability, Motivation, Opportunity theory (Renwick et al., 2013) and linked to the outcomes like sustainability and sustainable development using Social Exchange theory and Social Identity theory. According to the AMO theory, identifying and developing green competencies (Cabral and Dhar, 2019) are one of the major criteria for organisational performance improvement (Mohtar and Rajiani, 2016). Companies identify green talents and provide them the required environmental training to develop "Green Abilities". When such employees are provided with "Green Motivation" like green performance appraisal and green rewards, they feel more satisfied and attracted towards their organisation. Giving further "Green Opportunities", to explore into the corporate world through better flexibility at work, autonomy and employee participation in decision making, increases employee green behaviour at workplace. As an exchange process, this will enhance organisation commitment and trust, making the employees proud of their work for the company. Social Identity Theory, which is currently being used in GHRM research says that when employees develop green identity at workplace, it will guide their behavioural intention, and subsequently their behaviour towards meeting the triple bottom line of sustainability. For example, in light of Social Identity theory, Kim et al. (2019) revealed that if employees are environmentally concerned, they are more likely to adapt green human resource management practices of a company that increase their green behaviour at work, which in turn, will influence environmental performance of the company. Similarly, the present study suggests that green human resource management practices of a company enhance routine green behaviour of employees at workplace which will improve health and wellbeing of employees, strengthening the social sustainability pillar of their organisation. Therefore, within the contexts of Ability Motivation Opportunity Theory and Social Identity Theory, we propose that:

Proposition 4. *Green human resource management practices like green hiring, green training, green appraisal, green rewards, and green employee involvement in an organisation contribute to enhancement of an organisation's social sustainability dimensions of better health,*

wellness, equity and well-being of employees through the mediational effect of employee green behaviour at workplace.

Corporate Social Responsibility (CSR): It requires every organisation to consider the consequences of each business dealing in light of its effects on stakeholders (Carroll, 1999). Though concern for CSR started long back in 1950's, it gained much importance recently with increase in concern for environmental protection. CSR demands every company to consider social equality, health, and well-being through environment-friendly practices that enhance environmental sustainability, apart from the tradition of 'working for profit'. Companies not adhering to the CSR requirements are no longer considered stable and ethical (Loureiro et al., 2012). Therefore, most of the forward-thinking organisations, at present, adopt eco-friendly business practices and highlights CSR activities for achieving the sustainability targets. For example, the success of Sun Pharmaceuticals Industries Ltd., a listed green company in the health care sector in India, is attributed to rigorous green human resource management activities like recruitment, selection, performance appraisal, orientation, training and development as well as employee relation enhancement at workplace. They gave top priority to investment in 'Corporate Social Responsibility' (CSR) in order to achieve environmental sustainability through green practices such as discouraging use of paper works, pooling of car facility, use of more natural sunlight during day hours than electricity, work from home facilities, tree plantation camps, teleconferences, and conduct of annual 'Going green' survey (Suri and Banerji, 2016).

Contextual Influencers and Barriers: GHRM implementation (Tooranloo et al., 2017) in an organisation is influenced by the stakeholders (Guerci et al., 2016a; Järlström et al., 2018) through complex interactions of culture and politics internally (Ferris and King, 1991) and other legal rules, regulations, government interventions and trade unions externally. For example, Preuss et al. (2006), research on trade union and CSR in the European context found that trade unions have a significant influence on eco-friendly initiatives and CSR activities of companies. According to them, in those countries having rigid rules and regulations, trade unions and their institutional infrastructure perceive CSR as a means to gain more power for managers, which accordingly influence management practices and employees of the organisation. However, in countries where rules are lenient and the trade unions lack legitimacy to shape CSR agenda, their influence on management practices seems less. Therefore, in line with the above findings, the present study considers political conditions, government regulations and labour union involvement to be the major influencers of implementing GHRM practices and shaping employee green behaviour for achieving the social sustainability targets of an organisation.

In addition to these contextual influencers, there are dispositional impediments like lack of awareness on green practices among employees, their environmental values and attitudes, resistance to change, low motivational green support from supervisors and managers etc. that hinder adoption of GHRM practises. The situational barriers include limited financial options, lack of adaptability to specific markets (Visvanathan & Kumar, 1999) and underdeveloped value chains (Zhu and Geng, 2013). The technological barriers (Foxon and Pearson, 2008) such as high cost of implementation at mass level, expensive conventional alternatives and recycling procedures also remain the major challenges in implementation of GHRM at organisational level, especially in developing countries (Yusliza et al., 2017). The current article, therefore, consider these dispositional, situational and technological barriers in the implementation of green human resource practices and its subsequent effects on employee green behaviour and organisations' social sustainability.

4.1. Theoretical and practical implications to sustainability

Sustainability and sustainable development are currently one of the greatest concerns for all organisations, government agencies and practitioners (Olawumi and Chan, 2018). From an employee perspective, this is the first work that conceptualises green human resources under social sustainability context through the mediational role of employee green behaviour at work place. Viewing GHRM as a tool for achieving social sustainability has the following theoretical and practical implications. Green human resource practices like green recruitment, green training (Pinzone et al., 2019) and green rewards are not only confined to environmental performance improvement, but also create green employees, help improve daily employee behaviour and subsequently the work culture. Green culture at work will in turn lead to creation of healthy and safe work place ensuring employee wellness and wellbeing. Even though, previous research works established the environmental and financial benefits of adopting green human resource management practices in organisations, the social benefits are not explored in the literature. Therefore, contributing to the AMO theory and Social Identity Theory from an employee perspective, this work forms a base for researchers to further explore the relation of GHRM and social sustainability by empirically testing the effects of each green practice on health, wellness and wellbeing of employees.

In practical perspective, companies investing in green practices for environmental quality improvement should also consider the need for social sustainability. Awareness should be created among employees that the green practices of their organisation would ensure better life to the employees with equity, health, wellness and wellbeing in the long run. Healthy and safer workplaces with environmental-friendly work practices are essential to the realisation of organisational sustainability objectives. Similarly, deep understanding of how green employee behaviour affects an organisation, help authorities bridge the gap between green policy implementation and green goal realisation in the long run. The current model, therefore, guides managers and policy makers to implement potentially greener and better hr policies that would motivate employees to behave eco-friendly at work. This in turn helps meeting social sustainability requirements that has now become an inevitable component of organisational sustainability to all forward-thinking organisations. This novel concept offers chances for business entities to set realistic green target to improve employee behaviour at work and enhance employee commitment and satisfaction, thereby meeting the social sustainability requirements, in addition to economic prosperity and environmental performance.

5. Conclusion

Studies concerning organisational social sustainability as an outcome of green human resource management practices were hardly found in GHRM literature, which is a major gap that this study attempts to bridge. A model for social sustainability is conceptually explored in this work through green human resource management practices and employee green behaviour at workplace, using an in-depth analysis of peer reviewed articles in GHRM. The authors identified different green and clean production practices adopted in managing organisational human capital, targeting organisational sustainability strategies of enhancing the productivity of 'People', which in turn will have long term upshots on the "Profit" and "Planet". Through a systematic literature review and content analysis, most frequently occurring themes in collected

data sample were identified. These were then segregated, coded and clustered to form a structural base for further manual analysis, which revealed the social dimension of sustainability as the least investigated field. From this, we developed a model that conceptually explores the mediational role of 'employee green behaviour at workplace' in the relationship between GHRM practices and social sustainability of organisations from employee perspective, which has not been established by any of the previous researchers in this domain.

Further, the systematic review revealed that, Corporate Social Responsibility requirements were the major reason for GHRM initiatives in many organisations. Increasing concern for Corporate Social Responsibility demands employers to adopt green protocols in all the functional departments of their organisation. GHRM practices attract top green talents or create green talents through environmental protection related training and development that leads to the employee level outcomes of satisfaction, commitment and intention to stay. Green employees better understand the green values of their organisation and helps easy achievement of organisational sustainability goals. If their job specification provides the daily green duties and responsibilities of each employee, achievement of green goals through human resources would be a much simpler task. Other practices like employee appraisal for environmental protection initiatives, green rewards based on green performance, green teams to promote greening of organisations, welcoming employee suggestions regarding greening would also develop employee green behaviour at workplace. Subsequently, employees practice task related and non-task related green behaviour at workplace that enhance social wellness and well-being leading to complete realisation of organisational sustainability goals.

This study has the following limitations, that may be addressed in the future research works. First, only the articles relating to greening and environmental aspect from mid 1990s were considered. Next, it excluded the works that did not mention the greening of organisational human capital, for example, big data analytics, biofuels, medicines etc. Then, the articles reviewed and analysed in this study proposed a model in view of the social sustainability outcome of green human resource management practices on the basis of Ability, Motivation, Opportunity theory and Social Identity Theory, which remained suitable to the context. Other theories like Institutional theory, Stakeholder theory and Respect Openness Continuity theory which are used in this domain were not considered.

Despite these limitations, this study has explained the importance of social sustainability outcome of greening human resources management functions which help academic researchers in bridging the gaps in GHRM domain. It can be concluded that GHRM practices potentially contribute to the three aspects of organisation sustainability (people, planet, and profit). However, researches in the area of social sustainability still remain under covered, leaving it the weakest pillar of sustainability. Empirical studies can be conducted in future to establish the relationship between green human resource management practices and social line of organisational sustainability, including the mediating and moderating effects of possible determinants such as employee green behaviour at workplace, government interventions and trade union.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jclepro.2019.119131.

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