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Green Human Resource Management and Organizational Performance: Structural Equation Model Evidence from Nekemte Comprehensive Specialized Hospital, Ethiopia

Isubalew Daba Ayana[1, *], Misganu Getahun Wodajo[2]

[1]Department of Economics, Wollega University, Nekemte, Ethiopia
[2]Department of Management, Wollega University, Nekemte, Ethiopia

Abstract

Organizations have been more environmentally conscious in recent years, particularly since the sustainable development target was established worldwide. Consequently, scholars' attention has been drawn to the connection between green human resource management (GHRM) and organizational performance. This study aims to investigate the relationship between organizational performance and green human resource management at Nekemte Comprehensive Specialized Hospital (NCSH), a public hospital located in Nekemte City, east Wallagga zone, Oromia regional state, Ethiopia. Data was gathered using a closed-ended, five-point Likert questionnaire survey in order to meet the study's goals. All 223 questionnaire were received and analyzed using the structural equation modeling (SEM) method. Convergent and discriminant validity tests, as well as construct and composite reliability, were performed on the specified SEM model. The outcome of these tests showed that the SEM model's validity and reliability had been attained. Further, the SEM was checked for model fit indices and it was assured that the model is fit in all aspects. The SEM results revealed positive and significant effects of green reward and compensation (GRC) with a path coefficient of 0.41 (P<0.05) whereas green performance management and appraisal (GPMA) with a path coefficient of 0.48 (P<0.05) on organizational performance (OP) of Nekemte comprehensive specialized hospital. The structural model further revealed that green training and development (GTD) and green reward and compensation (GRC) have a significant effect on green performance management and appraisal (GPMA) with an estimated path coefficient of 0.49 (P<0.05) and 0.52 (P<0.05, respectively. The effect size analysis results indicated that GRC has the largest effect on organizational performance with an estimated path coefficient of 0.55 while GPMA has appeared with an estimated coefficient of 0.45 revealing a medium effect on OP. The result from the mediation analysis has indicated that GPMA has fully mediated between GTD and OP while it partially mediated between GRC and OP. From the econometric results, it is concluded that GHRM practices are positively contributing to the performance of the organization. The overall conclusion of the study is that there are limited GRHM practices that positively contribute to the performance of the hospital. The policy implication is that better organizational performance of the hospital demands the continuous effort of putting GRHM practices at the center of the organizational goal. Further, the dual contribution of GRC and the dual advantage of GPMA need to be well exploited.

Keywords

Green HRM, Organizational Performance, Likert Scale, Structural Equation Model, Nekemte City

1. Introduction

In the twenty-first century, environmental and sustainability issues have garnered more attention globally, regardless of related fields or corporate or public organizations involved. These days, businesses care about eco-friendly procedures that cut expenses, increase revenue, and benefit their staff [34]. The idea of "green human resource management" is therefore starting to catch the attention of academics and corporate HR managers. Using human resource management within the company is one of the primary ways to solve environmental concerns [12].

According to [27] green human resource management is the whole of policies, practices, and systems of an organization that make the organization and its employees green for the interest of the individual, society, natural environment, and the business. In the practices of green human resource management, the organizations use the activities such as such as recruitment and selection, training, compensation and rewards, and performance appraisal are adapted to ensure their employees understand and promote green behavior [44]. This shows that green human resource management is depicted through its practices.

It is the growing awareness and regulations related to environmental sustainability that have invoked the concept of green human resource management in the search for effective environmental management within both public and private organizations. The human resource department is largely responsible for forging the corporate mission statement based on environmental awareness and sustainability [19]. It creates a pattern of green behavior among employees which is often carried out into private life. This shows that green human resource management is becoming popular as part of sustainable development although less is known about it [31].

In an effort to protect the environment from harmful behaviors, a number of sub-Saharan African countries have passed laws and regulations to guarantee the sustainability of the environment. Research on environmental sustainability has shown that human activity is the primary cause of environmental degradation. Therefore, employing energy-efficient equipment and adopting workplace practices like recycling cans, papers, and bottles are two ways that environmental sustainability is applied in the workplace [40].

There is a growing need for the application of green human resource management in the healthcare organization. Green human resource management is a new concept in public health organizations that draws the attention of the health center to sustainability with various reformed practices. As a part of green social capital availability in an organization, the adoption of green human resource management practices can be fostered to attain resources [4]. The primary and most evident rationale for implementing green human resource management in healthcare organizations is to create a green workforce that understands, appreciates, and practices green initiatives and maintains its green objectives throughout the human resource management process [42].

The concept of human resources has evolved from time to time. The idea of human resource management first surfaced in the 1980s. Although rebranding people management gained popularity quickly, the theory underlying the notion was not well-known in many firms. The field of human resource management encompasses all facets of employee employment and management within firms [5]. The term human resource management has largely taken over from that of personnel management, which took over from previous terminology including labor or welfare management. In the 1980s, against a backdrop of economic recession and increased pressures on firms because of globalization and the accelerated pace of change brought about by technological developments, several academics began to think about people in organizations from different perspectives [44].

From the 1990s, the term strategic human resource became popular rather than simply human resource management. This is done to emphasize the objective of aligning the human resource management concept of human resource management is now popularized as green human resource management [32]. Its popularity has been introduced since the introduction of the millennium development goal in general and the sustainable development goal in particular.

Further, sustainability and green human resource management arose to meet the challenge of sustainable development which meets the needs of the present without compromising the ability of future generations to meet their own needs. It follows that sustainability and green human resource management arose to meet the challenge of sustainable development. Currently, it is one of the world agenda of 2030, sustainable development [44].

Since it emerged in the field of research in organizational studies after the 1990s, green HRM human resource management practices have been the concern of several academicians and management literature in general [17, 36]. Several studies have been conducted regarding green human resource management. For instance, [9] investigated the literature related to green human resource management. Their study found that the concept of green human resource management has attracted the attention of literature especially after the world has set the world sustainable development agenda.

Despite ample literature in Africa and other parts of the world, studies on green human resource management practices remain limited. Although the concept of the environment and the issues of organizational performance are given attention, there is limited literature in Ethiopia. Green human resource management however is the international policy that is under implementation along with the sustainable development goal. The human resource policy of Ethiopia also supports the policy of human resource management to be combative with the environment and sustainability.

This study is different from the previous studies in many

ways. First, this study uses three dimensions of green human resource management practices; green reward and compensation, green training, and green performance management and appraisal. Secondly, the study is different from the method of the study it employed. It has also incorporated qualitative analysis in the study. This study employed the structural equation model which functions better to measure the effect of the green human resource management practice on the performance of public organizations in Nekemte Comprehensive Specialized Hospital.

The study is important in many ways. Firstly, it contributes to the existing literature as there is limited literature in the areas of green human resource management. Through this, it overcomes the problem of the literature in the area of green human resource management and organizational performance. It follows that it adds a drop of knowledge in this area. Secondly, the finding of this study helps the Nekemte Comprehensive Specialized Hospital in improving the performance of the organization.

Thirdly, the significance of the study can be explained from the point of view of the service it will provide for future researchers. Unquestionably, future researchers will benefit from this. Finally, the study is very important for the policymakers. It follows that the study serves as the policy input from both regional-level policymakers and national-level policymakers. The objectives of the study are:

1. To analyze the effect of green training and development practice on organizational performance in Nekemte Comprehensive Specialized Hospital.
2. To investigate the effect of green reward and compensation practice on the organizational performance of Nekemte Comprehensive Specialized Hospital.
3. To examine the effect of green performance management and appraisal practice on organizational performance in Nekemte Comprehensive Specialized hospital.

2. Literature Review

The concept of "green human resource management" has been more well-known in the literature, especially with the establishment of the global agenda for sustainable development. The twelve HRM functions—reward management, discipline management, health and safety management, employee relations, recruitment, selection, induction, performance evaluation, training and development, and job design and analysis—also encompass several green HRM practices [46].

2.1. Studies on Green Training and Development

The primary goal of [42] study on the impact of green HRM on workers' environmental performance is to determine how green process innovation functions as a moderator. Their research revealed that stressing efficient environmental management enhances workers' green attitudes toward natural

goals, in line with pertinent environmental literature. Showcase how implementing green practices may improve organizational performance in general and the environment in particular.

In a similar vein, Pinzone et al. [30] examined data obtained from 260 healthcare professionals via survey. Because of the difficulty that healthcare workers face, this industry was chosen as an extreme example based on recent research findings. Employees who receive green training are more likely to engage in voluntary pro-environmental actions; our research indicates that this association is mediated by the fact that green training makes employees feel challenged.

According to [44], the impact of green manufacturing practices on organizational performance has been studied in the context of India. From field data, critical general manager factors were extracted, factors that positively affect organizational performance were assessed, and a model connecting critical factors and performance measures was developed. The survey approach is used in the research to acquire data. It guides how businesses could connect important general manager elements and performance metrics to focus their general manager actions and enhance operational, financial, and environmental outcomes.

In a similar vein [22] looked into how sustainable performance in healthcare businesses is affected by green HRM practices. Their investigation's conclusions demonstrated that green HRM techniques. According to [41] analysis of green innovation and environmental performance, triadic data from 309 small and medium-sized manufacturing sector businesses was gathered via a survey questionnaire. The study's findings indicate that green transformational leadership's impact on green innovation is mediated by green HRM practices. We also discovered that the environmental performance of a corporation is indirectly influenced by green HRM through green innovation.

2.2. Studies on Green Recruitment and Selection

According to [45], businesses ought to require their staff to be knowledgeable about green practices. In addition, the staff member might encourage clients to adopt a green lifestyle by purchasing eco-friendly products. They contended that improving employees' awareness of environmental issues through training could improve their performance in terms of the environment. Green training and development is defined as giving employees of the company the freedom to engage in environmentally friendly activities by teaching them how to operate in ways that reduce waste, save energy, and protect the environment. According to a very similar study by [29], some employers decide to use green selection criteria for job candidates. Moreover, outlining a business's environmental goals and principles.

Workers who are more conscious of the environment will be more inclined to incorporate what they know about the environment into daily operations, which will enhance the

environmental performance of their companies. Additionally, having staff members who are eager to participate and volunteer in environmental management initiatives is essential. To choose workers with environmental knowledge and teach them to meet the culture and environment of the company, selection is essential [42, 43].

To make sure that the candidates are qualified for the position, assessments, and interviews should be held during the selection process to learn more about the candidates' values, beliefs, and understanding of the environment. The research has shown that including environmental considerations in job descriptions and applicant criteria can help employers find candidates who share their values and environmental understanding. Alternatively, a company's reputation for environmental responsibility may draw in job applicants. Strong environmental policies can be interpreted by potential employees as a sign of the company's future actions [33].

To appeal to the most environmentally sensitive and aware candidates, companies are embracing "green employer branding" and showcasing information about their environmental initiatives during the hiring process. In a similar spirit, a company's green reputation plays a critical role in drawing in candidates who share the organization's values. As a result, job seekers can: believe that the company's values and their own are strongly aligned; view information about the organization's social and environmental performance as a predictor of future employer-employee relationships; and take pride in working for a company that has a green reputation [46].

2.3. Studies on Green Performance Management and Appraisal

By contrasting objectives and results, green appraisal and performance management (PM) seek to assess how well workers are performing in relation to their duties and obligations. When environmental challenges are addressed through PM, staff members receive insightful and helpful feedback regarding their contributions to environmental sustainability. Feedback has the potential to avoid negative attitudes and reward good action. Additionally, it is asserted that rather than being limited to the same green behaviors and skills, green appraisal needs to be dynamic and incorporate new objectives and challenges [6, 7].

While PM has been shown to benefit companies, there are drawbacks as well. Setting objectives and compiling relevant data to assess environmental performance across departments can be particularly challenging. Different environmental risks and goals may apply to organizational units and functional areas, and it is sometimes expensive and difficult to gather objective data on these goals and hazards. Because of this, most companies only allow CEOs and plant or division managers to participate in green assessments and PM [46].

The degree to which specific personnel exhibit behavior (actions and activities) and generate outcomes concerning greening over a predetermined amount of time is known as the "green performance appraisal". According to him, the green performance appraisal measures how well employees are performing in terms of moving towards a green environment. Its three elements are strategic focus, measurability, and completeness. One of the most important aspects of green human resources is evaluating the green performance of employees. Any firm cannot guarantee realistic environmental performance over the long term without this approach [8].

In the framework of the green performance evaluation, implementing corporate-wide environmental performance criteria is also essential. It is insufficient to incorporate green performance indicators into performance management systems or install corporate-wide environmental performance standards and reviews. To achieve targeted environmental performance, it is also necessary to build firm-wide conversations on green issues and communicate green schemes, performance indicators, and standards to all staff levels through performance evaluation systems [3].

Green performance reviews for employees must be carried out either on their own or, at the absolute least, as a component of the organization's performance review procedure. It is necessary to properly align the employee green performance measuring criteria with the organization's environmental performance standards. To sustain strong environmental performance, organizations must implement environmental audits and environmental management information systems. Several companies have developed information systems for environmental management. According to [26], the purpose of an environmental management information system is to effectively monitor the various types of pollution, resource use, energy consumption, and regulatory requirements that a firm faces.

2.4. Studies on Green Compensation and Rewards

Numerous empirical studies on green rewards and compensation have been undertaken recently. According to [20]. For instance, pay and rewards are a type of financial and non-financial incentive system designed to attract, retain, and motivate employees to support eco-friendly and environmental aims. Green pay and rewards include of incentives for accepting green environmental conduct, behavioral and technical bonuses, recognition for green environmental performance, and bonuses for competence.

A related study conducted by [13, 14] demonstrated how rewarding employees for altering their behavior might be used to incorporate the accomplishment of sustainable initiatives into the remuneration plan. Instead of encouraging bad behavior, the staff can be inspired to practice eco-friendly behavior in this way.
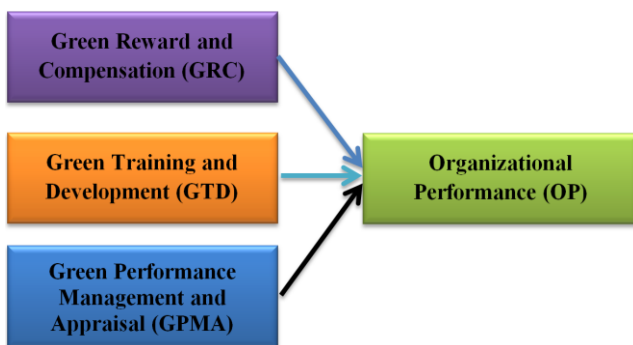
Green incentive systems are policies, programs, processes, and instruments created to maintain and protect the environment by raising pro-ecological employee knowledge, attitudes, and behaviors, according to another study of a similar nature

that was carried out by [1]. According to their research, green HRM includes green awards, which are intended to increase employee identification with the company's environmental objectives. Policies, programs, processes, and tools that are intended to be preserved are called "green rewards systems" [10].

Green incentives thereby enhance the company's reputation and contribute to financial gains. Research has indicated that the long-term performance of businesses associated with financial rewards results in a decrease in environmental pollution, increasing the opportunity for pollution avoidance [11].

2.5. Conceptual Framework of the Study

Three green HRM practices have been examined in the city of Nekemte's public hospitals in this study. Three explanatory variables make up the study, with the performance of the organization (Nekemte Comprehensive Specialized Hospital) serving as the dependent variable. These include green performance management and appraisal, green training, and green reward and pay. The variables that are measured are the explanatory variables. These latent variables are not seen. It is also an unobserved explanatory variable concerning the dependent variables.

Source: [5].

Figure 1. *Conceptual framework of the study.*

As a result, four indicators are used to build green performance and appraisal, while five indicators are used to build green reward and compensation, training, and development. Comparably, four indicators are used to construct organizational performance. The explanatory latent variable is indicated on the right side, while the latent explanatory variables are indicated on the left. The relationship and connection between the variables are indicated by the arrow that points from the explanatory variables to the dependent variable. As a result, the study has a strong conceptual foundation, making it feasible to move forward with creating an adequate research design.

3. Design and Method of the Study

3.1. Design of the Study

The study employed the cross-sectional survey research design as it provides an opportunity to collect insights from a target audience at a particular time interval. This design enables to obtaining of quickly collected information in a brief period within Nekemte comprehensive specialized hospital.

When a descriptive examination of a subject is needed, the researcher uses a cross-sectional survey research approach. The framework of a researcher's chosen study methods and techniques is known as research design. The study design is carefully chosen since it enables researchers to improve methodologies that are appropriate for the subject matter and structure their investigations for success.

The other reason why this study employed a cross-sectional survey research design is to capture its advantages. The main objective of this study is to collect data from the employees of Nekemte Comprehensive Specialized Hospital at one point in time just for this research. Further, cross-sectional studies are relatively cheap and less time-consuming than other types of research which justifies this study. The actual data was collected in June 2022. Thus, the study employed this research design considering the nature of the study. This shows that an appropriate research design has been employed in the study.

3.2. Type and Sources of Data

The study employed both primary and secondary data to achieve the objectives of the study. The primary data was generated from employees and management of Nekemte Comprehensive Specialized Hospital. Further, the document was generated from the formal documents of the hospital. Nekemte Comprehensive Specialized Hospital is a public hospital owned by the Oromia regional state that is administered by the Health Bureau of Oromia.

In addition to this, the human resource managers and the medical directors of the hospital were one of the sources of the primary data as the in-depth interview was carried out. It was conducted just to substantiate the data obtained from the questionnaire. Thus, the data for this study was sourced from the reliable source. The data for the document analysis was sourced from notice documents and green human resource management-related documents of the hospital. Regarding secondary data, several published and unpublished but reliable documents, magazines, and hospital reports were used. It was checked that the source is reliable and accurate as the purpose of the study was to come up with reliable finding that enables trustable recommendations. Therefore, the data for the study was sourced from reliable sources. It is now safe to go to data collection.

3.3. Questionnaire Data Collection Method for the Study

First, the study employed a questionnaire as the method of data collection. It is a frequently employed technique for gathering data, particularly in survey research designs. A set of printed questions on a sheet with areas for the respondents to write their answers made up a questionnaire [25].

The questionnaire's ability to quickly contact a large number of respondents from the two hospitals made it a viable option for the data collection strategy in the current investigation. Further, the questionnaire enables to give the respondents in the two public hospitals adequate time to respond to the items without any external pressures.

Moreover, it offers a sense of confidentiality to the respondent in responding to the question which improves the quality of data and in turn the quality of the findings of the study. Another reason why this study preferred a questionnaire as a method of data collection goes to its objectivity which reduces bias.

This again contributes to the quality of data [24]. The questionnaires were arranged in the five Likert scale as it is the better and standard method of questionnaire data collection for the problems related to this. The questionnaire prepared for the study is organized in four latent variables each has its questions that enable the measurement of the latent variable. The questionnaire was prepared in English language as the respondents are literate and can speak English. Further, many other working documents are also in English in the hospital. The questionnaire was self-administered just to obtain the required quality data and a full return of the questionnaire. Thus, it is possible to conclude that the questionnaire method of data collection is well-managed and administrated.

3.4. Sample and Sampling Techniques

Nekemte Comprehensive Specialized Hospital has employees. The target population of the study was the employees of the hospital. The hospital has 504 professional workers. It follows that all the professional workers of the hospital were the target population of the study. The professional workers are the nurses, doctors, midwives, pharmacists, and supportive staff of the hospital.

As it is very difficult to deal with the target population of hospital workers, I was forced to draw the sample from the target population. The process of sampling is recommended in the kinds of literature [15]. Sampling is done because a researcher usually cannot gather data from the entire population. Even in relatively small populations, the data may be needed urgently, and including everyone in the population in your data collection may take too long [35, 39].

Although the determination of appropriate sample size is a critical issue in SEM, unfortunately, there is no consensus in the literature regarding what would be the appropriate sample size for SEM. Some evidence exists that simple SEM models

could be meaningfully tested even if the sample size is quite small [16] but usually, $n = 100$–150 is considered the minimum sample size for conducting SEM. Some researchers consider an even larger sample size for SEM, for example, $n = 200$. Thus, this study decided to include a large sample size which is good for the accuracy.

Accordingly, the study employed Yemane's formula of sample size determination as it is popular and provides a better sample size where the population of the study is finite. Assuming a 95% confidence level and probability value equal to 0.05, the sample size was:

$$n = \frac{N}{1+N(e)^2} \tag{1}$$

Where n is the sample size, n is the population size, and e is the level of precision. When this formula is applied to the above target population, the sample size that was used for the study was calculated as:

$$n = \frac{504}{1+504(0.05)^2} = \frac{504}{1+504\,(0.0025)} = \frac{504}{1+1.26} = \frac{504}{2.26} = 223$$

This means, 223 people have participated in the study. It means that the structured questionnaires were distributed to 223 respondents from the hospital. Since the target population is homogeneous, the questionnaire was randomly distributed to the respondents. The respondents who filled out the questionnaire were randomly selected from the staff for the study.

3.5. Econometric Model Specification

The study employed the structural modeling equation as it has the following advantages. First off, there are benefits to validity using the structural equation model (SEM). Using many indicator variables per construct at once is made possible by structural equation modeling, which produces more reliable construct-level conclusions. Conclusions drawn from alternative analysis techniques would frequently be less obvious. Secondly, SEM is reliable. Structural equation modeling can take measurement error into account by explicitly including measurement error variables that correspond to the measurement error portions of observed variables [18].

Structural equation modeling is, without question, one of the most popular methodologies in the quantitative social sciences. Its popularity can be attributed to the sophistication of the underlying statistical theory, the potential for addressing important substantive questions, and the availability and simplicity of software dedicated to structural equation modeling. The popularity of the model sourced from SEM has three major advantages over traditional multivariate techniques.

These are; explicit assessment of measurement error; estimation of latent (unobserved) variables via observed variables; and model testing where a structure can be imposed and assessed as to fit of the data [28].

The study employed the structural equation model as

recommended by [5].

The statistical model of the standard structural model equation (SEM) was given as:

$$y = Ay + u \qquad (2)$$

Where u is a $n \times s$ matrix of zero-mean Gaussian error terms, which are driving the modeled system, and y is a $n \times s$ matrix of n area-specific cross-section with s scans each. A is a $n \times n$ matrix of path coefficients (with zeros for absent links).

Parameter estimation is achieved by minimization of the difference between the observed and the modeled covariance matrix Σ. For any given set of parameters, Σ can be computed by transforming the equation one as:

$$y = (I - A)^{-1} u \qquad (3)$$

$$\Sigma = yy^T = y = I - A)^{-1} uu^T (I - A)^{-1T} \qquad (4)$$

The first line of equation 3, where I is the identity matrix, can be interpreted as a generative model of how the system function arises from the connectional structure of the system: the Gaussian innovations u are applied to a function of the interregional connectivity matrix, or (I-A)-1, to obtain the measured time series y.

Furthermore, the causal relationship between organiza-tional performance and green human resource management is established by this study. Similar to structural equation modeling (SEM), the first model of the causal influence of green HRM is established by defining a set of green HRM practices.

Here, the activity of every green HRM practice is controlled by a system of coupled stochastic or ordinary differential equations that relate the practices' rate of change, also known as the (^x)/^t practices.

$$\frac{\partial x}{\partial t} = f(x, u, \emptyset^c) \qquad (5)$$

Finally, the linear structural equation model was given as:

$$Xi = v + \lambda U_i + KZ_i + \varepsilon_i \qquad (6)$$

where $v p \times 1$, $\lambda p \times 1$, and $K p \times q$ are parameter matrices with some elements often restricted to zero or one to ensure identification ability [37, 38].

The vector of conditional errors i is multivariate normal with E (i | Ui, Zi) = 0 and Cov (i | Ui, Zi) = Σi. This error term captures the deviation of the dependent variables from their conditional mean, given the latent variables and covariates, for example, measurement error.

The second stage of the model defines linear relationships between the latent variables.

$$U_i = \alpha B U_i + \kappa Z_i + \varphi_i \qquad (7)$$

4. Results and Discussions

4.1. Result of Indicator Reliability Test

Table 1. The indicator reliability test for the structural equation model of the study.

Indicator variables	Latent variables	Standardized loadings (A)	Square of standardized loadings (A)	Decision criteria	Conclusion
GTD1	GTD	0.97	0.9409	greater than 0.7	Indicator is reliable
GTD2		0.98	0.9604	greater than 0.7	Indicator is reliable
GTD3		0.98	0.9604	greater than 0.7	Indicator is reliable
GTD4		0.97	0.9409	greater than 0.7	Indicator is reliable
GRC1	GRC	0.98	0.9604	greater than 0.7	Indicator is reliable
GRC2		0.98	0.9604	greater than 0.7	Indicator is reliable
GRC3		0.98	0.9604	greater than 0.7	Indicator is reliable
GRC4		0.97	0.9409	greater than 0.7	Indicator is reliable
GPMA1	GPMA	0.95	0.9025	greater than 0.7	Indicator is reliable
GPMA2		0.95	0.9025	greater than 0.7	Indicator is reliable
GPMA3		0.95	0.9025	greater than 0.7	Indicator is reliable
GPMA4		0.96	0.9216	greater than 0.7	Indicator is reliable

Indicator variables	Latent variables	Standardized loadings (A)	Square of standardized loadings (A)	Decision criteria	Conclusion
GPMA5		0.94	0.8836	greater than 0.7	Indicator is reliable
OP1	OP	0.95	0.9025	greater than 0.7	Indicator is reliable
OP2		0.97	0.9409	greater than 0.7	Indicator is reliable
OP3		0.96	0.9216	greater than 0.7	Indicator is reliable
OP4		0.94	0.8836	greater than 0.7	Indicator is reliable

Source: Authors computation from STATA15

As it has been shown in Table 1, the squared of the standardized loadings of the measurement models are found to be greater than 0.7. This implies that the indicators' reliability is maintained. Further, it shows that the indicators of the SEM are perfect. It follows that there is no doubt about the indicator of the structural equation. This implies that it was safe to analyze and draw conclusions from the model.

4.2. Result of Composite Reliability Test

Table 2. Composite reliability test of the structural equation model.

Latent variables	Composite reliability	Decision Criteria	Conclusion
GTD	0.950	greater than 0.7	achieved the composite reliability
GRC	0.955	greater than 0.7	achieved the composite reliability
GPMA	0.902	greater than 0.7	achieved the composite reliability
OP	0.869	greater than 0.7	achieved the composite reliability

Source: Authors computation from STATA15

As it is indicated in Table 2, the composite reliability for all latent variables is greater than 0.7. This implies that the model has the expected level of internal consistency. Further, it means that the SEM model has achieved the composite reliability. The full calculation of the composite reliability is provided in the appendix section.

4.3. The Result of the Convergent Validity Test

Table 3. Convergent validity tests of the structural model.

Latent variables	The average variance extracted (AVE)	Decision criteria	Conclusion
GTD	0.975	greater than 0.5	Convergent validity achieved
GRC	0.977	greater than 0.5	Convergent validity achieved
GPMA	0.951	greater than 0.5	Convergent validity achieved
OP	0.932	greater than 0.5	Convergent validity achieved

Source: Authors computation from STATA15

As it is possible to observe in Table 3, the AVE of the entire latent variable in the model is greater than 0.5. This means that the

model has achieved convergent validity. It follows that there is no doubt about the convergent validity of the SEM model built into the study. See the appendix for the detailed calculation of the AVE.

4.4. A Discriminant Validity Test

Table 4. Discriminant validity test of the structural equation model.

Latent variables	GTD	GCR	GPMA	OP	Decision criteria	Conclusion
GTD	0.975				$\sqrt{AVE}$ > Correlation	Discriminant validity
GCR	0.4046	0.977			$\sqrt{AVE}$ > Correlation	Discriminant validity
GPMA	0.4131	0.5007	0.951		$\sqrt{AVE}$ > Correlation	Discriminant validity
OP	0.3943	0.5117	0.5863	0.932	$\sqrt{AVE}$ > Correlation	Discriminant validity

Source: Authors computation from STATA15

As shown in Table 4 above, the square root of the average variance extracted is greater than the Spearman rank correlation in the model. The brown shaded numbers show the AVE while the numbers below are the correlations. All the Spearman's rank correlation tests are below AVE. This can be checked vertically and horizontally. In all cases, the square roots of AVE are greater than the correlations of the latent variables. This indicates that the model has achieved discriminant validity. It further indicates that the latent constructs are showing the desired level of deviation from each other, reflecting that the model is desirable.

4.5. Model Fit Indices of the Study

Table 5. Model fit indices of the SEM of the study.

Model fit index	Adequate fit happens when	Value of the index for this model	Decision Made	Category of the index
Chi-square	p-value greater than 0.05	X^2=0.167, d/f=1, p-value=0.6947	model of the study is fit	
CMIN/Df	Less than 5	1.632	model of the study is fit	Absolute model fit measure
GFI	Greater than 0.90	0.991	model of the study is fit	
RMSEA	Less than 0.08	0.043	model of the study is fit	
SRMR	Less than 0.09	0.076	model of the study is fit	
NFI	Greater than 0.90	0.998	model of the study is fit	
CFI	Greater than 0.90	0.969	model of the study is fit	Incremental model fit measure
IFI	Greater than 0.90	0.988	model of the study is fit	

Source: Authors computation from STATA15

The model's fitness for the study is shown in table 5 above. Since the chi-square test is a statistically significant test, its value in the context of absolute fitness is distinct from other potential measures of fit in SEM. The chi-square test's null hypothesis is that there is no difference between the observed data and the anticipated model. This is due to our requirement that the prediction model as nearly as possible reflect the real data. This time, it is not necessary to reject the null hypothesis. Stated differently, a strong model fit is indicated by the lack of a significant result for this test [47].

Accordingly, the p-value of the chi-square is 0.6947 indicating a p-value greater than 0.05. This shows that one cannot

reject the null hypothesis which says the model fits perfectly. The implication is that the present SEM model of the study is a fit. This result is desirable.

On the other hand, relative/normed Chi-Square (CMIN/Df) was found to be 1.632. It is even less than 3 and Less than 5 too. The lower the CMIN/Df, the better the model fit. Therefore, the model of the study is fit when viewed from the angle of normed Chi-Square. In addition to this, the goodness of fit (GFI) index of the model is found to be 0.991 which is greater than 0.90 reflecting that the model is fit. This is analogous to R^2. It implies that showing the proportion of population variance explained by the model, and thus reflects greater GFI and better model fit.

Another model fit index from Table 5 above is that of root mean square error of approximation (RMSEA) is satisfies the required criteria. RMSEA is 0.043 which is less than 0.08.

This shows that the desired level of the RMSEA is obtained in the model. It is the adjusted index. The value of RMSEA obtained in our model is closer to zero. Therefore, the model for studying the impact of green human resource management on organizational performance in Nekemte Comprehensive Specialized Hospital is an adequate fit. Therefore it is safe to generate a conclusion from the sufficiently fit model of the study.

4.6. The Structural Equation Model (SEM) Results

After fitting the model and checking it for reliability and validity, it is now safe to report the structural equation model results. Accordingly, the estimates of the model result, effect size, and mediation effect of the model results are reported.

4.7. Effects of GHRM Practices on Organizational Performance

Table 6. Estimated coefficients of structural equation.

Latent variables	Structural equation model 1 (Organizational performance, OP)				
	Estimates	Standardized estimates	Z-value	p-value	SMC
GPMA	0.48*	0.45***	3.88	0.000	0.5127
GTD	0.13	0.16	1.67	0.095	0.8026
GRC	0.41*	0.55***	5.12	0.000	0.8221

*** Shows significant standardized estimates while * shows significant unstandardized estimates at Z value is >1.96, P value less than 0.05, 95% confidence interval, SMC- is squared mean correlation Source: Authors computation from STATA15

As it is possible to observe from Table 6, the regression equation can be written as:

$OP = 0.48\ GPMA + 0.13\ GTD + 0.41\ GRC + 0.229\ (e)$ indicating that green performance management and appraisal (GPMA) is found to have a significant positive effect on the hospital performance (OP). It is indicated by an estimated path coefficient of 0.48 which is significant at a 95 percent confidence interval. The squared multiple correlations (SMC) which is just analogous to R-squared is also found to be 0.5127 which is the desired level showing almost the majority (51.27%) of the variation in organizational performance is measured by the latent variable organizational performance (GPMA). This finding is in line with Masri and Jaaron (2017) who found that green performance management and appraisal are important for organizational performance. Organizational performance is even the base for the appropriate reward and compensation system.

Figure 1 shows the standardized path coefficients of the SEM model. Now the standardized path coefficients of the model are safely estimated from the model builder. In addition to this standardized loadings of the model were also set.

Similarly, the result shows that green reward and compensation has a positive and significant effect on the organizational performance of the hospital. It is calculated with the estimates of 0.41 which is positive and found with significant p-value. Observing from the SMC points of view, the variation of the change in OP that is measured by latent variable GRC is found to be 0.8221 showing that about 82 percent of the variation in OP is explained by GRC. This shows that the model fit is good and the result is reliable. This reflects that the green reward and compensation are very important for performance management and appraisal. This finding is in line with the findings of [17] who witnessed the importance of green rewards and compensation in enhancing organizational performance. Finally, green training and development (GTD), one of the latent variables of the study, has also positive but insignificant on organizational performance (OP). The estimates of the SEM model were found to be 0.13 with a p-value of 0.095 which is not significant at a 95% confidence interval. Similarly, the squared multiple correlation (SMC) shows that 80.26% of the change in OP is explained by the latent variable OP. This shows a better-desired level. However, green training

and development rather has significant effect on the green performance management and appraisal of the hospital.
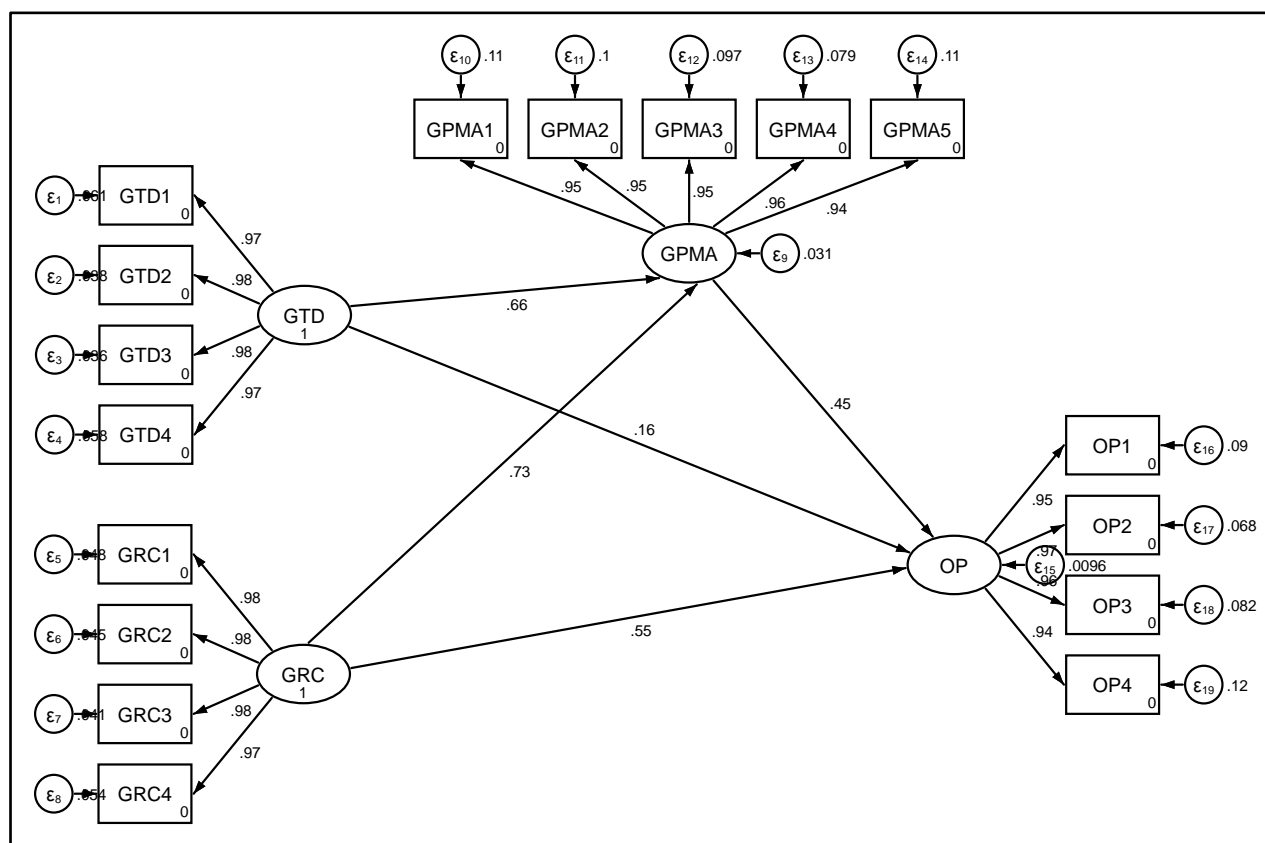

Figure 2. Standardized path coefficients of the structural equation model, Source: Author's computation from STATA15.

This finding is in line with the finding of [21] who found that green training and development had a positive effect on green performance management and appraisal before enhancing the organizational performance as a whole. This employee performance can be enhanced through employee training and development practices. Thus, two independent latent variables (green reward and compensation and green performance management and appraisal are found to have a positive significant effect on organizational performance while green training and development positively but insignificantly affect the hospital's green performance.

4.8. Effect of Green Training and Green Reward on Green Performance

Table 7. Estimated coefficients of structural equation.

| Latent variables | Structural equation model 2 (Green performance management, GPMA) | | | | |
	Estimates	Standardized estimates	Z-value	p-value	SMC
GTD	0.49*	0.66**	8.40	0.000	0.8026
GRC	0.52*	0.73**	9.35	0.000	0.8221

** Shows significant standardized estimates while * shows significant unstandardized estimates at Z value is >1.96, P value less than 0.05, 95% confidence interval, SMC- is squared mean correlation, Source: Authors computation from STATA15

As it is possible to observe from the above table 7, the second structural equation of the study can be written as $GPMA =$

$0.49GTD + 0.52\ GRC + 0.081(e)$. It is provided with the two latent variables (green training and development and green performance appraisal) are found to be positively and significantly affecting green performance and appraisal of the study. The estimates of the path coefficient of the green training and development on green performance are 0.49 with a significant p-value while estimates of the path coefficient of the green reward and compensation are 0.52 which is also a significant p-value. This shows that the green reward and compensation support green performance management. This finding coincides with the work of [2] who found that green training and development and green performance as a practice of green human resource management support organizational performance.

Further, this finding is in line with the work of [22], who found that green training and development should consider the issue of the environment as it enhances organizational performance and promotes green performance management of the organization. Similarly, the environmental issue should also be the center of the green reward and compensation strategy of the organization.

4.9. An Effect Size of GRHM Practices on Organizational Performance

Table 8. Effect size of the research variables of the structural equation model of the study.

Variables relations	Standardized estimates	Criteria (Müller, et al. (2015)	Decision on the effect size
GTD→OP	0.16	Around 0.1	Small effect
GRC→OP	0.55	greater than 0.50	Large effect
GPMA →OP	0.45	Around 0.30	Medium effect
GTD→GPMA	0.66	greater than 0.50	Large effect
GRC→GPMA	0.73	greater than 0.50	Large effect

Source: Authors development from STATA 15

As it is possible to see from above table 8, green reward and compensation (GRC) was found to have the largest effect on the organizational performance (OP) of the hospital. This is indicated by standardized effect size is found to be greater than 0.5. Not only on organizational performance (OP), is green reward, and compensation (GRC) found to have the largest effect on green performance. Another finding of the effect size analysis shows that green performance management (GPMA) has a medium effect on the organizational performance of the hospital. This is shown by the standardized effect size of 0.45 which is categorized as medium effect according to [23]. Finally, it is found that green training and development (GTD) has a small effect on organizational performance. The 0.16 of the standardized effect size shows that it is around 0.1 and reflects the smallest effect. When it was observed from the P-value point of view it is significant. The magnitude of the effect sizes, however, is the smallest of all the variables on organizational performance.

4.10. Mediation of the Effect of Green Performance in the Hospital

Table 9. The mediation effect of green performance in SEM of the study.

Mediation effect of endogenous variable (GPMA)					
	Variables	Direct effects	Indirect effects	Total effects	Decision
1	GTD	0.13 (0.16), non-sig	0.23 (0.66) (0.45), sig	0.36, sig	Full mediation
2	GRC	0.41 (0.55), sig	0.25 (0.73), sig	0.66, sig	Partial mediation

Note: non-sig- shows non-significant while sig shows significance at a 95% confidence interval. Values in parentheses are standardized estimates. Source: Authors computation from STATA15

As indicated in the table 9 above, green performance management has mediated between green training and de-

velopment and organizational performance. The direct effect of GTD is found to be 0.13 but non-significant while its indirect effect is 0.23 which is significant again. In addition to this, the total effect which is 0.36 also found to be significant. This shows that green performance management and appraisal are fully mediating between green training and organizational performance. Similarly, green performance management and appraisal are also found to mediate between green reward and compensation and organizational performance. The direct effect of the GRC is provided as 0.41 and significant while the indirect effect is 0.25 which is also significant. In addition to this, the total effect of the GRC is also found to be 0.66.

The total effect is also found to be significant. Therefore, the mediation of GPMA between green reward and compensation and organizational performance is dubbed as partial mediation. This finding is in line with the recent work of [22] who revealed that employee green performance significantly mediates the relationship between green reward and compensation and green training and development and organizational performance in Nekemte specialized hospital.

5. Conclusion and Recommendation

This study made the use of structural equation modeling (SEM) in examining the effect of green human resource management on organizational performance in Nekemte Comprehensive Specialized Hospital, Oromia region Western Ethiopia.

The conclusion from SEM reveals that all practices of the GHRM are positively affecting the hospital's performance. Two of the GRHM practices; green reward and compensation and green performance management have significant effects on the organizational study while green training has an insignificant effect on organizational performance. On the other hand, both green training and development and green reward and compensation are positively and significantly affecting green performance management of the hospital.

The effect size analysis revealed that green rewards and compensation have the largest effect on both green performance and organizational performance. However, green performance management has a medium effect on the performance of the organization. In contrast, green training and development has the smallest effect on organizational performance but a large effect on green performance appraisal.

From the mediation analysis, it is concluded that green performance management is fully mediating between green training and development and organizational performance while it is partially mediating between green reward and compensation and organizational performance.

From the conclusion of the study, the following recommendations are made. From the structural equation model estimation, it is concluded that green reward and compensation and green performance management are positively and significantly affecting the performance of the hospital. Thus, environmental issues need to be further kept as the major

criterion for rewarding and compensating employees of the organization. In addition to this, the idea of green human resource management (mobilizing the available human resources for environmental health and sustainability) needs to be at the center of the performance appraisal and the human resource function of the institution in general. Furthermore, the administration of the hospital needs to go further to deepen the engagement in the environmental issue. For instance, the cleaning campaign and other environment-related activities need to be extended to the surrounding environment (at least some limited radius outside the campus) in a more visible way as a means of enriching the existing practices of the green human resource management of the hospital. The GRHM practices need to further engage the community and other concerned bodies working collaboratively with the hospital regarding environmental conservation and environmental health.

The effect size from the standardized coefficient of the SEM has shown that green reward and compensation (GRC) was found to have the largest effect on organizational performance. Thus, the focus on providing green rewards and compensation to enhance organizational performance should be given attention. Moreover, the GRC has a dual benefit here. It follows that it has a large effect on green performance. Thus, the dual advantage of it needs to be exploited by the hospital. Further, the medium effect of green performance management and appraisal should be also noted and well utilized by the hospital. The smallest effect of green training and development on organizational performance need not be ignored as it has a larger effect on green performance management which has a medium effect on organizational performance. Thus, green training and development need to be planned to promote green performance and management.

From the mediation analysis conducted, it is concluded that green performance management is fully mediating between green training and development and organizational performance. Thus, the mediating effect of green performance and appraisal should be well utilized and focused by hospital administration. On the other hand, the indirect effect of green training and development needs to be taken into consideration during the planning and implementation of green human resource management.

6. Recommending Further Future Researches

Because any scientific test has limitations, researchers must indicate the directions for future investigation. The problem of the sample is one area that this study hopes to suggest for future research. 223 respondents were involved in the data analysis for the current study. To offer a more comprehensive conclusion and provide policy direction for the city's public health institutions, future directions may involve increasing the sample size. Furthermore, this research might include

more organizations and produce a more broadly based result.

Another problem is that just four latent variables in a single organization were used in this study to examine the effects of green HRM practices on organizational performance. As a result, future research might concentrate on performing a comparative analysis to simply observe how the effects of green HRM practices vary within or between firms.

Lastly, research in the future might concentrate on determining whether GRHM practices in hospitals differ from one another and whether the impact of GHRM varies based on the type of practices already in place in the organizations. Additionally, the five Likert scale was employed in this study to collect data. Since responders are given only five selections, this has limits. Subsequent research endeavors could employ seven-point Likert scales to examine the impact of GRHM on hospitals' organizational performance.

Conflicts of Interest

Authors declared no conflict of interest in any form.

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