

**HUMAN RESOURCE MANAGEMENT PRACTICES AND  
EMPLOYEE ENGAGEMENT AMONG NURSES IN  
KERALA: THE ROLE OF PSYCHOLOGICAL CONDITIONS**

*Thesis Submitted to*  
**Cochin University of Science and Technology**  
*for the Award of the Degree of*  
**Doctor of Philosophy**  
*under the Faculty of Social Sciences*

*by*

**Geetha Jose**

*Under the Supervision of*  
**Prof. (Dr). Sebastian Rupert Mampilly**



**SCHOOL OF MANAGEMENT STUDIES  
COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**KOCHI – 682 022**

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**Human Resource Management Practices and Employee  
Engagement among Nurses in Kerala: The Role of Psychological  
Conditions**

*Ph.D. Thesis under the Faculty of Social Sciences*

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## Certificate

This is to certify that the thesis entitled “**Human Resource Management Practices and Employee Engagement among Nurses in Kerala: The Role of Psychological Conditions**” is an authentic record of research work done by **Ms. Geetha Jose** under my supervision and guidance and it is adequate and complete for the requirements of submitting for the award of the Degree of Doctor of Philosophy under the Faculty of Social Sciences of Cochin University of Science and Technology, Kochi-22. This work did not form part of any dissertation submitted for the award of any Degree, Diploma, Associateship, Fellowship or other similar title or recognition from this or any other institutions. All the relevant corrections and modifications suggested by the audience during the pre-submission seminar and recommended by the Doctoral Committee have been incorporated in the thesis. Plagiarism was checked and it is within the acceptable limits.

Place: Kochi-22  
Date: 30/08/2017

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## *Declaration*

I, Geetha Jose, hereby declare that the thesis titled “**Human Resource Management Practices and Employee Engagement among Nurses in Kerala: The Role of Psychological Conditions**”, submitted to Cochin University of Science and Technology under Faculty of Social Sciences is the record of the original research done by me under the supervision and guidance of Dr. Sebastian Rupert Mampilly, Professor, School of Management Studies, Cochin University of Science and Technology. I also declare that this work has not been submitted elsewhere for the award of any degree, diploma or any other title or recognition.

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## Abbreviations

ANOVA	Analysis of Variance
AVE	Average Variance Extracted
CB-SEM	Covariance Based Structural Equation Modelling
GNM	General Nursing and Midwifery
GoF	Goodness of Fit
HR	Human Resources
HRD	Human Resource Development
HRM	Human Resource Management
HRMP	Human Resource Management Practices
HRP	Human Resource Practices
ISQUA	International Society for Quality in Healthcare
KMO	Kaiser-Meyer-Olkin
NABH	National Accreditation Board for Hospitals and Healthcare Providers
PCA	Principal Component Analysis
PHRMP	Perceived Human Resource Management Practices
PLS	Partial Least Squares
SEM	Structural Equation Modeling
SET	Social Exchange Theory
SPSS	Statistical Package for the Social Sciences
UWES	Utrecht Work Engagement Scale



# Chapter 1

## INTRODUCTION

### Contents

- 1.1 *Essence of Employee Engagement*
- 1.2 *Employee Engagement in today's business scenario*
- 1.3 *Employee Engagement and business success*
- 1.4 *Engagement in Healthcare Organisations*
- 1.5 *Nurses' Engagement*
- 1.6 *The Study Perspective*

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*This chapter conveys a general introduction to this research topic. The chapter briefly expresses the substance of employee engagement and its relevance in today's business arena especially in healthcare organisations. It further specifies the significance of nurses' engagement in healthcare organisations. Finally the chapter indicates the direction of this present research attempt.*

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In this epoch of globalization, swiftly reshaping business atmosphere and lofty competition, organizations are in a round-the-clock effort to bring about exceptional performance. The schemes followed to sustain as a prolific organization are concentrated not only on accumulating sales and service but also on methods to effectively and efficiently take advantage of an organization's human capital. Companies have envisioned that employees

are their biggest and cardinal resource and have acknowledged the proficiency of the human resources to be a root of competitive advantage (Barney & Wright, 1998; Pfeffer, 1994). The threat that managers face today is to figure out and unleash the human spirit in organizations. Human spirit is that segment of the human being which pursues gratification through self-expression at work (May, Gilson, & Harter, 2004). Kahn (1990) outlined this as “harnessing of organizational members’ selves to their work roles” and denominated it as employee engagement (p. 694). Kahn (1990, 1992) is frequently acknowledged as the first scholar to apply the notion of engagement to work.

In recent decades, the concept of employee engagement has been gaining significance and attention among academic researchers and practitioners alike (Saks, 2006; Mone, Eisinger, Guggenheim, Price, & Stine, 2011; Roof, 2015; Eldor & Harpaz, 2016). The concept is attracting increasing attention from academics, particularly from scholars in business and management, psychology and organisational behaviour disciplines (Welch, 2011). The escalating popularity of employee engagement is profusely echoed in scholarly and professional journals.

Engaged employees accept and cuddle roles within organisations by entrusting their spirit into these roles and in turn they become affixed to and are engrossed in the roles they perform (Rich, 2006). Employee engagement is a concept used to portray the degree to which employees are involved with, committed to, enthusiastic and passionate about their work (Macey & Schneider, 2008). Engaged people employ and express themselves physically, cognitively and emotionally as they perform their

roles (Kahn, 1990). Also, May et al. (2004) surmise that for the human spirit to bloom at work, the individuals must be capable to fully preoccupy themselves in their work, that is, they must be able to engage the cognitive, emotional and physical aspects of themselves in their work. Engagement with one's work is vital, given that work is a prevalent and significant part of an individual's well-being, affecting not only the quality of an individual's life but one's mental and physical health as well (Wrzesniewski, Rozin, & Bennett, 2002). Engaged employees have a feeling of energetic and effective association with their work activities and they see themselves as able to pact fully with the requirements of their job (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002).

In the prevailing economic scenario, the employees' psychological association with their work is absolutely indispensable to contest effectively (Chaudhary, Rangnekar, & Barua, 2011). The escalating interest in engagement is because of its positive association with employee behaviours that stimulate employee performance and business success (Attridge, 2009). At the organizational level, scholarly works on employee engagement has repeatedly established a significant, positive association with organizational performance (Carter, Nesbit, Badham, Parker, & Sung, 2016). More and more organisations admit that no company, small or large, reaps continuous success without engaging employees who carry high energy and passion to their work (Macey, Schneider, Barbera, & Young, 2009). The research documentation relating engagement with performance conclusions has forged an extensive notion amongst practitioners that enhancing and sustaining high

levels of employee engagement is crucial for business performance (Attridge, 2009).

Major part of what has been penned about employee engagement can be observed in practitioner journals where it has its base in practice comparatively than theory and empirical research (Saks, 2006). The notion of employee engagement is a comparably a novel one, one that has been massively advertised by human resource consulting firms that offer recommendation on how it can be created and benefitted (Macey & Schneider, 2008). In spite of the critical outcomes of engagement, scholarly research on the construct is inadequate (Wefald & Downey, 2009); especially little is known about determinants of employee engagement and there is insufficient data about its outcomes (Karatepe & Olugbade, 2009; Eldor & Harpaz, 2016). As a relatively new construct, more work building the validity, different antecedents and consequences associated with engagement is warranted (Gruman & Saks, 2011). Inadequacy of studies on employee engagement and the perks correlated with engagement offer humanistic and practical sense for managers and researchers of organizations to delve into the depths of employee engagement phenomenon.

## **1.1 Essence of Employee Engagement**

Recently, there has been an acute rise in the enthusiasm in the notion of employee engagement and its role in work performance and competitive advantage (Slatten & Mehmetoglu, 2011). Though employee engagement has repeatedly been proclaimed as the lever to an organization's success and competitiveness (Gruman & Saks, 2011), there exists some turmoil about the substance of employee engagement (Welch, 2011).

Researchers have pointed out that the terms employee engagement, work engagement and job engagement are often used interchangeably in academic literature (Welch, 2011; Agarwal, Datta, Blake-Beard, & Bhargava, 2012). The state of employee engagement is considered to be comprehensive of long-term emotional involvement and is a precursor to more temporary abstractions of employee sentiments such as job satisfaction and commitment (Shuck, Reio, & Rocco, 2011). In the engaged state people become physically involved in their tasks, cognitively alert and passionately connected to others in ways that manifest their individuality (Gruman & Saks, 2011). Because of their confident and affirmative mental outlook, engaged employees devise their own positive feedback, in terms of appreciation, recognition and success (Bakker & Demerouti, 2008).

When engaged employees are cognitively interested and emotionally attached to their jobs in addition to their physical attempt to achieve their work goals (Ashforth & Humphrey, 1995; Kahn, 1990). Engaged employees are not workaholics, they do not work hard because of a strong and irresistible intrinsic momentum, but for them working is enjoyable (Bakker & Demerouti, 2008). Employees who are highly disengaged in their work roles resist and detain their physical, cognitive and emotional energies, and this is reflected in task activity that is, they tend to be robotic, passive and detached (Goffman, 1961; Hochschild, 1983; Kahn, 1990).

Engagement has cropped up as a very important construct in organizational research on account of its favourable relationship with

employee behaviours that promote organizational retention and performance (Chalofsky & Krishna, 2009). In essence employee engagement is a heightened emotional and intellectual connection that an employee has for his/her job, organisation, manager or co-workers that in turn, influence him/her to apply additional discretionary effort to his/her work. But few organisations actually dig into what actually stimulates employee engagement. Recently, Burke (2010) commented on how difficult it was to obtain details about workplace engagement outside the Western context, due to a limited organisational research tradition in that area. It is imperative for organisations, that are set up to survive, fire up engagement within the workforce and this will counter the ephemeral seduction of short lived monetary gains with eternal aroma of success.

## **1.2 Employee Engagement in today's business scenario**

Employee engagement emanated to be pleasant and beneficial for business and various writers have chanted the praises of engagement as a key factor of individual attitudes, behaviour and performance as well as organizational performance, productivity, retention, financial performance and shareholder returns (Bates, 2004; Baumruk, 2004; Harter, Schmidt, & Hayes, 2002; Richman, 2006; Burton, Chen, Li & Schultz, 2017). Engagement has potentially positive consequences for both employees and their employing organizations (Koyuncu, Burke, & Fiksenbaum, 2006).

With transformation and restructuring unavoidable in many organisations, one of the biggest challenges presently surfacing in companies is the declining levels of employee engagement (Pritchard,



2008; Chaudhary et al., 2011). A number of consulting companies (e.g., Gallup, Blessing-White) have surveyed their clients and have found a concern that the majority of employees are not engaged in their work and their organizations (Chalofsky & Krishna, 2009).

According to Blessing White's 2011 research report, out of the 10,914 workers surveyed, only 31% were engaged and in all regions, except Southeast Asia, more employees indicated there is "no way" they will stay with their employer in 2010 compared to 2008 (p. 13). According to the report 37% of the Indian workforce are engaged, which is the highest level of engagement worldwide. However, it is disappointing to find that only 30% of the younger employees are engaged in their work. The functions in India with highest number of engaged employees are with the most tangible priorities of sales (45%) and marketing (43%). The number of Indian employees determined to leave the organization in the next 12 months was found to have increased from 5% (2008) to 10% (2010) which should be viewed with caution. 21% of the employees are ambivalent towards their long-term commitment to the organization for which they work which should also be a matter of concern. Towers Perrin, an international business consulting company, in their 2007 -08 Global Workforce Study, based on a survey of 90,000 employees worldwide, showed that only 21% were engaged in the job, 8% were highly disengaged and the remaining 71%, the massive middle, fall into two categories: enrolled (partially engaged) and disenchanting (partially disengaged). According to Watson Wyatt's Work Asia Survey Report for 2008-09, across Asia-Pacific, the universe of the survey, overall employee engagement is declining with a 4 percent dip compared to the previous

year and the employee engagement score, measured in terms of engagement, commitment and line of sight (clarity on the direction of business) has declined by 3 percent in India with regard to previous year (Bhattacharya, 2009).

Employee engagement is pivotal for organisations that desire to achieve competitive advantage and employee engagement has become a very important issue during the last decade and research from survey data frequently reveals low levels of engagement in many countries (Robertson & Cooper, 2010). Conservatively, it is estimated that less than 30% of those who go to work report even partial engagement with their work (Chalofsky, 2010), and research has suggested significant engagement declines worldwide (Gebauer & Lowman, 2008), especially in the context of economic markets in both developed and emerging economies. Given the importance of employee engagement to organizations, combined with the deepening disengagement among workers today, a key concern for organizations is how to promote the engagement of employees (Gruman & Saks, 2011). This decline in the employee engagement levels clearly highlights the need to undertake research in this area to find out mechanisms for enhancing employee engagement, particularly in the Indian context. A review of the extant studies that have investigated job engagement, demonstrates that being engaged in one's job may lead to positive outcomes for individuals as well as organizations (Chaudhary et al., 2011). Hence human resource development (HRD) professionals and academic researchers are increasingly being called upon to explore the phenomenon of employee engagement and support the development

of strategies that facilitate employee engagement in the workplace (Macey & Schneider, 2008).

### **1.3 Employee Engagement and business success**

The correlation amid employee engagement and performance is logical with engagement models, theory and research (Gruman & Saks, 2011). Successful organisations realize that engaged employees are cardinal to sustaining their leadership and development in the market (Devi, 2009). The competence and effectiveness of a fully engaged workforce is tremendous. Kahn (1990, 1992) argued that the physical, cognitive and emotional energies of engagement foster active, complete role performances through behaviour that is extra conscientious, interpersonally collaborative, innovative and involved. Moreover, Macey and Schneider (2008) observed that engaged employees invest their time, energy and personal resources trusting that their investment will be rewarded (intrinsically or extrinsically) in meaningful way by the supervisor/management.

Recently, Dikkers, Jansen, , Lange, Vinkenburg, and Kooij (2010) noted that engaged workers are energetic, are positively connected to their work and feel they are doing their jobs effectively. Hence it is clear that the potential of a fully engaged workforce is tremendous. Studies have shown that employee engagement is positively related to job satisfaction, organisational commitment, organisational citizenship behaviour, discretionary effort, task performance, salesperson performance, psychological wellbeing and innovative work behaviours and negatively related to turnover intention, emotional exhaustion and burnout.

Most of the engagement literature at this time is primarily based on survey results generated by consulting companies rather than empirical research. The Towers Perrin (2006) study compared groups of highly engaged workers with groups of less engaged employees. Key findings of these comparisons show that 84% of highly engaged employees believe that they can positively affect the quality of their company's products compared with 31% of the disengaged, 72% of highly engaged employees believe that they can positively affect customer service versus 27% of the disengaged, 68% of highly engaged employees believe that they can positively affect costs in their job or unit versus 19% of the disengaged, 59% of highly engaged employees planned to stay with their current employer compared with just 24% of the disengaged and employees who are the most committed to the organization perform 20% better on the job. Globally, similar studies report that disengaged employees cost the German economy approximately \$263 billion, the Australian economy \$4.9 billion, and the Asian economy \$2.5 billion annually (Meere, 2005).

Researchers have made significant strides in exploring the potential relations between engagement and performance related outcome variables that suggest enhancing engagement could create a compelling competitive advantage for organizations across the globe (Shuck Rocco, & Albornoz, 2011). A highly engaged workforce is a sign of a healthy organisation, whatever its size, geographical location and economic sector. Creating an engaged workforce is a key to business success in a modern globalized economy.

## **1.4 Engagement in Healthcare Organisations**

The workplaces have been subjected to advancement, modification and innovation over the past decade and most organisations have to battle in the competitive global economy (Kumar & Sia, 2012). The healthcare system also has undergone tremendous change over the past decade (Burke, Ng, & Fiksenbaum, 2009). People consider healthcare as one of their necessary priorities in most countries and it is expected to become even more significant as populations age (Burke et al., 2009). The soaring costs of healthcare, an ageing population, developing sophistication of technology, mushrooming of hospitals, emergence of new diseases, and greater public awareness for better quality of healthcare, have made the environment of healthcare organisations more dynamic (Othman & Nasurdin, 2011). Against this background of increasing competitive intensity, hospitals around the world see themselves faced with the challenge of enhancing quality (Baluch, Salge, & Piening, 2013). Therefore, improving the quality of service behaviour and the patients' and their families impressions of those assistances are paramount to increasing the financial accountability of hospitals (Chien, Chou, & Hung, 2008).

The objective of superior service performance might be feasible by ways such as initiating a customer oriented management and by dredging the patient relationship to safeguard loyalty (Chien et al., 2008). A drift towards a patient-oriented care model underpins the efforts in improving service quality. For decades, researchers have been studying factors influencing performance in health organizations with emphasis on worker factors and work environment factors (Al-Ahmadi, 2009). The recruitment

and retention of healthcare professionals, particularly nurses, has become a high-priority policy issue that is inherently related to the quality and sustainability of our healthcare system (Cho, Laschinger, & Wong, 2006).

Given the complexity of a hospital's task environment, retaining self-efficacious employees who treat patients with dignity and respect is pivotal to delivering high-quality health care (Baluch et al., 2013). Quality care delivery requires the presence of committed workforce that is fully engaged in the work and settings that empower them to provide the care they are educated to provide. The survival of healthcare organisations depend on their ability to satisfy customer needs, while achieving quality, flexibility and organizational responsibility, through the engagement and commitment of employees (Fay & Luhrmann, 2004; Newell, 2002).

Nurses occupy a central role in the delivery of health care in all countries, though countries may have different health care systems (Burke et al., 2009). As nurses play an important role to portray the organization's competence, their attitudes and behaviours toward patients would have significant influence towards patients' perceived service quality and satisfaction. Accordingly, the nature and quality of service provided to individuals within healthcare organizations may largely be dependent on nurse performance (Simpson, 2009). However, the factors that best predict optimal nurse performance remain elusive. Research focused on identifying factors that impact nurse performance has recently included the study of work engagement (Simpson, 2009). Nurses' attitude towards their jobs and commitment to their employing organizations have been compelling to researchers due to their impact on behaviour at work and

quality of patient care (Al-Ahmadi, 2009). Based on the above discussion it can be concluded that engagement of healthcare professionals is vital for achieving effective health service delivery in healthcare organisations.

### **1.5 Nurses' Engagement**

Nurses are not only a sizable occupational group in national economy, but also a fraction of the workforce that has earned a significant amount of research attention in the field of human resource management and organizational psychology in various countries (Cooke & Zhan, 2013). Nurses provide to the health and well being of society in a country. Nursing care continuously transform itself to cope up with the swiftly changing healthcare scenario (Chien et al., 2008). In the age of extensive hospital expansions, hospitals must increasingly revamp to an entrepreneurial type of management aimed on medical service behaviour and service performance (Chien et al., 2008). For healthcare zone, this could be attained by administering meticulous and better quality medical services which appease the medical needs of patients (Chien et al., 2008).

Nurses constitute the largest human resource elements in healthcare organisations and therefore have a huge influence on quality of care and patient outcomes. Nursing care is an essential part of patient care and is significant predictor of quality of healthcare services (Al-Ahmadi, 2009). Researchers have also established on the contribution of nursing care to patient outcomes such as quality of care and patient satisfaction. In healthcare organisations nurses act as boundary spanners. Boundary-spanning employees comprise those points of contact that an organisation has with its environment. In hospitals, nurses as customer-contact

employees have always been an important part of the medical profession (Othman & Nasurdin, 2011). The effect nurses' performance has on several patient outcomes inside the hospital setting is extensively appreciated and recognized as a critical antecedent to the transfer of quality patient care.

Nursing is a stressful occupation. The emotional demands of service profession have a significant impact on nurses wellbeing (Lee & Akhtar, 2007). But frequently these professionals are sufferers of job burnout due to their unique alliance with care seekers (Lee & Akhtar, 2007). Nurses frequently work in a life or death scene and regular and deep involvement with patients tends to be emotionally taxing (Maslach, 1982). Throughout time, nurses' jobs will always be enveloped with elements of stressful, difficult contests and episodes of hardship (Othman & Nasurdin, 2011). Jobs characterized by high job strain, that is, psychologically demanding work coupled with little opportunity to make decisions or use personal skills, often can result in poor worker productivity.

Providing relevant kinds of job resources can buffer the negative impact of stressful job demand (Attridge, 2009). Supportive management practices are crucial to achieve high nursing performance (Drach-Zahavy, 2004; Al-Ahmadi, 2009). Similarly, Cho et al. (2006) argue that supportive organizational structures in the work environment promote greater fit, which results in positive work outcomes. Day-to-day multiple contacts demanding with patients depletes the emotional resources of nursing professionals and leads to low levels of engagement in the job. There are research evidences backing the positive association between employee engagement and service based organisational outcomes.



Nurses' engagement is very much essential to prioritize and implement interventions aimed towards improving nurse performance, patient outcomes and other core healthcare organizational outcomes (Simpson, 2009). Maslach and Leiter (1997) have proposed that fit between employees and their work environments results in greater engagement in their work and lower levels of burnout. It is necessary for us to develop better understanding on nurses' engagement for improving the efforts to enhance it. In this modern challenging hospital environment highly engaged nurses who treat patients with dignity and respect is pivotal to delivering high quality health care. However most of the studies are carried out in the Western settings and there is a growing concern over whether business practices can enhance engagement in non-western settings (Yousef, 2000; Al-Ahmadi, 2009).

## **1.6 The Study Perspective**

Healthcare is considered as one of the top priorities of people across the globe. The success of healthcare organisations primarily depends on the quality of healthcare delivery. Nurses constitute the largest human resource elements in healthcare organisations and hence have a great impact on the quality of care and patient outcomes. Nurses' engagement in their job is important to hospitals success. High stress levels form increasing workloads and low staff levels can cause nurse engagement to drop, risking patient care. Surprisingly there is a relative shortage of studies focussed on the factors enhancing engagement (Simpson, 2009). This study is a modest attempt to address this limitation. Research indicates that external job resources are important to facilitate engagement. In this

regard, human resource management practices is proposed as a job resource in the present study as it is functional in achieving work goals, motivation and development. Previous studies also highlight the role of personal resources in explaining the transition from job resources to work engagement. The present study considers psychological meaningfulness, psychological safety and psychological availability as the personal resources contributing to employee engagement. The current study is designed to propose and validate the employee engagement of nurses in the hospitals in Kerala as an outcome of their perception of human resource practices in the hospitals and their psychological conditions in terms of psychological meaningfulness, psychological safety and psychological availability.

Based on the above discussion the originating research questions of the study have been framed as:

1. What is the perception of employees about the degree of implementation of specific HRM practices in their organisation?
2. Do the employees experience appreciably the psychological conditions of safety, meaningfulness and availability in their job performance in organisation where HRM practices have been effectively carried out?
3. Do the employees feel engaged in organisations where HRM practices are effectively implemented?
4. If the two above scenarios (2 & 3) are true, to what extent the psychological conditions mediate the association between HRM practices and employee engagement?

Employee engagement, an ideal tool for improving the quality of nursing care is directly extendable to other business sectors. The researcher proposes to contribute the finding of the present study to growing fields of HRM and more so in the case of healthcare literature.

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## THEORETICAL BACKGROUND

<i>C</i> <i>o</i> <i>n</i> <i>t</i> <i>e</i> <i>n</i> <i>t</i> <i>s</i>	2.1 <i>Conceptualising Employee Engagement</i>
	2.2 <i>Human Resource Management Practices (HRMP)</i>
	2.3 <i>HRMP, a job resource, as an antecedent of Employee Engagement</i>
	2.4 <i>Role of personal resources in HRMP-Employee Engagement relationship</i>
	2.5 <i>Uniqueness of the Psychological Conditions of Safety, Meaningfulness and Availability</i>
	2.6 <i>Psychological Safety</i>
	2.7 <i>Psychological Meaningfulness</i>
	2.8 <i>Psychological Availability</i>
	2.9 <i>Insight into the Conceptual Model</i>

*The information presented in this chapter offers background for this research. The chapter discusses the constructs that form the focus of the study. This literature study focuses on concepts of employee engagement, HRMP, and psychological conditions of meaningfulness, safety and availability. The literature on the definitions of employee engagement, its antecedents and consequences, influence of biosocial variables on engagement are explained along with its uniqueness and method of measurement. The chapter also discusses the importance of HRMP, its influence on firm performance and employee attitudes, and how it acts as a driver of engagement. A discussion on the uniqueness of psychological conditions of meaningfulness, safety, and availability and its ability to act as personal resources is also provided. Finally, the chapter deals with the specific context of the research.*

## 2.1 Conceptualising Employee Engagement

Today organisations are battling with new difficulties in their endeavours to remain focused and competitive. These include fierce performance pressures, the commencement of innovation, addressing the necessities of a highly diverse workforce and the globalization of business. Organisational leaders are progressively inferring that a unique competitive advantage in their ventures to improve productivity dwells in their human resources (HR). Therefore, to achieve top performance, organisations have to discover the motivations and expertise of their employees. This advancement mirrors a rising pattern towards a ‘positive psychology’ that spotlights on human strengths and optimal functioning rather than on shortcomings and malfunctioning (Seligman & Csikszentmihalyi, 2000). One of these positive states is work engagement. Recent endeavours to enhance organisational performance have started to underscore employee engagement as a key component affecting organisational effectiveness, innovation and competitiveness.

Engagement has risen as very critical construct in organizational research because of its favourable association with worker behaviours that influence organizational retention and performance (Chalofsky & Krishna, 2009). Kahn (1990) was the first to present the concept of employee engagement. Kahn (1990) characterized engagement as “the harnessing of organizational members’ selves to their work roles” (p. 694). Highly engaged employees are involved, committed, enthusiastic and passionate about their work (Macey & Schneider, 2008) Engaged employees work with passion, foster advancement, encounter a significant

connection to their company and move the organization forward (Attridge, 2009). Subsequently, academic writers and professional associations are likewise becoming increasingly keen on employee engagement.

Engagement is the degree to which a worker puts discretionary attempt into his or her work, beyond the obliged minimum to get the job done, as additional time, intellectual competence or energy (Devi, 2011). Macey et al. (2009) defined engagement as “a psychic kick of immersion, striving, absorption, focus and involvement” (p. 5). Most of what has been composed about employee engagement can be found in specialist journals where it has its premise in practice rather than theory and empirical research (Saks, 2006). Lately, there has been a sharp increment in the interest in the idea of employee engagement and its role in competitive advantage and work performance (Kular, Gatenby, Rees, Soane, & Truss, 2008).

It is a common conviction that there is an association between employee engagement and business results (Harter et al., 2002). Engagement is one of the positive organisational behaviour concepts that developed in the previous decade. Luthans (2002) explained positive organisational behaviour as “the study and application of positively oriented HR strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today’s workplace” (p.59). Recently researchers have noticed that the terms employee engagement, work engagement and job engagement has been often utilized conversely as a part of the scholastic works (Welch, 2011; Agarwal et al., 2012). Work engagement is the most examined and empirically approved

form of employee engagement in the present scholarly literature (Yalabik, Popaitoon, Chowne, & Rayton, 2013). Recently the work on employee engagement has extended internationally and prompted new theoretical models.

### **2.1.1 Overlaps with other constructs**

One topic apparent in the employee engagement writings is the worry that employee engagement might not be a definite construct but merely a new label attached to an older concept such as organisational commitment, job satisfaction, job involvement or organisational citizenship behaviour (Welch, 2011; Saks, 2006; May et al., 2004; Rich, 2006; Vigoda-Gadot, Eldor & Schohat, 2012). In the academic literature it is set up that engagement is unique from established constructs in organizational psychology, such as organizational commitment, job satisfaction or job involvement (Saks, 2006).

As per Maslach, Schaufeli and Leiter (2001), organizational commitment refers to an employee's fidelity to the organization that gives employment and henceforth the emphasis is on the organization, while engagement concentrates on the work itself. Organizational commitment additionally varies from engagement in that it alludes to a man's disposition and connection towards their organisation (Saks, 2006). Engagement is not an attitude; it is the extent to which an individual is mindful and assimilated in the execution of their roles. Job satisfaction is the degree to which work is a wellspring of need fulfilment and happiness or a means of liberating employees from hassles or dissatisfiers; it does not encompass the person's relationship with the work itself (Maslach et al., 2001).



Job involvement is similar to the involvement dimension of engagement with work, but exclude the energy and effectiveness aspects (Brown, 1996; Maslach et al., 2001; Wyk, Boshoff & Cilliers, 2003). In this way, engagement provides a more complicated and thorough point of view on employees association with their work. Maslach et al. (2001) noticed that engagement varies from job involvement in that it is characterized more with how the individual utilizes his/her self during the performance of his/her work. Moreover, engagement involves the dynamic utilization of emotions and behaviours, in addition to cognitions. Finally, work engagement might be considered as a precursor to job involvement in that people who encounter deep engagement in their roles ought to come to identify with their roles (May et al., 2004). According to Saks (2006) organisational citizenship behaviour includes wilful and informal behaviours that can help co-workers and the organization, the centre of engagement is one's formal role execution and performance as opposed to extra-role and deliberate conduct.

Rich (2006) empirically established that employee engagement is positively associated to, but unique from job involvement, job satisfaction and intrinsic motivation. Intrinsic motivation is the extent to which an individual is interested in a task and engages in it for the sake of the task itself (Utman, 1997). Rich (2006) pointed out that intrinsic motivation is a narrow and limited mode of motivation orientation that involves the elemental attitudes and goals that result to actions, whereas orientation to motivation encompassed by job engagement addressed the investment of physical, cognitive and emotional energies into role performance that is not merely driven by simply by one's innate psychological need for

internal satisfaction. So employee engagement, by its very nature, is surpassing the limits of actions that are accomplished exclusively for intrinsically satisfying motives.

Comprehensively, all these studies extended support for the distinctiveness of employee engagement concept. Henceforth, it is clear that employee engagement matters and it is not a new characterization associated with an older concept which is wrapped up as employee engagement (Welch, 2011).

### **2.1.2 Definitions of Employee Engagement**

Various definitions of employee engagement can be seen in scholarly articles. Employee engagement is stated by Kahn (1990) as “the harnessing of organization members’ selves to their work roles” (p. 694). He also referred engagement as the psychological presence while possessing and executing an organisational role.

Rothbard (2001) opined that engagement encompasses two vital ingredients, attention and absorption. Attention is the intellectual presence and time employed by an employee on thinking of the job role. The extent of an employee’s concentration on a role is termed as absorption.

Maslach et al. (2001) portrayed energy, involvement and efficacy in the job as employee engagement. They observed the three dimensions of energy, involvement and efficacy as the straight opposites of the exhaustion, cynicism and ineffectiveness, the three burnout dimensions, respectively.

According to Schaufeli et al. (2002) engagement is a perpetual and prevalent affective-cognitive state instead of a momentary and precise state of mind. They referred it as a “positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74).

The Chartered Institute of Personnel and Development in their research report (2006) elucidated employee engagement as emotional engagement, cognitive engagement and physical engagement. Emotional engagement is being very much involved emotionally in one’s work. Concentrating hard during work is termed as cognitive engagement. Physical engagement refers to the willingness to go an extra mile for your organisation.

According to Hewitt Associates LLC (2004) employees are engaged in their organisation when they are cognitively and emotionally committed to their employer. They operationalised it in terms of three basic behaviours: say, stay, strive. Say means the employee usually talks good about the organization and draw attention of customers. Stay refers to the deep desire of an employee to be a part of the current organization, in spite of the possibilities of working in other organisations. The additional efforts and behaviours that are leading to business success exhibited by employees is termed as strive.

As per Fleming and Asplund (2007) engaging employees in their work is similar to capturing their heads, hearts and souls for instilling an innate yearning and enthusiasm for excellence. Employee engagement is also referred as a positive attitude of employees towards their organisation and its values (Robinson, Perryman, & Hayday, 2004).

Recently, Albrecht (2010) stated engagement as “a positive and energized work- related motivational state” (pp. 4-5). He added that engaged employees express their real eagerness in their work contributing to organizational success. Also, Shuck and Wollard (2010) interpreted employee engagement as “an individual employee’s cognitive, emotional and behavioural state directed toward desired organizational outcomes” (p. 103). In the view of Macey and Schneider (2008) employee engagement is a “complex nomological network encompassing trait, state and behavioural constructs” (pp. 23-24).

On the basis of engagement levels Meere (2005) classified employees as ‘engaged employees’, ‘not engaged employees’ and ‘disengaged employees’. Engaged employees work with passion and experience deep connection to their employer and hence they are the ones who bring innovation and move the organization forward. Those employees who are not happy at work but stay detached towards their role are referred to as not engaged employees. Disengaged employees are unhappy at the same time they show their fretfulness at work and also they always hurt and frustrate their engaged co-workers.

Recently, Yalabik et al. (2013) defined employee engagement as “an independent, persistent, pervasive, positive and fulfilling work-related affective–cognitive and motivational–psychological state”(p. 2801). Further they stated that engagement is psychological state and they operationalised their definition in the Utrecht Work Engagement Scale which is having three sub-dimensions namely: vigor, dedication and absorption.

In the employee engagement studies it is observed that the most repeatedly used definitions of engagement are the ones recited by Kahn (1990), and Schaufeli and Bakker (2004). It can be pointed out that these two definitions have a resemblance with regard to their sub-dimensions notably: cognitive component corresponds to the absorption dimension, emotional component identifies with the dedication dimension and physical aspect correlates with vigor dimension.

The present research utilizes the definition of work engagement by Schaufeli et al. (2002). They described it as “a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption” (p. 74). Vigor refers to high levels of energy and mental resilience at work. It is also characterised by devotion in one’s work and also the endurance during troubles. Dedication refers to ‘a sense of significance, enthusiasm, inspiration, pride, and challenge’. Absorption is fully concentration and happy immersion in one’s work, whereby time passes quickly and one has difficulties with disconnecting oneself from job.

Despite the fact that the concept of employee engagement was propounded by Kahn (1990) he did not put forward an operationalisation for the construct. Maslach and Leiter (1997) manifested engagement as energy, involvement and efficacy’ which are conceptualised as straight opposites of ‘exhaustion, cynicism and lack of professional efficacy’, the three dimensions of the concept of burnout. Subsequently they proposed to measure engagement by the opposite sequence of scores on the ‘exhaustion, cynicism and lack of professional efficacy’ components in the Maslach Burnout Inventory.

Later, it was observed by Schaufeli et al. (2002) that explaining the relationship between engagement and burnout is beyond the bounds of possibility since both constructs are being considered to be the two extremes of a series that is measured by a single instrument. Schaufeli et al. (2002) defined engagement as a “persistent, positive affective-motivational state characterized by vigour, dedication and absorption” (p. 74). In 2002, Schaufeli and his fellow researchers developed an instrument for measuring work engagement in terms of three dimensions namely: vigor, dedication and absorption. The three dimensional structure of work engagement was proved using confirmatory factor analysis. Also, Schaufeli and Bakker (2004) argued that burnout and work engagement are two independent states of mind that are negatively related rather than two opposite extremes. Work engagement and burnout are not completely reciprocal and mutually exclusive and as they are not fully complementary and mutually reciprocal states of mind, the opposite pattern of MBI scores cannot be used for appropriately calibrating engagement (Schaufeli & Bakker, 2004).

May et al. (2004) developed a scale for measuring engagement based on Kahn’s (1990) conceptualisation. The items reflect each of the three components of Kahn’s (1990) psychological engagement: cognitive, emotional and physical engagement. An exploratory principal components factor analysis conducted on the initially developed 24 items did not result in three separate and reliable factors and hence an overall score was used. The psychometric properties of this scale need to be analysed before considering it as a sound measure of engagement.

Saks (2006) adopted a different method for measuring employee engagement. Employee engagement was conceptualized to have two components, job engagement and organisation engagement. Though Saks concur with Kahn's model consisting of physical, cognitive and emotional components, the instrument does not measure engagement based on the above conceptualization. The instrument needs to be validated in diverse samples for considering it as a sound measure.

Rich, Lepine, and Crawford (2010) developed an 18- item job engagement scale based on Kahn's (1990) conceptualisation of engagement. Job engagement emerged as a higher order structure with three lower order dimensions – physical, cognitive and emotional. As the instrument is relatively new construct validity need to be well established in diverse samples and more extensive cross national research is required to establish the psychometric properties of the new instrument.

Majority of the empirical studies on employee engagement attempted to operationalise engagement at the individual level (Attridge, 2009). There are many evidences showing that Utrecht Work Engagement Scale (UWES) by Schaufeli et al. (2002) are reliable, valid and stable (Schaufeli, Bakker, & Salanova, 2006; Dikkers et al., 2010). To assess work engagement, Schaufeli et al. (2006) framed a short questionnaire based on a cross-national study. The initial 17-item UWES was abridged to 9 items (UWES-9). It is concluded that the UWES-9 scores has adequate psychometric properties. Researchers have opined that the total score for engagement is sometimes more useful (Wefald & Downey, 2009; Schaufeli & Bakker, 2004; Agarwal et al., 2012). Therefore it is appropriate to employ

UWES for measuring engagement as it is the most reliable instrument of engagement available to date. As seen in the previous works, the present study also aggregates vigour, dedication and absorption components of engagement.

The factors in UWES-9 are very much associated to nurses' day to day work life. The qualities embedded in professional nurses for measuring their engagement can be effectively captured by UWES-9. Previous research studies reveal that majority of the previous works attempting to examine nurses' level of engagement have employed UWES-9 (Laschinger, Wilk, Cho, & Paula, 2009; Giallonardo, Wong, & Iwasiw, 2010). The above definition is expected to cover all the anticipated situations in the present study. Hence the UWES definition was adopted for the present study as well.

### **2.1.3 Biosocial Variables and Employee Engagement**

It can be seen that in the scholarly works, that there is no congruity in the results on the correlation between biosocial variables and engagement levels. The findings of Koyuncu et al. (2006) revealed that the biosocial variables like marital status, age and gender did not explain any significant variance in engagement. Xu and Thomas (2011) in their study, established that tenure was not related to engagement levels. Findings of a study by Schaufeli and Bakker (2003) revealed that engagement levels vary across age, gender, education and tenure. Only job tenure showed significant difference in the engagement levels. A significant relationship between tenure and employee engagement levels was reported by Kumar and Sia (2012).



Recently Othman and Nasurdin (2011) researched the relationship between demographic variables such as age, marital status, education, organizational tenure and job tenure with engagement and the outcome of the study revealed that only marital status of employees caused a significant difference in the levels of engagement.

A study of work engagement was conducted among registered nurses by Simpson (2009). The results revealed that as age of the nurses increases their engagement levels also increase. Similarly, as number of working hours in a week increases, engagement also increased. There were no significant differences in work engagement levels across work shift and experience. Hence it can be concluded there exists a mixed opinion among researchers on the variance in levels of employee engagement with demographic factors.

#### **2.1.4 Antecedents and consequences of Employee Engagement**

With the increasing relevance of employee engagement concept, researchers are now concentrating on what actually enhances it. However it is noticed that, scholarly works on its antecedents are thematically inadequate and hence more attention is demanded on this area (Chaudhary et al., 2011).

The literature discussed in the section for the purpose of illustration, have been thematically classified and presented in Appendix 2.

Kahn (1990) explored the factors at in which employees personally engage or disengage. The study was carried out among the counsellors of a summer camp and members of an architecture firm. He established that

three psychological conditions namely, psychological meaningfulness, psychological availability and psychological safety are necessary for engagement.

Attridge (2009) organised and scrutinized scholarly works on employee engagement and found out that supervisory communication, job design, resource support, style of leadership and working conditions are enablers of work engagement.

Results of a study by Schaufeli and Bakker (2004) revealed that there is a negative correlation between engagement and burnout and turnover intention. The study also established that employee engagement was wholly determined by job resources.

In the view of May et al. (2004), employees need to engage in their work to become top performers. They have to immerse in their role physically, emotionally and cognitively. Drawing insights from the study of Kahn (1990), they carried out a study among the employees of an insurance company and the outcomes revealed that psychological meaningfulness, safety and availability influenced employee engagement in the work.

Saks (2006) conceptualized employee engagement as two components namely job engagement and organisation engagement. Results established that the determinants of employee engagement were job characteristics, recognition and rewards, supervisor support, perceived organisation support, procedural justice and distributive justice. The consequences of employee engagement were job satisfaction, organisation citizenship behaviour and organisational commitment.

Recently, Chaudhary et al. (2011) examined the impact of HRD climate on engagement of employees. The result of the study conducted among 85 business executives demonstrated that employee engagement is significantly predicted by HRD climate.

In a study among fire fighters and their supervisors, Rich et al. (2010) tried to examine whether engagement is influenced by value congruence, perceived organisational support and core self evaluation of employees. The study also examined the role of engagement on job performance and organisational citizenship behaviour. The results revealed all the selected determinants predicted engagement. Also it was found that employee engagement influenced the outcomes namely, task performance and organisational citizenship behaviour.

A new addition to engagement literature was provided by Welch (2011). The article presents the evolutionary waves in the development of employee engagement phenomenon. The paper also discusses the role of internal communication in enhancing engagement. By incorporating the role of internal communication, Welch (2011) defined organisation engagement as “a dynamic, changeable psychological state which links employees to their organisations, manifest in organisation member role performances expressed physically, cognitively and emotionally and influenced by organisation-level internal communication”.

Shuck et al. (2011) carried out a study among employees in different organisations operating in different sectors. The study tested the influence of job fit, psychological climate and affective commitment on employee engagement and found that all the antecedents significantly

influenced work engagement. The study also proved that discretionary effort and intention to turnover were two consequences of engagement.

Medhurst and Albrecht (2011) developed a conceptual model encompassing employee involvement climate and psychological capital as precursors of work engagement and salesperson performance as an outcome. Employee involvement climate, in terms of participative decision making, performance based rewards, information sharing and ongoing training and development is proposed as a predictor of employee engagement thereby influencing salesperson performance. The study also proposes that the association between employee involvement climate and employee engagement is based on the degree of psychological capital, characterised by, self efficacy, optimism, hope and resilience. The proposed conceptual model theoretically explains the role of organisational resources, personal resources in enhancing engagement and ultimately their performance.

A longitudinal study was carried out by Dikkers et al. (2010) among 794 Dutch government employees to examine the relationships of proactive personality with job resources, job demands and work engagement. The results of this study established that proactive personality was associated with an increase in employee engagement over time. Also, proactive employees with high perceived social support experience high engagement levels over time.

The predictors and outcomes of employee engagement were studied among bank professional and women bank managers by Koyuncu et al. (2006). Engagement was significantly predicted by work-life experiences such as control, value fit and rewards and recognition. Engagement

positively influenced job satisfaction, intention to quit and outcomes of psychological well being.

Based on the previous scholarly articles on performance management systems, Gruman and Saks (2011) established the conceptual linkages between elements of performance management process and employee engagement. Authors subsequently developed a conceptual framework of engagement that includes performance management elements and they also suggest that performance management mechanisms may be improved by promoting the role of employee engagement as a determinant of increased performance.

Recently, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) explained the influence of personal resources in terms of self-efficacy, organizational-based self-esteem and optimism in forecasting engagement. Results of the study revealed that personal resources and job resources contributed to employee engagement.

An overall framework of work engagement was formulated based on proof on predictors and outcomes of engagement by Bakker and Demerouti (2007). In the Job Demands-Resources model it was assumed that job resources social support, skill variety, performance and autonomy stimulate engagement and performance. It was also assumed that when the employees experience high workload, mental and emotional demands, the job resources become more prominent and act as strong motivators.

Llorens, Schaufeli, Bakker, and Salanova (2007) investigated relationships among task resources, efficacy beliefs and work engagement

among the students of a Spanish University and found that efficacy beliefs mediated the association between task resources and engagement. It was also observed that, over a period, student engagement increased their efficacy beliefs, which in turn improved task resources.

Hakanen, Bakker, and Demerouti (2005) carried out a study among Finnish dentists to test whether the negative association between job demands and engagement gets weaker when adequate job resources are available. They concluded that job resources helped the dentists to meet the high job demands related with their profession thereby facilitating engagement in work.

Recently, Agarwal et al. (2012) carried out a study among Indian managerial level employees to examine the associations among leader-member exchange, innovative work behaviour, and intention to quit. The study also intended to test the mediating function of employee engagement within these relationships. The findings established that leader-member exchange influenced engagement and work engagement influenced innovative work behaviour. Results also revealed that engagement was negatively related to intention to quit. The study also supported the mediating role of work engagement in the association between leader-member exchange and innovative work behaviour, and, leader-member exchange and intention to quit.

Albrecht and Andretta (2011) examined the associations among empowering leadership, empowerment, employee engagement, affective commitment and turnover intention among community health service employees. The outcomes revealed that the relationship between

empowering leadership and engagement is mediated by empowerment. Also it was concluded that employee engagement partially mediated the relationship between empowerment and affective commitment, which in turn is significantly related to turnover intentions.

Gupta and Kumar (2012) carried out a study to examine the impact of performance appraisal justice on engagement among Indian professionals working in multi-national corporations. It was found that distributive justice and informational justice positively influenced employee engagement.

The association between leader behaviour and follower engagement was explored by Xu and Thomas (2011). The study findings suggested that all the leader behaviours, characterised by team oriented behaviours, behaviours associated with improved performance and behaviours associated with displaying integrity, facilitate employee engagement in its own right.

Slatten and Mehmetoglu (2011) explored whether role benefit, strategic attention and job autonomy were antecedents of employee engagement. The study also examined innovative behaviour as an outcome of engagement. Findings of this study which was conducted among the frontline employees working in the hospitality sector showed that employee engagement positively influences innovative behaviour. Also the findings pointed out that perceived role benefit, strategic attention and job autonomy is significantly and positively associated with employee engagement.

Hakanen, Bakker, and Schaufeli (2006) conducted a study among Finnish teachers to explore the associations among job resources,

engagement and organisational commitment. The findings confirmed that work engagement mediated the relationship between job resources and organisational commitment.

The association among perceived supervisor support, psychological empowerment and employee engagement was examined among employees working in service sector organisations in India by Jose and Mampilly (2015). The study revealed that psychological empowerment mediated the relationship between perceived supervisor support and employee engagement.

Pati and Kumar (2010) explored the role of self efficacy, perceived organisational support and perceived supervisor support in improving employee engagement. Results of the study conducted among Indian software programmers suggested that occupational self efficacy is positively associated with engagement. It was also found that perceived organisational support mediated the link between occupational self efficacy and work engagement.

Rurkkhum and Bartlett (2012) explored the association between employee engagement and organizational citizenship behaviour among employees of four large organisations in Thailand. The moderating influence of perceptions HRD practices on the above relationship was also tested. The findings revealed support for positive associations between organisational citizenship behaviour and employee engagement. The findings did not suggest any evidence for the moderating role of perceived HRD practices on the relationship between employee engagement and organizational citizenship behaviour.



Recently, Chaudhary, Rangnekar, and Barua (2012) studied the influence of occupational self efficacy and HRD climate on employee engagement. The study also attempted to investigate the mediating role of HRD climate in the self efficacy and engagement relationship. The findings of the study carried out among Indian business executives showed that self efficacy and HRD climate influenced work engagement. Also study results showed that the relationship between self efficacy and employee engagement was partially mediated by HRD climate.

Yalabik et al. (2013) attempted to examine the mediating role of employee engagement between employee attitudes and employee outcomes among the clerical employees in a bank. The employee attitudes assessed include affective commitment and job satisfaction, and the outcomes studied were supervisor rated job performance and self reported intention to quit. Study results showed that engagement mediated the association from affective commitment to supervisor rated job performance and intention to quit. Also, the study findings revealed that work engagement also mediates the relationship from job satisfaction to employee outcomes, job performance and intention to quit.

Yagil (2012) investigated the mediating role of employee engagement in the association between emotion regulation strategies, characterized by deep acting and surface acting, and customer outcomes, in terms of customer satisfaction and loyalty intentions, among first-line service employees and their customers. The study findings revealed that the association between deep acting and customer outcomes are mediated through employee engagement.

Simpson (2009) carried out a study among registered nurses to investigate the associations of job search behaviour, job satisfaction and turnover cognitions to work engagement. The study results revealed that nurses who reported high job satisfaction, low turnover cognition and low job search behaviour experienced greater work engagement.

Othman and Nasurdin (2011) conducted a study among staff nurses in Malaysia to explore the associations between hope and resilience with employee engagement. The findings suggested a positive relationship between hope and employee engagement. Also, resilience and work engagement were positively related.

Currently organisations are seeking the assistance of experts to develop and maintain highly engaged employees. A healthy association between employee and employer is an essential prerequisite for cultivating engagement in organisations (Devi, 2011). Workforce perception of employee-employer relationship is shaped by human resource management practices (HRMP) of the organisation. It is also observed that human resource management (HRM) environment of an organisation plays cardinal role in shaping the attitudes and performance of employees (Aggarwal & Bhargava, 2009).

Employees view HRM practices offered by their organisation as a personalised commitment of organisation to the workforce (Tsui, Pearce, Porter, & Tripoli, 1997). HRM practices of the organisation help the employees to decipher the goals and objectives of their employer. The HRM practices implemented in the organisation will be perceived differently by different employees leading to varied responses from

employees (Bowen & Ostroff, 2004; Kehoe & Wright, 2013). Employees respond to the favourable HRM practices by expressing positive attitudes and behaviours such as engagement in work (Jose & Mampilly, 2012). However scholarly literature explaining the role of HRM practices on engagement is relatively sparse (Wollard & Shuck, 2011). Hence the present study attempts to investigate and explain employee engagement as a function of perceived HRM practices.

## **2.2 Human Resource Management Practices (HRMP)**

In modern business scenario human resources are imperative for achieving organisational effectiveness and gaining competitive advantage (Agarwala, 2003; Wright & Kehoe, 2007). Organisations go through sea change in the form of restructuring and acquisition and they want employees who help them to meet their goals and objectives (Fabi, Martin, & Valois, 1999; Angle & Perry, 1981).

### **2.2.1 Importance of HRMP**

Researchers have pointed out that, for an organisation the main sources of competitive advantage are their committed employees and the way by which they are being managed (Lawler, 1992; Pfeffer, 1994; Guthrie, Flood, Liu, & MacCurtain, 2009). The logic behind the collective argument is that the HR of an organisation cannot be simulated or proxied successfully by its competitors (Huselid, 1995). This realization has led to rise in the scholarly research linking HRMP and performance (Wright, Gardner, & Moynihan, 2003). HRM practices are discretionary actions that signify employers' investment and commitment to their employees. Mindful and deliberate management of HR signal to the employees that

their company gives care and support to their employees (Edwards, 2009; Tsui et al., 1997).

Akdere (2009) stated that for attracting, developing and retaining employees it is vital to nurture and preserve a professional association among employees and also between employees and employers. HRM practices play a crucial role in enhancing organisational performance by powerfully motivating and reinforcing the employees to display favourable attitudes and behaviours which in turn will help the organisation to execute its competitive strategy (Schuler & Jackson, 1987; Agarwala, 2003; Lado & Wilson, 2015).

HRM practices impact the performance of the organisation by improving the skills, attitude and behaviours of employees and also by creating structural and operational efficiencies (Arthur, 1994; Huselid, 1995; Aggarwal & Bhargava, 2009). HR practices such as recruiting, rigorous selection, training, coaching, and mentoring effect the employee skills, whereas, practices like performance appraisal, team work, incentive compensation, and promotion enhance the motivation of skilled employees. Also HRM practices like job rotation, cross functional teams, and quality circles spur participation among employees. The output of skilled and inspired labour pool workforce will be unimaginable if they are given favourable circumstances to utilize their skills and abilities so as to scheme out novel ways of executing their roles.

The quality and quantity of HRM practices delivered differ across organisations. Prior empirical researches has consistently established that effective HRM practices influence firm performance (Huselid, 1995).

Effective HRMP are correlated with low employee turnover, increased productivity, high earnings for employees, and increased financial performance of the organisation (Guthrie, 2001; Bailey, Berg, & Sandy, 2001; Huselid, 1995). HRM practices are also correlated with job satisfaction, organisational commitment, involvement, organisational citizenship behaviour, and innovative work behaviour of employees (Berg, 1999; Aggarwal & Bhargava, 2009). Thus it is well established that HRM practices impact firm performance and workforce attitudes and thus has a clout on the effectiveness of the organisational (Aggarwal & Bhargava, 2009). An organisation's HRM habitat will undoubtedly play a cardinal role in impacting employee attitudes, employee performance and finally firm performance.

The impact of HRMP and policies on organisational performance is a dominant research topic in the areas of HRM, industrial and organisational psychology, and industrial relations, and, the primary conclusions appear favourable (Becker & Gerhart, 1996; Dyer & Reeves, 1995; Guest, 1997; Boudreau, 1991; Jones & Wright, 1992; Kleiner, 1990; Huselid, 1995). Based on the approach adopted, Guest (2011) segregated the works on the human resource management practices – performance link as strategic approach, descriptive approach and normative approach.

As per the strategic approach organisations will have superior performance if they have a fit between business strategy, structure and HRM policy and practice. In descriptive approach the broad area of HRM practices and policies are mapped into inputs and outputs. The

descriptive approach failed to explain the constitution of HRM practices and outcomes. To some extent normative approach, the third approach, specified the content of HRM practice and policy which was favourable for measurement purpose.

Guest (2011) summarized that strategic and descriptive model did not explain the linkages between HRMP and performance. But the normative approach is strongly based on organisational psychology and is developed on certain behavioural theories those presume that appropriate HRM practices enhance the commitment and motivation of workforce. In this approach the association between HRMP and performance are explained on the basis of behavioural theories. Boxall, Purcell and Wright (2007) differentiated the field of HRM as micro HRM, strategic HRM and international HRM. Micro HRM includes the HR policies and practices for managing individuals, groups and organisation. The comprehensive human resource strategies practised by organisations and their effects on performance are covered under strategic HRM. International HRM includes HRM practices and policies in organisations working beyond the national boundaries.

Also Delery and Doty (1996) identified three different approaches on the relationship between HRM practices and firm performance. One is the effects of individual 'high performance' or 'best' HRM practices on firm performance. Second, the influence of internally appropriate combinations (configurational) of HRM practices on organisational performance., Third, the effects of appropriate ('strategic') fit between strategy and HRM practices.

From the scholarly works on linkages between HRMP and firm performance, it can be inferred that there is empirical explanation for the above linkage regardless of the approach followed. Hence Bowen and Ostroff (2004) noted that HR systems and practices are signs that lets the workforce develop a sense of attitudes and behaviours that are have a signalling function that allows employees to form a shared sense of the behaviours that are anticipated and rewarded by the superiors, thereby promoting employee reactions to HRM that are in line with organisational objectives and goals.

A research was conducted by Delery and Doty (1996) in a sample of banks to investigate the association between HRMP and profitability. The results of the study established that irrespective of the universalistic, contingency and configurational approaches to HRM, HR practices positively influence profitability. Also, Guthrie (2001) pointed out that HRMP impacted productivity. Similarly, it is established that greater use of high performance work systems is correlated to favourable employee and organisational outcomes (Guthrie et al., 2009). MacDuffie (1995) conducted a research and established that the HR practices 'bundles' were positively associated with the quality and productivity. A study was carried out by Youndt, Dean, and Lepak (1996) among manufacturing organisations and found out that human capital- enhancing HRMP were positively associated with operational performance. Recently Akdere (2009) empirically provided an evidence for the positive association between quality-focused human resource practices (HRP) and organizational performance outcomes. The findings of these scholarly works notably

significant in portraying human resource practice's contribution to the organisation's bottom line.

### **2.2.2 HRMP and Employee Attitudes**

The interest in HRM lies in the very fact that employees contribute to organisational performance (Guest, 2011). Edwards (2009) stated that human resources practices (HRP) are non-obligatory and desirable activities that signal employers' commitment to and investment in employees. Empirical studies have revealed that HRP impacts organisational effectiveness through several factors such as employee commitment, job satisfaction, decreased fatigue, and employee performance (Rao, 1990; Yeung & Berman, 1997; Walton, 1985; Berg, 1999; Godard, 2001).

HRP are perceived by the workforce as a personalised commitment to them by the firm, which is then retaliated by the employees through desirable attitudes and behaviours (Tsui et al., 1997). Hence it can be inferred that human resource management practices influence employee attitudes, employee performance and finally lead to organisational productivity and organisational performance. Researchers have established clearly that HRM practices help in developing the perceptions of employees about their employer. Also Agarwala (2003) pointed out that HRM practices influence the ability and motivation of employees and help them to display desirable attitudes and behaviours in the workplace that in turn will contribute to organisations competitive strategy and performance (Arthur, 1994; Berg, 1999; Aggarwal & Bhargawa, 2009).



According to Dyer and Reeves (1995) the outcomes of HRM practices can be categorized into four levels namely employee outcomes, organisational outcomes, financial outcomes and market outcomes. They concluded that HRM work outward across these groups, employee outcomes being most proximal to HRM practices.

A model proposed by Wright and Nishii (2004) linking human resource management and performance includes five levels – intended practise, actual HR practices, perceived human resource practices (HRP), employee reactions in terms of affective and attitudinal outcomes and performance. Scholarly works have established that HRM practices directly influence turnover, commitment, task performance and organisational citizenship behaviour (Huselid, 1995; Shaw, Delery, Jenkins, and Gupta, 1998; Kuvaas & Dysvik, 2010; Nishii, Lepak, & Schneider, 2008). Scholarly work analysing the linkages among perceived HRMP and employee level outcomes are confined within the limits of social exchange theory (Rhoades & Eisenberger, 2002).

According to Rao (1999) studies on the association between HRP and employee attitudes are picaresque. Recently researchers also have noted that though conceptual model provide evidence for the linkage between HRMP and employee level outcomes the empirical works are relatively silent, especially in the Indian context (Agarwala, 2003; Aggarwal & Bhargava, 2009; Guest, 2001).

Edgar and Geare (2008) examined the association between four areas of HRMP such as, equal employment opportunities, training and development, recruitment and selection, good and safe working conditions,

and employee attitudes in terms of organisational commitment, job satisfaction, and organisational fairness. They found that employee evaluations of strength of HRP were significantly related to the employee attitudes. It was also found that total count of human resource management practices and employer reports of HRM practices were not related to employee attitudes. Thus Edgar and Geare stress the signification of considering employee perspective while measuring HRMP.

Agarwala (2003) investigated the association between innovative HRM practices, in terms of introduction of innovative HRP, implementation of innovative HRP and importance of innovative HRP, and organisational commitment. The results of the study revealed that employees' perception of the degree of introduction of innovative HRP significantly predicted organisational commitment.

Alfes, Shantz, and Truss (2012) conducted a study in the service sector and found that perceived HRP positively influenced well being and organisational citizenship behaviour, and negatively influenced turnover intentions. Also it was found that employees trust moderated the association between perceived HRMP and task performance, well being, and turnover intentions.

Baluch et al. (2013) conducted a study in the healthcare sector to provide a better knowledge of the trajectories through which HRM can improve satisfaction level of patients. They found that there is a positive relationship between employees' perception of HR systems and patient satisfaction. Also, they established that employees' civility towards patients mediated the above linkage.

Byrne, Miller, and Pitts (2010) conducted a study among 190 employees from nine different organisations and found that there is a relationship between favourability of HRMP and job satisfaction and they also established that trait entitlement moderated the linkage between favourability of HRMP and job satisfaction.

Edwards (2009) established that the association between employee perception of human resource factors and organisational identification is partially mediated by perceived organisational support. Kinnie, Hutchinson, Purcell, Rayton, and Swart (2005) established that employees' satisfaction with HRP is significantly related to organisation commitment. An empirical research was conducted by Allen, Shore, and Griffeth (2003) to investigate the association of supportive HR practices and perceived organisational support in the employee attitudes. The findings revealed that the linkages between supportive HR practices and job satisfaction, and, supportive HR practices and organisational commitment, are mediated through perceived organisational support. Also it was found that perceived organisational support is negatively related to intention to turnover.

Guthrie (2001) established that implementation of high involvement HRP are positively related to retention and productivity. Based on a study conducted among 1000 firms, Huselid (1995) concluded that HRP influence turnover and productivity.

Recently in India, Dhiman and Mohanty (2010) conducted an empirical research to examine the associations among perceived HRMP and attitudinal outcomes. The findings show that there is a positive

relationship between perceived HRMP, employee satisfaction and organisational commitment.

Fey, Bjorkman, and Pavlovskaya (2000) developed and tested a model consisting of HRMP, HR outcomes and firm performance and the findings support the mediating role of HR outcomes in the HRMP and firm performance linkage. Gooderham, Parry, and Ringdal (2008) examined the influence of HRMP on perceived firm performance and found that the effect of HRMP on perceived firm performance was modest.

Takeuchi, Lepak, Wang, and Takeuchi (2007) established that high-performance work systems generate a high level of collective human capital and encourage a high degree of social exchange within an organization, and that these are positively related to the organization's overall performance.

From the above scholarly works, it can be deciphered that the HRM practices are associated with a wide array of human resource and firm level outcomes.

### **2.2.3 Measurement and levels of aggregation of HRM Practices**

HRM researchers have highlighted the need to spot an appropriate approach for measuring HRM practices, when examining the effect of HRM practices on employee level outcomes. A commonly adopted method is additive mechanism where, the employers point out which are HRM practices presently practising the organisation in a yes or no scheme. Followers of this approach associate the total number of HRM practices with employee level outcomes for further analysis. The

limitation of this approach rests in its inability to portray how well or to what extent the practice is implemented in the organisations.

An upgradation in the additive method was advised by Guest and Pecci (1994) by way of capturing the responses from the employer on the strength of HRM practices or the extent to which they are practiced, through Likert scales. The possibility of discrepancy between the perceptions of employee and employer gave birth to the third school of thought, where employees' self reports on the strength or power of implemented HRM practices are analysed with their attitudes (Wright & Boswell, 2002; Paul & Anantharaman, 2003; Purcell, Kinnie, Hutchinson, Rayton, & Swart, 2003). Clients of this denomination believe that it is reasonable to assess employee perceptions when the interest is on employee level attitudes (Fiorito, 2002; Gibb, 2001; Guest, 2001; Edgar & Geare, 2008)

Employee perceptions of HRM practices of the organisation will be shaped fundamentally by their personal experience of HRM practices. Very few studies actually collect data directly from the employees who are seen as central to organisational performance (Kinnie et al., 2005). Against this backdrop, the present study measures HRM practices as how they are perceived by the employees.

Perceived HRMP has been analysed in different ways in the studies linking human resource management practices and performance. A few research works on HRMP have analysed each of the HR practice independently to identify each of their effects on the outcome variables. But few researchers remarked that HRMP are perceived holistically by

every employee, which in turn may be suitable and valid for predicting employee outcomes (Rousseau & Greller, 1994; Guest, 1998; Gratton & Truss, 2003). Gooderham et al. (2008) stated that it is becoming common to group or combine practices in order to create more coherent explanations of the HRM-performance link. The conclusion from this literature is that combining HRM practices in a fashion that promotes internal consistency is a better approach to that of plainly identifying individual effects.

### **2.3 HRMP, a job resource, as an antecedent of Employee Engagement**

Scholarly work demonstrates that job resources assume a vital role in encouraging work engagement. According to Bakker and Demerouti (2008) job resources are those characteristics of the job that have the potential to reduce job demands and the associated costs. They also noted that organisational, social and physical facets of the job can be certified as a job resource if they are useful in attaining goals, personal growth, and learning. Hence job resources play a cardinal role in influencing work engagement in addition to reducing high demands at job (Halbesleben, 2010). According to Bakker and Demerouti (2008) job resources either extrinsically or intrinsically motivate employees thus promoting employee engagement.

There are evidences in the scholarly works on the positive influence of job resources on employee engagement. A longitudinal research carried out by Mauno, Kinnunen and Ruokolainen (2007) among Finnish health care employees revealed that job resources influenced job engagement.

Also based on another longitudinal study by Hakanen, Perhoniemi and Toppinen-Tanner (2008) established that job resources predicted employee engagement. Moreover, job resources such as, autonomy, social support, feedback, and opportunities to learn also influenced work engagement (Schaufeli, Bakker & Van Rhenen, 2009).

Based on the review of literature, it can be inferred that HRMP of the organisation can be considered as job resource as they help in attaining work goals and stimulate personal growth, learning, motivation and development. In this regard, the present study identifies HRMP as a strong antecedent of employee engagement. Much of the earlier studies have demonstrated statistically significant relationships between measures of HRP and employee outcomes.

#### **2.4 Role of personal resources in HRMP-Employee Engagement relationship**

Many studies have established the linkage between HRMP and employee/behaviour outcomes, but there exists a relative shortage of literature on ways through which the value is generated (Wright & Gardner, 2002). Many researchers have mentioned this as a black box issue in the area of HRM research.

Though HRP are critical to employee engagement, an employees' self is to be involved to attain engagement (Sonntag, Dormann & Demerouti, 2010). Employees should believe that they have the energy, affective ability and the cognitive capacity to do their tasks with dedication, vigour and absorption.

Hence an employees' faith that he/she is flexible and confident to handle tasks at work are the direct enablers of employee engagement which could also in turn explain the linkage between human resource management practices and employee engagement. Hobfoll, Johnson, Ennis and Jackson (2003) defined personal resources as individuals' sense of their ability to control and influence their environment successfully. Personal resources are vital in disclosing the progression from job resources to employee engagement.

Generally, research studies envisaging personal resources have concentrated on variables such as optimism, hope, efficacy, resilience, and psychological empowerment (Luthans, Youssef, & Avolio, 2007; Quiñones, Broeck, & Witte, 2013; Jose & Mampilly, 2014). Besides these variables there exist personal resources such as psychological meaningfulness, psychological safety and psychological availability that are important antecedents of engagement.

Though some researchers have examined these relationships, the limited evidence confirms that psychological meaningfulness, psychological safety and psychological availability foster work engagement (Kahn, 1990; May et al., 2004; Oliver & Rothmann, 2007; Soane et al., 2013; Binyamin & Carmeli, 2010). The present study moves in this direction and at the same time extend previous researches on employee engagement by analyzing the associations among HRM practices and employee engagement by considering the intervening ability of the psychological conditions of availability, meaningfulness and safety.



## **2.5 Uniqueness of the Psychological Conditions of Safety, Meaningfulness, and Availability**

Kahn (1990) believed that “people employ and express or withdraw and their preferred selves on the basis of their psychological experiences of self-in-role” (p. 694). Hackman and Oldham (1990) also believe that there are vital psychological states that affect internal work motivations of employees. Kahn referred psychological conditions as the momentary rather than static circumstances of people’s experiences that shape behaviours. Through an inductive analysis he articulated three psychological conditions, the experiential conditions whose presence influenced people to personally engage or disengage. The three psychological conditions emerged are psychological meaningfulness, psychological safety and psychological availability. He also stated that employees vary in their work engagements based on their feeling of meaningfulness, safety and availability of resources they perceive they have in different settings.

When employees perceive their job is meaningful to them, they are more likely to engage in it. Also, when an employee believe that he or she can express her views without fear of risk it leads to more engagement in work. Also studies have shown that when employees have cognitive, emotional and physical resources to do the work they are more likely to engage in job (May et al., 2004; Olivier & Rothmann, 2007). Few studies have shown that psychological meaningfulness, psychological availability and psychological safety are nearest predictors of employee engagement (May et al., 2004; Jeung, 2011).

The above psychological states were examined by May et al. (2004) and the study also confirmed the important role of three psychological conditions between job-related enablers (e.g., job enrichment, work role fit, supportive work relations, and availability of resources) and engagement. Recently Vinarski-Peretz and Carmeli (2011) established that employees' perception of care felt influence their psychological conditions such as safety, meaningfulness, and availability, which will result in a higher level of engagement in innovative behaviours at work..

Recent research suggests that each psychological condition may follow a distinct mechanism in exerting influence on employee and organisational outcomes. Therefore researches identify the need to hypothesize each conditions of psychological meaningfulness, psychological safety and psychological availability, distinctively. Most of the researchers have considered and analysed psychological meaningfulness, psychological safety and psychological availability separately (May, Gilson, & Harter, 2004; Rosso, Dekas, & Wrzesniewski, 2010; Li & Tan, 2013, Kahn, 1990). Consistent with this view, the present study hypothesizes that each of psychological conditions uniquely affects employee engagement in its own right.

## **2.6 Psychological Safety**

Kahn (1990) defined psychological safety as “feeling able to show and employ one’s self without fear of negative consequences to self-image, status, or career” (p. 708). Recently Li and Tan (2013) noted that a dearth of confidence reduces perception of psychological safety. According to Edmondson (1999) one experiences safety if he/she is

daring to question existing practices, express dissent, and admit mistakes without fear of negative consequences. Moreover, Edmondson (2004) depicted psychological safety as an individual's perception of the consequences of interpersonal risks in the working environment.

In a safe environment employees feel that they will not experience unpleasant reactions if they show their real selves. Moreover in such a type of environment, employees figure out tolerable actions and behaviours. The psychological condition of safety and its antecedents and outcomes have received relatively little attention in the literature to date.

According to May et al. (2004) supervisory relations and co-worker relations influence psychological safety. According to Kahn (1990) a supportive interpersonal relationship increases psychological safety, because a relationship of that kind will allow the employees to try and perhaps fail without fearing dangerous consequences. Recently Carmeli, Reiter-Palmon, and Ziv (2010) stated that when employees feel that they are psychologically safe to speak up, seek help from others, and express themselves without fearing of negative interpersonal consequences, they are more likely to develop a high degree of involvement in creative endeavours that are ultimately important for employee creative performance. Hence based on the above discussion it can be summarized that psychological safety will lead to work engagement, as it reflects one's belief that a person can employ him-/herself without fear of negative consequences (Kahn, 1990; May et al., 2004).

## 2.7 Psychological Meaningfulness

Motivation theorists and psychologists argued that the employees possess an instinctive longing to have a job life that they see as meaningful (Maslow, 1971; Alderfer, 1972; Herzberg, Mausner, & Snyderman, 1959). Moreover Maslow (1971) stated that individuals will be ignited to their potential only if they perceive their work as a meaningful one.

Researchers have pointed out that in today's world for an individual the main home is the organisation and hence sources of creating a meaningful workplace is a hot topic in the area of HRD (Dimitrov, 2009; Chalofsky, 2003; Turner, 2005).

Individuals experience meaningfulness when they “felt worthwhile, useful, and valuable- as though they made a difference and were not taken for granted” (Kahn, 1990, p. 704). Kahn also noted that paucity of meaningfulness was related to employees' perception that “little was asked or expected of their selves and that there was little room for them to give or receive in work role performances” (p. 704). Kahn (1990) identified that three factors generally influence psychological meaningfulness: task characteristics, role characteristics and work interactions. When members were doing work that was challenging, clearly delineated, varied, creative, and somewhat autonomous, they were more likely to experience psychological meaningfulness. Roles perceived as unimportant in an organisational constellation lacked the power to offer a sense of meaningfulness. People also experience psychological meaningfulness when their task performances included rewarding interpersonal interactions with co-workers and clients. Such connections are an invaluable source of

meaning in people's lives because they meet relatedness needs (Alderfer, 1972).

Results of a study carried out by Soane et al. (2013) established that meaningful work improves work engagement and this in turn is correlated with low absenteeism. Frankl (1992) has opined that employees have a primary intention to identify meaning in their job. Meaningfulness is defined as the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Hackman & Oldham, 1980; Renn & Vandenberg, 1995). According to Aktouf (1992) dearth of meaning in one's work may lead to disengagement. According to Harter (2001), employees want to engage with work that has meaning and is an extension of their personalities and dreams.

Based on the review of literature it can be summarized that psychological meaningfulness is a significant antecedent of positive employee outcomes like engagement (Rosso et al., 2010; May et al., 2004).

## **2.8 Psychological Availability**

Psychological availability refers to a "sense of having the physical, emotional, or psychological resources to personally engage at a particular moment" (Kahn, 1990, p. 714). It involves an individual's capacity to engage at work, given the distractions he or she experiences as a participant in other life roles, which have the potential to draw his or her energy from work and further reduce his or her complete attention to work (Kahn, 1990; May et al., 2004). Psychological availability is a vital

condition at work because “being available is partly a matter of security in abilities and status and maintaining a focus on tasks rather than anxieties” (Kahn, 1990, p. 716). In essence, it captures the extent to which employees perceive themselves to be confident of coping with demands of both technical and social aspects of their work and job roles (Kahn, 1990).

Psychological availability is a reflection of one’s readiness to engage in a work role given the other work and non-work activities that he or she may be involved in and/or distracted by. Although psychological availability (as a specific term) has the least amount of empirical backing, there is much research regarding individuals’ availability of resources and how it may affect job performance and/or engagement. Research regarding psychological availability is closely related to, if not the same as, research concerning the importance of recovery from work, achieving a balance between work and family demands, and having the ability to engage in stress coping strategies (Eden, 2001; Frone, 2003; Pearlin, 1983).

Factors that may influence such beliefs include the individual’s resources, work role insecurities and outside activities (May et al., 2004). Job-related resources have been identified as a principal determinant of experienced availability (Kahn, 1990). Job resources include physical, psychological, or organizational aspects of the job, such as access to information, time, job control, good climate, and so forth (Hakanen et al., 2008). It is obvious that job resources would increase employees’ confidence to engage in assigned tasks. In line with this, empirical

findings have confirmed that job-related resources increase individuals' experienced availability in their work role (May et al., 2004).

Experienced availability improves employees' work engagement because when they are confident in undertaking their work, they are more likely to immerse themselves in the work (Chen, Zhang, & Vogel 2011). When individuals are psychologically available, they have emotional, physical, and cognitive resources, and thus increased energy to engage at work (Kahn, 1990; May et al., 2004; Binyamin & Carmeli, 2010).

## **2.9 Insight into the Conceptual Model**

Following the rationale of work-engagement theory (Kahn, 1990) that was discussed earlier, it is hypothesized that experienced meaningfulness will have a positive relationship with work engagement. People who feel no meaningfulness at work will have little motivation to engage at work. Studies have shown that experienced meaningfulness enhances individuals' work motivation (Renn & Vandenberg, 1995) and work engagement (May et al., 2004). Experienced safety refers to the individuals' belief that they can behave and express themselves at work without fear of negative consequences. Experienced safety has been found to be positively related to work engagement (May et al., 2004). Finally, experienced availability has been found to increase employees' work engagement because only when employees believe they are able to perform tasks are they likely to be engaged in their work (May et al., 2004).

To build the conceptual framework, the present study relies on the above discussed psychological conditions, psychological meaningfulness,

psychological safety and psychological availability, which were proposed by Kahn (1990) in his seminal work on engagement, in clarifying the black box of how perceived HRMP are translated to employee engagement. According to Kahn (1990) psychological meaningfulness, psychological safety and psychological availability are functions of the characteristics of work environment that shape employees' experiences of themselves and their roles. Kahn (1990) also theorizes that these three psychological variables are the keys to understand the internal dynamics that drive employee engagement. The present study proposes that the perceived HRMP creates different psychological conditions through generating positive perception about returns (psychological meaningfulness), assurance (psychological safety) and resources (psychological availability) which in turn, in their own rights, effect employee engagement at work.

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**CONCEPTUAL FOCUS**

*C o n t e n t s*

- 3.1 *The Conceptual Lens*
- 3.2 *HRM Practices and Psychological Safety*
- 3.3 *HRM Practices and Psychological Meaningfulness*
- 3.4 *HRM Practices and Psychological Availability*
- 3.5 *Mediating Role of Psychological Safety in PHRMP- Psychological Meaningfulness relationship*
- 3.6 *Mediating Role of Psychological safety in PHRMP – Psychological Availability relationship*
- 3.7 *Psychological Safety and Employee Engagement*
- 3.8 *Psychological Meaningfulness and Employee Engagement*
- 3.9 *Psychological Availability and Employee Engagement*
- 3.10 *Trajectories from HRMP to Employee Engagement*

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*Having presented the relevant literature on the key variables under study, the current focus is on developing a conceptual framework for the study. The chapter provides a description of the literature gap and motivation for the present study. It is then followed by a detailed discussion of the hypothesised linkages among the variables in the conceptual framework. Finally, a diagrammatic representation of the conceptual framework is presented.*

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### 3.1 The Conceptual Lens

Employee engagement is an emerging concept in business, management, organizational psychology and human resource development (HRD) fields (Wollard & Shuck, 2011). Welch (2011) observed that engagement is variously termed as personal engagement, work engagement, job engagement or employee engagement. Empirical evidences show that employee engagement is associated with various positive individual and organizational outcomes. According to Saks (2006), job engagement is positively related to job satisfaction, organizational commitment, and organizational citizenship behaviour, and negatively related to intention to quit. Researches show that high levels of engagement are positively associated with well-being of employees and negatively related to burnout (Schaufeli & Bakker, 2004). Consequently, employee engagement has emerged as a critical element for business success (Slatten & Mehmetoglu, 2011).

The Compensation Trends Survey 2012, conducted by Deloitte Human Capital Advisory Services in the Indian market, employee engagement has been ranked as the third human resource challenge, first and second being retaining critical talent and hiring of skilled talent respectively. Indian industry is realizing that technology, IT infrastructure, large-scale operations and capital are 'entry criteria' and not competitive tools anymore and the competitive edge will come from a company's ability to innovate, create and use the energies of its people (Bhatnagar, 2005).

Various studies have found in literature exploring the flowering associations between employee engagement and performance-related outcome variables that recommend boosting up engagement could create a compelling competitive advantage for organizations across the globe (Shuck et al., 2011). However a review of the available literature suggests that the complex process by which employees engage in the workplace has yet to be fully explored. Wollard and Shuck (2011) stated that little is known about antecedents of employee engagement and the variables that contribute to the overall development of employee engagement. Therefore more attention is needed to determine the enablers of employee engagement in the Indian context. The present research work intends to address the relative shortage of research on the antecedents of employee engagement in Indian context. Specifically, the study focuses on the role of perceived human resource management practices (PHRMP), psychological safety, psychological availability and psychological meaningfulness in explaining employee engagement.

In literature there exist various theories and models to render a framework on how to boost employee engagement (Bakker & Demerouti, 2008; Kahn, 1990; May et al., 2004). Research literature has not suitably attended on how the employees' perceptions of human resource management practices (HRMP) of the organization influence their engagement level in work. Wright, McMahan, & McWilliams (1994) viewed human resource management practices (HRMP) as the means through which employee perceptions, attitudes, and behaviours are shaped. Also employee development practices are expected to boost employees' accountability towards the organisation and in turn it

enhances their motivation to work hard to improve organisational effectiveness (Lee & Bruvold, 2003).

Usually employees do not perform up to their potential which means that they are underutilized (Bailey, 1993). Hence Bailey affirmed that organisational attempts to bring out discretionary effort from employees may provide benefits instead of costs. It was also noted that HRM practices influence employees' skill and motivation, and thus affect their discretionary effort. Human resource practices are one of the sources of cultivating healthy relationship between employees and employers. Kuvaas (2008) stated that current research on best practice, high-performance, high-commitment, high involvement, progressive, and human-capital-enhancing HRM implies that organizations offer resources and opportunities that improve the motivation, skills, attitudes and behaviours of their employees.

Association between human resource practices (HRP) and employee and organizational outcomes have been well documented. High performance work systems, a set of management policies and practices thought to endow employees with greater levels of skills, information, motivation and discretion, tend to have lower rates of employee absenteeism and voluntary turnover along with high labor productivity and lower labor costs (Guthrie et al., 2009). Thus, the theoretical literature clearly suggests that the behaviour of employees within firms has important implications for organizational performance and that HRMP can affect individual employee performance through their influence over employee skills and motivation and through structures that allow employees to improve how their jobs are performed (Huselid, 1995).

Practices at the workplace environment level are designed to motivate workers in different ways and encourage them to put forth discretionary effort (Berg, 1999). These motivational processes link job resources with organizational and individual outcomes via employee engagement (Schaufeli & Bakker, 2004). Recently, Wollard & Shuck (2011) noted that even though HRM practices are often suggested as an antecedent of employee engagement, there is a relative shortage of studies presenting HRM practices as a driver of employee engagement. Based on this premise employees' perception of HRMP are considered as a predictor of employee engagement.

Researchers have stated that in addition to relying on the intentions behind HRM practices as presented by the HRM professionals it is also very important to know how employees perceive HRM practices of the organisation (Khilji & Wang 2006; Nishii et al., 2008). As Nishii et al. (2008) observed individuals have varied responses to the aims and impact of HRM policies and practices. Few studies have spotlighted on individual employee experiences of HRM practices and policies, and hence this study focuses on how employees' perceptions of HRM practices are linked with employee outcomes, particularly employee engagement.

A stronger theoretical background for explaining association between human resource practices and employee engagement can be found in social exchange theory (SET). SET states that obligations are created through an array of interactions between parties who demand interdependence. A fundamental principle of SET is that interactions

among parties will become loyal and trustful over time as they follow definite rules of exchange (Cropanzano & Mitchell, 2005). Usually, these standards of exchange suggest reciprocity such that the reactions of one party activate the responses of the other party. For example, when individuals receive economic and socio emotional resources from their organization, they feel obliged to respond in kind and repay the organization (Cropanzano & Mitchell, 2005). Therefore, the norm of reciprocity is important in explaining discretionary behaviour in organizations (Sander, Moorkamp, Torka, S. Groeneveld, & C. Groeneveld, 2010). This line of reasoning assumes that human resource management practices are viewed by employees as organization's commitment towards them, which is then reciprocated back to the organization by employees through positive behaviors (Bowen & Ostroff, 2004; Kinnie et al., 2005) like employee engagement. Thus, employees are more likely to exchange their engagement for resources and benefits provided by their organization (Saks, 2006).

From an academic perspective, scholarly works on understanding how HR practices translate into effective work behaviours is in its nascent stage. This present study addresses this call by theorizing and empirically examining how human resource management practices facilitate psychological conditions and augment engagement in the work. Specifically, a recent review of the theory and research on human resource management practices and employee outcomes has pointed out that the mechanism through which human resource management practices influence employee outcomes is an area of research that still requires attention.

Furthermore, research evaluating human resource management practices and employee engagement is rare, and typically does not evaluate the mechanism by which human resource management practices may influence employee engagement. This is despite the growing interest in the social underpinning of engagement in the workplace. This study contributes to the literature by adding specificity and clarity to the link between human resource management practices and employee engagement by illuminating the importance of psychological meaningfulness, psychological availability and psychological safety.

Researchers have realized that it is high time to dredge up the black box through which HRM practices impact upon individual outcomes. Wright and Boswell (2002, p. 262) argue that ‘the dearth of research aimed at understanding how multiple (or systems of) HR practices impact individuals certainly suggests a ripe of opportunity for future research’.

Kahn (1990) stated that engagement is a product of two different forces: an individual’s respective psychological experience of work that drives their attitudes and behaviour and the individual, interpersonal, group, intergroup and organizational factors that influence this experience. Xanthopoulos et al. (2007) have empirically established that, in the Job Demands - Resources model of engagement, personal resources intervened the relationship between job resources and work engagement. Job resources are “those physical, psychological, social, or organizational aspects of the job that may (a) reduce job demands and the associated physiological and psychological costs, (b) are functional in achieving work goals, and (c) stimulate personal growth, learning, and development”

(Demerouti, Bakker, Nachreiner & Schaufeli, 2001, p. 501). Against this backdrop HRMP can be viewed as job resource.

Hobfoll, Johnson, Ennis, and Jackson (2003) defined personal resources as positive self-evaluations that are generally linked to resiliency and refer to individuals' sense of ability to control and successfully impact their environment (p. 632). Kahn (1990) and May et al. (2004) have argued that psychological conditions of meaningfulness, safety and availability intervene the relationship between job features and engagement. Against this background the role of personal resources in enhancing engagement cannot be overlooked. So the present study attempts to investigate the intervening role of personal resources in terms of psychological meaningfulness, psychological availability and psychological safety, in the perceived human resource management practices (PHRMP) – employee engagement relationship.

### **3.2 HRM Practices and Psychological Safety**

Psychological safety is defined as “feeling able to show and employ one’s self without fear of negative consequences to self-image, status, or career” (Kahn, 1990, p. 708). It has been reported that employees’ trust in supervisor is positively related to psychological safety.

The perception of HRM practices, that is, employees’ observations of the nature of their organisation’s HRM system, have been identified as one factor particularly relevant for creating and maintaining trust (Robinson & Rousseau, 1994; Mayer & Davis, 1999; Searle, Weibel, & DenHartog., 2011) which in turn help employees feel safe in taking



interpersonal risks as they believe that they will not suffer when expressing their true selves or their ideas at work.

Uncertainty may hamper feeling of psychological safety. When individuals sense uncertainty, they perceive their environment as ambiguous and complex, which in turn may increase the level of stress related to how to cope with these demands. Well maintained human resource management systems may decrease employees' perceptions of uncertainty by providing them with a clearer and more stable work environment. Based on the above logic it is asserted here that positively perceived human resource management practices (PHRMP) reduces uncertainty and thus employees feel safe in expressing their true selves' in work.

### **3.3 HRM Practices and Psychological Meaningfulness**

Psychological meaningfulness is the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Hackman & Oldham, 1980; Renn & Vandenberg, 1995). People experience meaningfulness when they feel worthwhile, useful, and valuable as though they made a difference and were not taken for granted (Kahn, 1990). According to May et al. (2004) the workplace factors that affect meaningfulness are job enrichment, work role fit and co-worker relations.

HRP can play an important role in matching people with the organizations and the jobs they work in (Boon, DenHartog, Boselie, & Paauwe, 2011). HR practices like formal training enables employee to have a sense of worthwhile accomplishment on challenging tasks.

Employees who have received formal training are likely to undertake more challenging task (Lee & Lee, 2010) which help to experience psychological meaningfulness (Kahn, 1990). Human resource practices may help employees' perceive the task to be important and meaningful (He, Luo, & Jiang, 2014).

When individuals are treated with dignity, respect and value for their contributions and not simply as the occupant of a role, they more likely experience a sense of meaningfulness (Kumar & Sia, 2012). In line with this, it is proposed that employees' perception of HRMP positively influence psychological meaningfulness.

### **3.4 HRM Practices and Psychological Availability**

Psychological availability is defined as an individual's belief that he/she has the physical, emotional or cognitive resources to engage the self at work (Kahn, 1990). In essence, it assesses the readiness, or confidence, of a person to engage in his/her work role given that individuals are engaged in many other life activities (May et al., 2004, p. 17- 18).

Jie et al. (2011) have pointed out that perceived human resource practices enhance the competence of employees. Workplaces that provide employees with physical, emotional and psychological resources necessary for role performances will have employees who are more engaged (Gruman & Saks, 2011). Job resources can come from the organization (pay, career opportunities, job security), interpersonal and social relations and from task itself (Bakker & Demerouti, 2007). Emotional resources can be acquired through interpersonal relationships

which in turn can improve one's psychological availability (Gruman & Saks, 2011). Trust in supervisor positively influences psychological availability (Li & Tan, 2013) and employees' perception of confidence and trust are influenced by their perception of human resource practices of the organisation. Hence it is posited that positively perceived HRMP are positively related to psychological availability.

### **3.5 Mediating role of Psychological Safety in PHRMP- Psychological Meaningfulness relationship**

Only in secure and non- threatening environment individuals are able to find meaning in their job so as to meet the needs and the goals of the organization. Greenhalgh & Rosenblatt (1984) define job insecurity as the perceived powerlessness to maintain desired community in a threatened job situation (p. 438). Job security is argued to be one of the most critical factors that influence employees' motivation (Wiley, 1997; Gould-Williams & Davies, 2005) and other organizational attitudes such as organizational commitment and job satisfaction (Ashford, Lee, & Bobko, 1989; Borg & Elizur, 1992). Employees may not take responsibilities and initiatives when they feel that the work environment is threatening and this reduces their self-esteem and self- confidence. Job insecurity is associated with decreased safety and motivation (Borg & Dov, 1992; Greenhalgh & Rosenblatt, 1984). This means that a psychologically unsafe feeling may flounder psychological meaningfulness. The present study posits that favourable human resource management practices of the organisation help to cultivate a non-threatening and safe feeling in employee and this in turn help them to perceive their work as more meaningful. Yet, despite the salient role of psychological safety in human resource practices to

psychological meaningfulness link, especially in the modern flexible and insecure business environment, there are not many empirical studies examining these linkages.

### **3.6 Mediating role of Psychological Safety in PHRMP – Psychological Availability relationship**

Properly designed and implemented human resource systems reduce the perceptions of uncertainty of employees i.e., enhances the psychological safe feeling of employees. They cultivate a sense of stability and certainty. Also clear policies of the organisation help employees to express their self at work. In uncertain and stressful situations, psychological availability plunges, because the individual directs energies toward finding certainty and a feeling of security. The present study reasons that perceptions of psychological safety plays an intervening role in the relationship between HRM practices and psychological availability because HRM practices creates conditions of greater certainty and lower levels of stress among employees who work in a well organized and institutionalized environment. Such work conditions free their energy and help develop a sense of psychological safety which in turn helps them to become more available in their work. It is likely that psychological safety plays an intervening role in the link between perceived human resource management practices and psychological availability. This plausible mechanism linking HRM practices and psychological availability remains unexplored in the literature and the present study based on above discussion hypothesize that psychological safety mediates the relationship between perceived HRM practices and psychological availability.

### **3.7 Psychological Safety and Employee Engagement**

Perceptions of psychological safety help employees to take risks and express their true selves in work. They will feel comfortable to actively engage their interests in work and try novel ways of doing it (Amabile, 1983; May et al., 2004). Conversely, when employees perceive their organisation to be unstable and threatening they are likely to disengage from their work roles and at same time will be doubtful to take risks and try novel things (May et al., 2004).

Dollard and Bakker (2010) found that psychosocial safety climate positively predicted change in employee engagement. Few other studies have also empirically established the positive association between psychological safety and work engagement (May et al., 2004; Olivier & Rothmann, 2007). Kark and Carmeli (2009) suggested if individuals feel psychologically safer, they may feel personally engaged in their work without fear of negative consequence to self-image, status, or career. Therefore, this study expected to find that psychological safety would be positively related to work engagement.

### **3.8 Psychological Meaningfulness and Employee Engagement**

Psychological meaningfulness is thought to have an influence on work engagement through the belief that individuals have a constitutional drive to accomplish meaning in their job (Frankl, 1992). When employees perceive their job to be individually meaningful, they are inclined to be inspired to devote more of themselves and hence they become more engaged in it. Conversely, if one lacks meaning in their

work, they are likely to alienate themselves or become disengaged from it (Aktouf, 1992).

Individuals lack professional capacity in work when they perceive their work as less meaningful and purposeful (Maslow (1971). Previous research has demonstrated that meaningfulness is associated with internal work motivation (Fried & Ferris, 1987; Renn & Vandenberg, 1995). Furthermore, May et al. (2004) performed a study to test the model proposed in Kahn's (1990) ethnographic work and found, once again, that meaningfulness displayed the strongest (positive) relationship with work engagement. Olivier and Rothmann (2007) followed up on May et al.'s (2004) study to test further assumptions that were proposed in Kahn's (1990) model and confirmed that meaningfulness displayed a positive relationship with work engagement. Maslow (1971) wrote that individuals who do not perceive the work as meaningful and purposeful will not work up to their professional capacity. Therefore, the present study proposes that psychological meaningfulness would predict work engagement.

### **3.9 Psychological Availability and Employee Engagement**

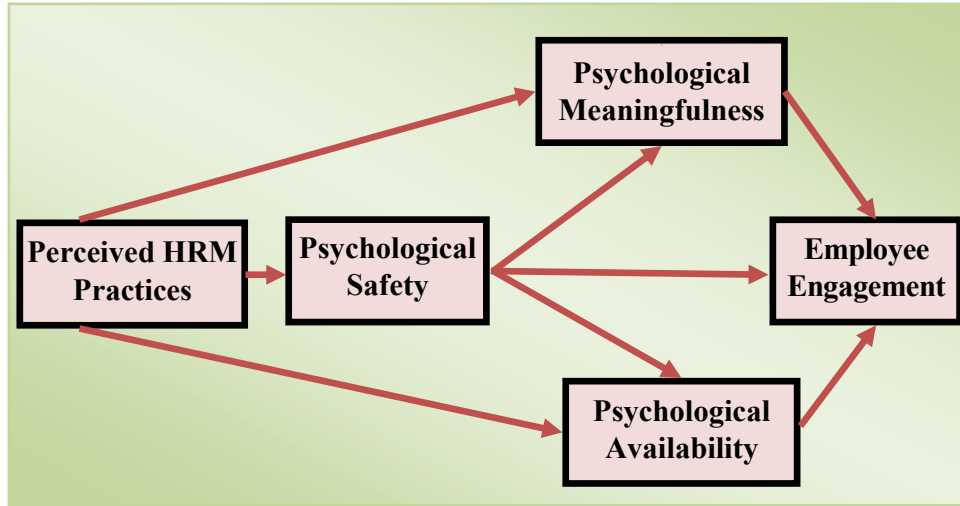
Psychological availability, or the trait of having the physical, emotional and mental resources to do a job, is essential to engagement (Kahn, 1990). Psychological availability is expected to be significantly and positively correlated to engagement. The more psychologically available the individual is, the more engaged he or she will be. In line with this it can be proposed that when individuals have the physical, emotional and mental resources they are expected to be engaged in their work.

Stress literature confirms this fact as it suggests that when workers experience overload, they withdraw or disengage from work, perhaps in an effort to replenish their resources (Ganster & Schaubroeck, 1991; May et al., 2004). Further, research supports a positive relationship between psychological availability and work engagement (Kahn, 1990; May et al., 2004). Hence, this research proposed that psychological availability would be positively associated with work engagement.

### **3.10 Trajectories from HRMP to Employee Engagement**

It is proposed that there are three distinct trajectories through which human resource management practices contribute to employee engagement. The first path, psychological meaningfulness, explicates the effects of human resource management practices on employees' perception of value and virtue of work, hence motivating employees to engage in their job. The second path is through psychological safety. It spotlights another psychological outcome of perceived human resource management practices, i.e., disposition for self-expression without fear of negative consequences which in turn is vital for engagement. The third path, psychological availability, links human resource management practices to engagement by understanding how perceived human resource management practices shape employees' perception of the personal capacity in terms of their physical, cognitive and emotional resources to engage in their work role. In line with the above discussion it is proposed that each of the paths contributes for the relationship between HRMP and employee engagement in its own right.

Based on the above discussion the following conceptual model was framed for empirical analysis.



**Figure 3.1: Diagrammatic Representation of Conceptual Model**

The objectives of this study and hypothetical propositions have been framed and stated based on the above model that provides the conceptual lens for the study.





## RESEARCH METHODOLOGY

<b>C</b> <b>o</b> <b>n</b> <b>t</b> <b>e</b> <b>n</b> <b>t</b> <b>s</b>	4.1	<i>Relevance of the Study</i>
	4.2	<i>Research Problem</i>
	4.3	<i>Objectives of the Study</i>
	4.4	<i>Hypotheses of the Study</i>
	4.5	<i>Designation of Variables and definitions</i>
	4.6	<i>Research Design</i>
	4.7	<i>Scope of the Study</i>
	4.8	<i>Sampling Design</i>
	4.9	<i>Data Collection Method</i>
	4.10	<i>Instruments for Data Collection</i>
	4.11	<i>Analysis Design</i>
	4.12	<i>Limitations of the Study</i>

*This chapter presents the framework of methods and techniques used for conducting the present research. Rationale, research problem and scope of the study are explained. The chapter then proceeds to explain the research design, sample design, data collection method, measures of constructs and analysis design. Finally the limitations of the present study are mentioned.*

## 4.1 Relevance of the Study

The Indian healthcare sector is in its initial phases of advanced expansion assuring significant and momentous growth. The industry was \$65 billion during 2011-2012 and is expected to actualize \$280 billion by 2020 (Harjeet, 2013). The advancement and prosperity of the Indian healthcare territory may be imputed to a few demographic and economic ingredients. Increase in population of the country with majority of the Indian population in the younger age group and surge of geriatric community represents huge potential for a patient base and makes a market for preventive, curative and geriatric care opportunities. Hike in disposable income, alarming increase in the incidence of lifestyle-associated maladies, such as cardiovascular, oncological ailments and diabetes, developing general awareness, patient preferences and better utilization of the institutionalised care as an outcome of increase in literacy rates are some of the salient demographic factors that are expected to accelerate the growth of this sector.

Increase in health insurance coverage with a number of private players and foreign players entering the market, India emerging as a major medical tourist destination and tax benefits provided by the government are some of the economic factors that contribute to the growth of healthcare sector of India. As India's economic engine continues to drive its growth, multiple enterprises will crop up and patients will start shopping for healthcare and thus the clinical care is becoming a business. In such a scenario victory will go to those who can provide what the customer (patient) wants. While the Indian healthcare sector is poised for growth it is still plagued by various

challenges. According to the Compensation Trends Survey 2012 retaining critical talent, engaging healthcare professionals and hiring skilled talent are the top challenges faced by this sector. Also another concern is the scarcity of human resources.

Nurses constitute the largest human resource element in healthcare organisations and they play a vital role in influencing patient perceptions of their hospital experiences. Therefore nurses' engagement towards their job is significant due to their impact on the quality of care and patient outcomes. Nurses who are engaged in their jobs might be more empathetic to their patients and the needs of their colleagues (Santo, Pohl, Saiani, & Battistelle, 2013). In this era of responsible care, nurse engagement is critical to hospitals success.

Though the services of the nurses of Kerala are well appreciated all over the world, the profession has not been allowed to realize its full potential in the state (Health policy Kerala, 2013). The current nursing environment in Kerala is characterized by laborious workloads and arduous stress among nurses. Nurses are often victims of burnout due to their unique relations with care seekers and there are high levels of illness- related absenteeism. High stress levels from increasing workloads and low staff levels can cause nurse engagement to drop, risking patient care. This situation threatens the health of nurses themselves, their patients and their employing organisations. Therefore it is imperative to find ways to create high quality work environments to engage the nurses in their jobs.

Employees feel engaged in their work when they find personal meaning in their work, receive positive interpersonal support, and function in a productive job environment. Surprisingly, there is a relative shortage of research on the antecedents of engagement of nurses in the Indian healthcare sector. Also a bulk of nursing research has concentrated on issues of workload, lack of resources, overtime work, burnout, psychosomatic symptoms, absenteeism and intent to leave the job. This implies, the research emphasis was on the dark side of nursing experiences.

Recent development in organisational behaviour have fostered a different emphasis, an emphasis on human flourishing and individual strengths represented by the beginnings of positive psychology and ‘what is right’ in organisations represented by positive organisational scholarship focussing on positive outcomes such as resilience, meaning, excellence and engagement. In light of this, it is worth studying the enablers of nurses’ engagement. Strong human resource management helps hospitals and health systems navigate everyday challenges and continually focus on increasing engagement of healthcare professionals and improving patient care. Studies have explained the human resource management practices effectively contribute to positive healthcare outcomes. Although the nature of each healthcare system and the subsequent use of human resource practices differ depending on national context, the importance of human resource management in its ability to impact employee outcomes such as engagement remains constant. Also to build a healthy human capital base in healthcare organisation, the government of Kerala State has decided to implement strong human resource practices. Despite this fact, there is relative shortage of studies on the role of human resource practices in

enhancing employee outcomes, specifically engagement of nurses in Kerala context. Therefore it is imperative to empirically understand how human resource management practices enhance engagement. Exploring the relationship between human resource management practices and engagement will greatly enhance the present body of knowledge in the field of positive organisational behaviour in a developing country context.

## **4.2 Research Problem**

Employee engagement is gaining a top priority in organizations across the world. Engaged employees are essential to an organization's success in every industry, and very crucial in healthcare. The environment facing the healthcare industry has shifted from a fairly stable one into a more challenging and dynamic landscape.

The rising costs of healthcare, an ageing population, growing sophistication of technology, the proliferation of private hospitals, emergence of new diseases, and greater public awareness for better quality of healthcare, have developed stress and created more difficulty on hospitals and their employees. Accordingly, the most affected healthcare employees are the nursing professionals who are required to deal with increased demands for efficiency, cost-cutting, and improved healthcare quality, whilst at the same time coping effectively with workplace stress, exhaustion and burnout. The quality of nursing care positively affects a hospitals' capability to provide services at the required professional standard. Therefore, healthcare organizations need highly competent nurses who are willing to work efficiently towards organizational goals.

As nurses play an important role to portray the organization's competence, their attitudes and behaviours toward patients would have significant influence towards patients' perceived service quality and satisfaction. Hence to give excellent care, nurses should engage in favourable attitude in the form of work engagement. Based on the emergence of positive psychology the scientific study of human strengths and optimal functioning, work engagement has been recognized as one of the positive states, which is considered to be the antipode of burnout.

Engaged employees often experience positive emotions, and this may be the explanation why they are more productive. Surprisingly, there is a relative shortage of research on the antecedents of engagement specifically in the healthcare context of developing countries. Therefore the present study focuses on the antecedents of engagement in the healthcare sector.

Wright et al. (1994) viewed human resource practices as the means through which employee perceptions, attitudes, and behaviors are shaped. Hence the role of human resource practices in enhancing employee engagement cannot be overlooked. The role of human resource management (HRM) within the health care sector and its potential to effectively contribute to employee well-being and improved health care outcomes has become topical among hospital HR practitioners and academics across different national settings. Hence the present study intends to explain the relationship between human resource practices and engagement.

As employee engagement is a state that resides with the person, rather than the job, it will vary among individuals in the same job and from task to task. Therefore explaining engagement without understanding the individuals' psychological conditions of meaningfulness, safety and availability, will tell only half of the story. Psychological meaningfulness is associated with perceptions of work elements that create motivation for work. Psychological safety is associated with elements of social systems that create varying levels of perceived safety (or lack of threats) in which to perform one's duties. Psychological availability is associated with perceptions of the availability of physical, cognitive and emotional resources with which to engage in role performance. To promote high work engagement in the nursing workforce, nurses as boundary-spanners of healthcare organizations need to have higher psychological conditions. Without these innate spirits, nurses may encounter negative feelings such as burnout and depression. Throughout time, nurses' jobs will always surround with elements of stressful, difficult situations, and episodes of hardship. Hence, nurses with high psychological conditions are believed to combat these adverse upshots efficiently, which in turn, will lead to greater work engagement and higher job performance. Given the challenging nature of the nursing profession, studying the linkage between psychological conditions and work engagement would be interesting. With the growing body of research on employee engagement, job resources (human resource management practices) along with personal resources (psychological meaningfulness, psychological safety, psychological availability) can be proposed as major determinants (Halbesleben, 2010). Against this background, this study is a limited yet

decisive attempt to examine the employee engagement of nurses in Kerala as consequences of human resource management practices and their psychological conditions.

### **4.3 Objectives of the Study**

Based on the conceptual framework highlighted in the previous chapter, the study proceeds to inquire into the following objectives.

#### **4.3.1 General Objective**

To explicate and establish the employee engagement of nurses in the hospitals in Kerala as an outcome of their perception of human resource practices in the hospitals and their psychological conditions brought about by the HR practices in their hospitals.

#### **4.3.2 Specific Objectives**

- a) To measure the perception of human resource practices of the nurses in the hospitals in Kerala as perceived by nurses employed there in.
- b) To ascertain the level of psychological conditions prevailing among the nurses in terms of psychological meaningfulness, psychological availability and psychological safety.
- c) To measure the levels of employee engagement experienced by the nurses employed in the hospitals in Kerala.
- d) To determine whether nurses' perception of human resource management practices varies across their personal backgrounds of age, gender, educational qualification and years of experience.



- e) To ascertain the relationship between perception of human resource practices and psychological conditions among the nurses in the hospitals in Kerala.
- f) To establish the linkages between psychological conditions and work engagement among the nurses in the hospitals in Kerala.
- g) To statistically validate a model explaining employee engagement in terms of employees' perception of human resource management practices, psychological meaningfulness, psychological safety and psychological availability.

#### **4.4 Hypotheses of the Study**

Based on the above objectives, hypotheses of the study derived from the available insights and learnings offered by the literature and the hunches of the researcher, supported by the arguments and deductions presented in sections 3.2 through 3.10 in the chapter on conceptual focus are framed as under:

- H1: There is significant difference in the perception of HR practices of nurses across their age categories.
- H2: There is significant variation in the perception of HR practices of nurses across their educational classification.
- H3: There is a significant difference in the perception of HR practices of nurses across their years of experience.
- H4: Perception of human resource practices positively influence psychological meaningfulness.

- H5: There is a significant influence of perception of human resource practices on psychological safety.
- H6: There is a positive influence of perception of human resource practices on psychological availability.
- H7: Psychological meaningfulness positively influences employee engagement
- H8: There is a significant influence of psychological safety on employee engagement
- H9: Psychological availability significantly influences employee engagement
- H10: Psychological safety positively influences psychological meaningfulness
- H11: There is significant influence of psychological safety on psychological availability
- H12: Psychological safety mediates the relationship between perception of human resource management practices and psychological meaningfulness.
- H13: The relationship between perception of human resource management practices and psychological availability is mediated by psychological safety.
- H14: The relationship between perceived human resource management practices and employee engagement is mediated by psychological safety.

H15: The relationship between perceived human resource management practices and employee engagement is mediated by psychological meaningfulness.

H16: The relationship between perceived human resource management practices and employee engagement is mediated by psychological availability.

#### **4.5 Designation of Variables and definitions**

The conceptual focus of the study revolves around five variables. The variables used in this study include Perceived Human Resource Management Practices, Psychological Meaningfulness, Psychological Safety, Psychological Availability and Employee Engagement. The independent variable is Perceived Human Resource Management Practices. Psychological Meaningfulness, Psychological Safety and Psychological Availability are deemed as the intervening variables and Employee Engagement is the designated dependent variable.

##### **4.5.1 Perceived Human Resource Management Practices (PHRMP)**

Human resource management practices are referred to as a set of internally consistent policies and practices designed and implemented to ensure that a firm's human capital (employees' collective knowledge, skills, and abilities) contribute to the achievement of its business objectives (Huselid, Jackson and Schuler 1997, p. 171). HRM practices relate to the specific practices based on philosophies and formal policies, that are designed to attract, develop, motivate, and retain employees to ensure the

effective functioning and survival of the organization (Delery & Doty, 1996).

In the present study the human resource management practices are those practices which enhance the ability, motivation and opportunity of nurses. The human resource management practices measured in this study are the perceptions of responding nurses on the selection, training, performance appraisal, compensation, rewards, workplace resources, work life balance, grievance handling, empowerment, communication and teamwork activities adopted and operational in their hospitals. Nurses' perception of these practices was measured using a questionnaire developed by Dhiman and Mohanty (2010). Nurses' responses to all the 41 statements were on a 6-point scale anchored by 1 = strongly disagree to 6=strongly agree.

Principal component analysis on Perceived Human Resource Management Practices with Varimax rotation resulted in the extraction of six components with Eigen values greater than one. The six components are (i) Selection, Training, Performance appraisal (ii) Compensation, and Rewards & Recognition (iii) Workplace Resources and Work-Home Life Balance (iv) Grievance Handling and Employee Empowerment (v) Communication (vi) Teamwork. The Cronbach's alpha values of these components are .948, .909, .885, .847, .813 and .745. Cronbach's alpha coefficient value is greater than .70 for all the components and hence suitable for further analysis.

#### **4.5.2 Psychological Meaningfulness**

Meaningfulness is defined here as the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Hackman & Oldham, 1980; Renn & Vandenberg, 1995).

Operationally, psychological meaningfulness is the extent to which nurses' perceived that their job activities are important, meaningful, worthwhile and significant. A six-item scale by May et al. (2004) was used to measure psychological meaningfulness. Participants made responses to all the measures on a 6-point scale anchored by 1 = strongly disagree to 6=strongly agree.

Reliability analysis was carried out using Cronbach's alpha method with SPSS 21.0. One item was dropped since it reported a low item- total correlation in the reliability analysis. The five item scale has Cronbach's alpha of .777.

#### **4.5.3 Psychological Safety**

Psychological safety is defined as "feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career" (Kahn, 1990, p. 708). Individuals feel 'safe' when they perceive that they will not suffer for expressing their true selves at work.

Psychological safety is operationalised as the degree to which the nurses' felt comfortable to be themselves in work and express their opinions at work in a non-threatening work environment. Psychological safety was measured using a three-item scale developed by May et al.

(2004). Participants made responses to all the measures on a 6-point scale anchored by 1 = strongly disagree to 6=strongly agree.

The Cronbach's alpha coefficient value was found to be .70. Threshold for Cronbach's alpha is 0.7 (Nunnally 1978), and hence acceptable.

#### **4.5.4 Psychological Availability**

Psychological availability is defined as an individual's belief that one has the physical, emotional or cognitive resources to engage the self at work (Kahn, 1990). In essence, it assesses the readiness, or confidence, of a person to engage in his/her work role given that individuals are engaged in many other life activities. Psychological availability is the confidence individuals had regarding their ability to be cognitively, physically and emotionally available for work (May et al., 2004).

In this study psychological availability is operationalised as the nurses' perception of his/her ability to think clearly and display appropriate emotions at work and the confidence to handle competing demands, physical requirements and the difficulties that come up in work. Psychological availability was measured using a five-item scale developed by May et al. (2004). Respondents were asked to indicate their response in a six point scale ranging from 'strongly disagree' to 'strongly agree' with anchor points '1' and '6' respectively.

The psychological availability scale yielded a Cronbach's alpha coefficient of .819 which is above the widely accepted threshold of .7 (Nunnally, 1978).

#### **4.5.5 Employee Engagement**

Kahn (1990) was one of the first to propound the concept of engagement. Kahn (1990) defined personal engagement as the harnessing of organization members' selves to their work roles; in engagement people employ and express themselves physically, cognitively and emotionally during role performances. The term employee engagement, work engagement, personal engagement and job engagement are interchangeably used in the academic and practitioner literature.

Operationally, employee engagement have been defined as a positive, fulfilling work related state of mind that is characterized by vigour, dedication and absorption (Schaufeli & Bakker, 2004). Vigour is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in ones work and persistence in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride and challenge. Absorption is characterized by being fully concentrated and happily engrossed in ones work, whereby time passes quickly and one has difficulties with detaching oneself from work. The most widely used instrument for measuring engagement is Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2002) which consists of 17 items.

A shortened version of nine items is available (Schaufeli et al., 2006). UWES-9 is the widely used version and it reflects the core aspects of engagement (vigour, dedication and absorption). It has been validated in many countries and has acceptable psychometric properties. The present study uses UWES-9 for measuring nurses' engagement. Each

dimension had three items each. Nurses' responded in a seven point scale ranging from 'never' to 'always'.

The coefficient of Cronbach's alpha of the scale is .874, which is greater than the widely accepted threshold of .7 (Nunally, 1978).

#### **4.6 Research Design**

Methodologically the study falls into a descriptive cum explanatory framework. The study reports the employees' perception of human resource practices of their organisation and their level of engagement towards the work. Therefore the study can be termed as descriptive in nature. Also the study seeks to examine the linkages among human resource practices, psychological conditions and employee engagement. Thus the study demonstrates explanatory function too.

#### **4.7 Scope of the Study**

Scope of the study is explained in terms of population, place of study, sources of data and duration of data collection. The scope of the present study is detailed here.

##### **4.7.1 Population**

The population of the present study extends to nurses who have B.Sc (Nursing) or GNM qualification, working in the NABH (National Accreditation Board for Hospitals and Healthcare Providers) accredited hospitals in Kerala with at least one year of experience in the current hospital. Unit of observation of the study is a nurse who is selected randomly from the source list of nurses who fulfils the criteria of B.Sc



(Nursing) or GNM qualification, working in a NABH accredited hospital in Kerala with at least one year of experience in the current hospital. In September 2013 there were about 15000 nurses employed in 12 NABH accredited hospitals in Kerala distributed across the Northern, Central and Southern region of the State.

#### **4.7.2 Place of Study**

The area of study is the whole of Kerala. Hospitals with NABH accreditation scattered all over the state of Kerala offered the venue of observation and data collection. These hospitals were formally approached for their permission for the administration of the survey instruments.

#### **4.7.3 Data Sources**

Primary data and secondary data were used in the study. Data for analysis was the primary data collected through a questionnaire survey conducted among the nurses who constitute the population of the study. Secondary data was collected from NABH websites and hospital databases.

#### **4.7.4 Duration of Data Collection**

Data for the study was collected during an eight months period from September 2013 to May 2014.

### **4.8 Sampling Design**

The target population of the present study includes nurses who have B.Sc (Nursing) or GNM qualification, working in NABH accredited

hospitals in Kerala with at least one year of experience in the current hospital. Nurses with experience less than one year were excluded from the population. List of NABH accredited hospitals in Kerala as on September 2013 was obtained from the NABH website and two hospitals were selected randomly from Northern, Central and Southern regions of Kerala

NABH accredited hospital has got a certification for maintaining excellent processes and providing quality facilities. NABH is a constituent board of the Quality Council of India. Also, NABH is an institutional member of the International Society for Quality in Healthcare (ISQUA). An NABH accredited hospital preserve high quality of care and patient safety. The human resource department of the hospital employs stringent control in order to regularly acquire the accreditation renewal. So by confining the study to NABH accredited hospitals in the state, the inclusion of hospitals with ineffective human resource management practices were prevented. List of nurses working in these selected hospitals were obtained and region-wise list of nurses were prepared and the nurses were randomly selected from these list. Hence the sampling method is two-stage sampling. Unit of observation of the study is a nurse who is selected randomly from the source list of nurses who fulfils the criteria of B.Sc (Nursing) or GNM qualification, working in a NABH accredited hospital in Kerala with at least one year of experience in the current hospital.

#### **4.8.1 Sample size**

The sample of this research is calculated by using Taro Yamane (Yamane, 1973) formula with 95% confidence level.

The calculation formula of Taro Yamane is presented as follows.

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

Where :

n = sample size

N = The population size

e = the acceptable sampling error

As on September 2013 there were 12 NABH accredited hospitals in Kerala distributed across the Northern, Central and Southern region of the State employing around 15000 nurses. Estimated sample size calculated using Taro Yamane's Formula is 390. To overcome the problem of sample inadequacy it was decided to distribute 160 questionnaires to each of the three regions, totalling to 480. There were about 15 incomplete questionnaires and hence they were excluded. Finally, there were 465 usable questionnaires for analysis.

#### **4.9 Data Collection Method**

The objective of the present study is to examine the relationships among perception of human resource practices, psychological conditions of meaningfulness, availability and safety, and engagement of nurses working in the NABH accredited hospitals in Kerala based on an empirical

analysis. The questionnaire survey has been widely acknowledged as an efficient tool for measuring perceptions of individuals on a particular subject. Respondents were the nurses working in selected hospitals and the questionnaires were given directly to the respondents. Self reporting method was the approach used for data collection. Hence for the present study questionnaire survey method was employed for collecting data.

#### **4.10 Instruments for Data Collection**

The final instrument consisted of 64 items (See Appendix 1). They are arranged into four different sections (Section A to Section D). Section A had nine items for measuring employee engagement. Respondents were asked to indicate how they feel at work in a seven point scale ranging from 'never' to 'everyday'. Section B had 14 items for measuring the psychological conditions of meaningfulness, availability and safety. Participants made responses to all the measures on a 6-point scale anchored by 1 = strongly disagree to 6=strongly agree. Section C had 41 items for measuring perception of human resource management practices. Participants made responses to all the measures on a 6-point scale anchored by 1 = strongly disagree to 6=strongly agree. The last section was on the demographic details of the respondent.

The instrument gathered respondent information on age, gender, years of experience and professional educational qualification as these factors were thought to be of relevance capable of influencing respondents' perception of HRMP. The variables like marital status and tenured nature of employment have been controlled for and hence not sought in the questionnaire.

#### **4.11 Analysis Design**

For the statistical analysis of data ANOVA test, correlation analysis and regression analysis was carried out using SPSS 16.0. Warp PLS 4.0 was employed for testing mediation and for analysing the overall model fit. The present study initially explains the socio-demographic profile of the respondents. The demographic factors include gender, age, years of experience and educational qualification. Analysis looked into the effect of these socio-demographic variables on nurses' perception of their human resource management practices. Subsequently all the hypotheses were tested using SPSS 16.0 and Warp PLS 4.0.

#### **4.12 Limitations of the Study**

Methodological whistle-blowing from certain quarters which pointed out that the conceptual paths resorted in this research warranted more of a longitudinal than the currently resorted cross-sectional strategy though acknowledged is beyond the limited, personal resources of the researcher.

Another drawback perceived is the use of self-reporting method for measuring the constructs which makes the study prone to response bias. In order to check for the adverse effect of self-reporting, statistical tests were applied to rule out common method variance.

The study does not include perception of nurses on compensation after the recent assurance given by Government of Kerala for a minimum salary of ₹ 20,000.

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## Chapter 5

### DEMOGRAPHICS, RELIABILITY, VALIDITY, AND NORMALITY OF MEASUREMENTS

<b>C</b> <b>o</b> <b>n</b> <b>t</b> <b>e</b> <b>n</b> <b>t</b> <b>s</b>	5.1 <i>Data Records</i>
	5.2 <i>Profile of Respondents</i>
	5.3 <i>Reliability and Factor Validity Analysis of Measures of Constructs</i>
	5.4 <i>Distributional Characteristics of Variable Data</i>
	5.5 <i>Analysis of Normality of Data using Skewness and Kurtosis Values</i>

*This chapter presents the details of data collection and discusses the socio-demographic profile of the respondent nurses. It further focuses on the analysis of reliability and validity of the five variables included in the conceptual framework of the study. The chapter also presents the data distribution of the variables using histograms. Skewness and kurtosis measures are also analysed for assessing the normality of the variables.*

## 5.1 Data Records

The researcher distributed 480 questionnaires to the selected nurses working in NABH accredited hospitals in Kerala. 160 questionnaires each were distributed in the Southern, Central and Northern regions of the state. After the preliminary check 15 questionnaires were found invalid. Thus the final data set had 465 usable questionnaires. Table 5.1 gives the data collection details.

**Table 5.1: Details of Distribution and Retrieval of Survey Instrument**

Region	No. of questionnaires distributed	No. of responses received	Final no. of valid responses	Response rate
Northern	160	160	158	98.7%
Central	160	160	155	96.8%
Southern	160	160	152	95%

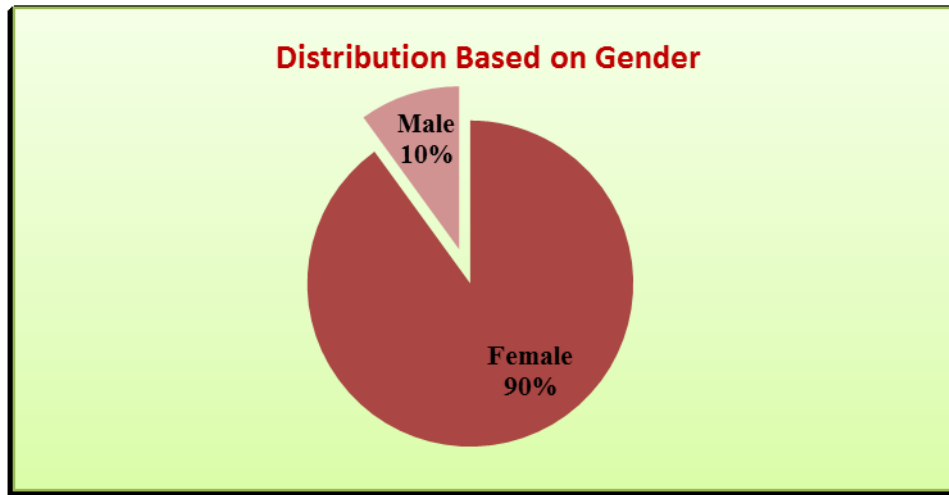
The above table shows that there is a good response rate which is above 90% in all regions. Thus the final sample size of the study becomes 465. Further analyses were carried out using the data obtained from these 465 respondent nurses.

## 5.2 Profile of Respondents

Gender, age, educational qualification, and years of experience were the demographic details surveyed. This section explains the demographic profile of 465 nurses in terms of their gender, age, educational qualification and years of experience.



### 5.2.1 Classification of Nurses Based on Gender



**Figure 5.1: Classification of Nurses Based on Gender**

In Kerala society relatively less number of males opt for nursing profession and several reasons are suggested for this. Suggested reasons include stereotyping of nursing profession, lack of male interest in the profession, low pay and the perception that male nurses will have difficulty in the workplace in carrying out their duties. These reasons seemingly have led to the disproportionate representation of females among the total sample of the study.

### 5.2.2 Classification of Nurses Based on Age

The respondents were grouped into five categories based on their age and the numbers of respondents falling in each group are shown in the table.

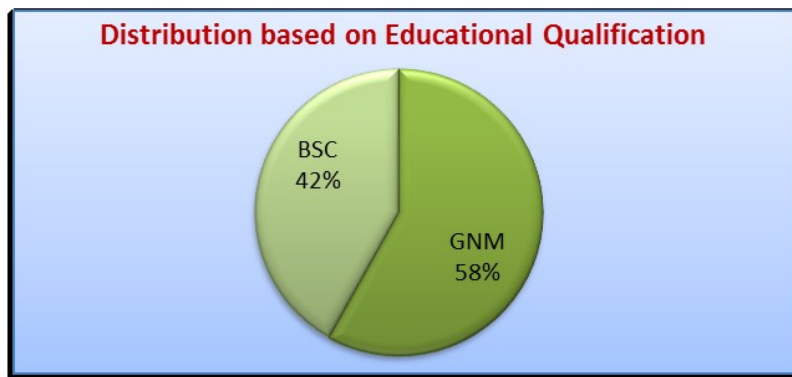
**Table 5.2: Distribution of Nurses Based on Age**

Age category	Frequency	Percentage
Less than 25 years	166	35.7
25 -30 years	193	41.5
31-35 years	36	7.7
36-40 years	29	6.2
Above 40 years	41	8.8
	465	100.0

From the table it is observed that 77.2% of respondents are below 30 years of age indicating the predominance of youngsters in the nursing profession, and the rest are above 30. It is also noted that 41.5% of the nurses fall in the category of 25-30 years of age group and only 6.2% fall in the category of 36 – 40. Out of 22.7%, above 30 years, either they leave the profession after marriage or the opportunities abroad lure them away once they gain 5-10 years of experience locally.

### 5.2.3 Classification of Nurses Based on Educational Qualification

Nurses having either GNM qualification or BSc Nursing qualification were included in the present study. The split up of respondents based on their educational qualification is given below.

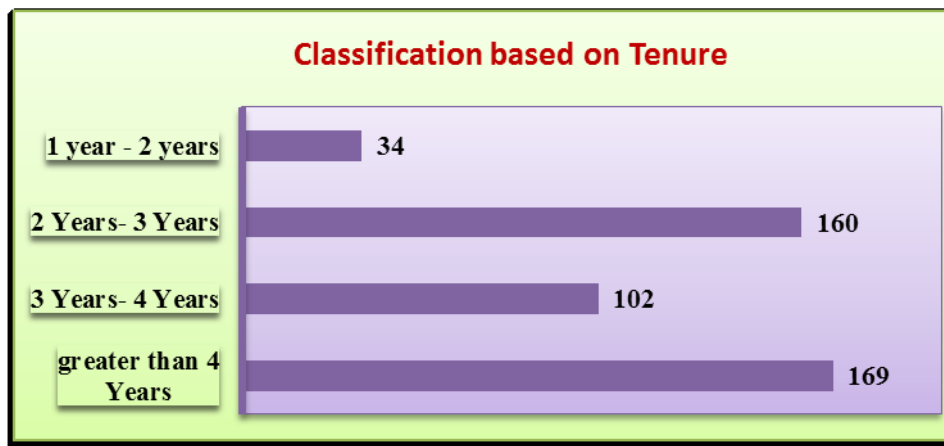


**Figure 5.2: Classification of Nurses Based on Educational Qualification**

In the sample majority of respondents (270) were having GNM qualification and 195 respondents were BSc nurses. Unlike in many other instances where the sample unit can be from assorted academic backgrounds, cent percent of nurses included in the present study was found to be academically and attitudinally inclined towards the profession.

#### **5.2.4 Classification based on Tenure of Nurses**

Data collection was done among the nurses with different tenures.



**Figure 5.3: Classification based on Tenure of Nurses**

The profile of respondents show that majority of the nurses in the total sample, 431 out of 465 nurses, are having more than two years of association with the present hospital.

#### **5.2.5 Profile Summary**

Nurses who have B Sc. (Nursing) or GNM qualification, working in NABH accredited hospitals in Kerala with at least one year of experience in the current hospitals are the respondents of the present study. The

demographic profile of the 465 respondent nurses reveals that 90% of the nurses are women. Majority of nurses are below thirty years of age. 58% of the sample is GNM nurses and 93% of the nurses are having more than two years of experience in the current hospital.

### **5.3 Reliability and Factor Validity Analysis of Measures of Constructs**

The extent to which an instrument consistently produces same results if it is used in same situation on repeated occasions is called reliability of the instrument. In essence it is the accuracy of the instrument. In the present study internal consistency method was used to estimate the reliability of the scales. Cronbach's alpha is a measure of internal consistency and it was used for determining the internal consistency for all the scales employed in the study. In this test the internal consistency is evaluated based on the inter-relatedness of items in the scale (Cronbach, 1951). Various reports on the acceptable values of Cronbach's alpha suggest that it could range from 0.70 to 0.95 (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVellis, 2003). Nunnally (1978) suggested that Cronbach's alpha of .70 can be considered the minimum reliability required for a scale. For all the scales used in this study Cronbach's alphas was estimated and have been noted in the respective sections.

In structural equation modelling the latent factor structure of the measures is very relevant and hence it was analysed by exploratory factor analysis. Principal Component Analysis (PCA) was used for extracting the factors in the present study. In order to obtain a more comprehensible factor solution Varimax rotation was carried out. Multivariate normality

assumption is not a requirement as PCA is based on principal axes (Floyd & Widaman, 1995). According to Gorsuch (1983) exploratory factor analysis appears to be relatively robust against data normality violations. The strict prerequisites for conducting factor analysis on data are sampling adequacy measures and correlation among items of the scale. These prerequisites are assessed by using Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity.

For determining the sampling adequacy for PCA, KMO was measured. The KMO statistic varies between 0 and 1. Kaiser (1974) states that the KMO statistic greater than 0.5 are acceptable. Moreover, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Hutcheson & Sofroniou, 1999). Correlation among the scale items are tested by Bartlett's test of Sphericity. It tests the hypothesis that the correlation matrix of all items is an identity matrix, indicating that there is no correlation among these items. Significance confirms that the correlation among items in the matrix is significantly different from zero.

The present study deals with five different constructs namely, perceived human resource management practices, psychological meaningfulness, psychological safety, psychological availability and employee engagement. For all the constructs reliability and factor analysis were carried out. As suggested in scholarly literature factor analysis was conducted after reliability analysis and scale item purification (Churchill, 1979).

### 5.3.1 Reliability analysis of Perceived Human Resource Management Practices (PHRMP)

The human resource practices investigated in this study are teamwork, grievance handling, employee empowerment, communication, compensation, rewards and recognition, workplace resources, home and work life balance, selection, training and performance appraisal. Reliability of each of these dimensions was assessed by internal consistency method through Cronbach's alpha. Cronbach's alpha was calculated using SPSS 21.0. The Cronbach's alpha values of all dimensions of perceived human resource management practices and the number of items in each dimension are listed in the table below.

**Table 5.3: Reliability Analysis of Perceived Human Resource Management Practices**

Components	Cronbach's Alpha	No. of Items
Teamwork	.745	3
Communication	.813	3
Grievance Handling	.770	3
Employee Empowerment	.848	3
Workplace resources	.762	3
Work-home life balance	.842	4
Compensation	.850	4
Reward and recognition	.835	4
Selection	.877	5
Training	.825	4
Performance appraisal	.906	5

From the above table it can be seen that the Cronbach's alpha coefficient value for all the eleven dimensions of perceived human resource management practices is greater than .70. Threshold for Cronbach's alpha is 0.7 (Nunnally 1978), and hence acceptable for further analysis.

### **5.3.2 Factor Analysis of PHRMP**

Usually, researchers empirically examine the key dimensions of HRM practices by factor analysis (Becker & Huselid, 1998; Thang & Quang, 2005). This approach is appropriate to capture variations in the formation of dimensions of HRM practices due to contextual influences. But this method did not yield uniform dimensions of HRM practices, because the researchers included different human resource management practices in different study contexts. Moreover, HRM practices are likely to be influenced by the cultural values (Ngo, Turban, Lau, & Lui, 1998). Therefore it is important to identify the human resource management practices in the context of a particular study (Thang & Quang, 2005). This study first identified HRM practices from the literature and then conducted an exploratory factor analysis to pinpoint precisely the dimensions of HRM practices as perceived by the nurses working in the selected NABH accredited hospitals in Kerala.

Factor analysis was carried out using SPSS 21.0. KMO and Bartlett's Test of Sphericity for Human Resource Management Practices were performed for the scale items. The following table presents the results of the two analyses.

**Table 5.4: KMO and Bartlett's Test of Sphericity for PHRMP**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.937
Bartlett's Test of Sphericity	Approx. Chi-Square	14098.708
	Df	820
	Sig.	.000

The KMO value obtained is 0.937, well above the mandatory minimum of 0.5. Therefore sampling adequacy was taken as confirmed. Bartlett's test of sphericity is significant at .01 ( $p < .01$ ). Therefore the suitability of the present data set for factor analysis was also confirmed.

Principal component analysis on Perceived Human Resource Management Practices (PHRMP) with Varimax rotation resulted in the extraction of six components with Eigen values greater than one. Factor loadings of 0.4 or higher were taken as significant loadings considering the sample size of the study ( $N=465$ ). As per the guidelines in Hair, Anderson, Tatham, and Black (1998), significant factor loadings for a sample size of 350 or greater is .3. i.e., larger sample size requires small factor loadings. The six factor structure explains 64.8% of variance in perceived human resource management practices. This percentage of variance explained by the factor structure is more than 50%, which is considered acceptable (Hair et al., 1998). The factor loading matrix of PHRMP is shown in Appendix 3.

A close analysis of the item loadings (see Appendix 3) show that selection, training, and performance appraisal items of the scale collapsed



into the first factor comprising 14 items. Compensation and rewards and recognition together emerged out as the second factor and has eight items. Workplace resources and work-life balance collapsed into single factor and it emerges as the third component constituting seven items. Three items of communication emerged as the fourth factor. The fifth factor consists of six items comprising measures of grievance handling and employee empowerment. The sixth factor is teamwork and it consists of three items.

After the extraction of six distinct factors of perceived human resource management practices reliability measures were computed for the six components. Reliability values were calculated using SPSS 21.0. The reliability values and the number of items in each of the components is shown in the below table.

**Table 5.5: Reliability analysis of six extracted factors of PHRMP**

<b>Components</b>	<b>Cronbach's alpha</b>	<b>No. of Items</b>
Selection, training, Performance appraisal	.948	14
Compensation and Rewards & Recognition	.909	8
Workplace Resources and Work-Home Life Balance	.885	7
Grievance Handling and Employee Empowerment	.847	6
Communication	.813	3
Teamwork	.745	3

Cronbach's alpha coefficient value is greater than .70 for all the components and hence suitable for further analysis. The final scale of human resource management practices has 41 items.

### 5.3.3 Reliability Analysis of Psychological Meaningfulness

The scale of psychological meaningfulness has 6 items. Reliability analysis was carried out using Cronbach's alpha method with SPSS 21.0. One item was dropped since it reported a low item- total correlation in the reliability analysis. Therefore in the present study the final scale of psychological meaningfulness has five items. The reliability analysis of psychological meaningfulness scale is given in the table below.

**Table 5.6: Reliability Analysis of Psychological Meaningfulness**

Reliability Statistics		
Component	Cronbach's Alpha	No. of Items
Psychological meaningfulness	.777	5

The five item scale has Cronbach's alpha of .777 and is acceptable for further analysis.

### 5.3.4 Factor analysis of Psychological Meaningfulness

Exploratory Factor Analysis using principal component analysis with Varimax rotation was done for confirming the factor dimension of psychological meaningfulness using SPSS 21.0. The results are given below.

**Table 5.7: KMO and Bartlett's Test of Sphericity of Psychological Meaningfulness**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.810
Bartlett's Test of Sphericity	Approx. Chi-Square	559.565
	Df	10
	Sig.	.000

KMO test shows a value of .810 which is well above the cut-off value of 0.5. Bartlett's Test of Sphericity is also significant at  $p < .01$ . Therefore the present data set is suitable for factor analysis.

The factor loadings of the items were on predicted lines and thus could be accounted as a single factor. The factor loadings are presented below.

**Table 5.8: Factor loading Matrix of Psychological Meaningfulness**

Component Matrix	
Items of Psychological meaningfulness scale	Component
	1
m1	.679
m2	.760
m3	.689
m4	.736
m5	.771

The single factor structure explains 53% variance in psychological meaningfulness. This percentage of variance explained by the single factor structure is more than 50% and hence acceptable for further analysis (Hair et al., 1998).

### 5.3.5 Reliability Analysis of Psychological safety

Psychological safety scale has three items. Reliability analysis by internal consistency method was conducted for the scale using SPSS 21.0.

**Table 5.9: Reliability Statistics of Psychological safety**

Component	Reliability Statistics	
	Cronbach's Alpha	No. of Items
Psychological safety	.700	3

The Cronbach's alpha coefficient value was found to be .70. Threshold for Cronbach's alpha is 0.7 (Nunnally 1978), and hence acceptable.

### 5.3.6 Factor analysis of Psychological Safety

Suitability of data for factor analysis was assessed using KMO and Bartlett's Test of Sphericity. KMO test shows a value of .601 which is well above the cut-off value of 0.5. Bartlett's Test of Sphericity is also significant at  $p < .01$ . Hence data is suitable for factor analysis. The output table is given below.

**Table 5.10: KMO and Bartlett's Test of Sphericity for Psychological safety**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.601
Bartlett's Test of Sphericity	Approx. Chi-Square	172.636
	Df	3
	Sig.	.000

Exploratory Factor Analysis using principal component analysis with Varimax rotation was done for confirming the factor dimension of psychological safety measure using SPSS 21.0.

The factor loading matrix the given below

**Table 5.11: Factor loading matrix of psychological Safety**

Component Matrix	
Items in Psychological safety scale	Component
	1
s1	.827
s2	.676
s3	.750

Exploratory factor analysis with principal component analysis resulted in a single component and it explained 56.793 percent variance and this is more than 50%, which is considered acceptable (Hair et al., 1998).

### **5.3.7 Reliability Analysis of Psychological availability**

The psychological availability scale consists of five items. Cronbach's alpha was calculated using SPSS 21.0. The results are shown in the table below.

**Table 5.12: Reliability Statistics of Psychological Availability**

<b>Component</b>	<b>Cronbach's Alpha</b>	<b>No. of Items</b>
Psychological availability	.819	5

The psychological availability scale yielded a Cronbach's alpha coefficient of 0.819 which is above the widely accepted threshold of .7 (Nunally, 1978).

### **5.3.8 Factor analysis of Psychological Availability**

Appropriateness of data for factor analysis was assessed using KMO and Bartlett's test of sphericity. The results are given below.

**Table 5.13: KMO and Bartlett's Test of Sphericity of Psychological Availability**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.793
Bartlett's Test of Sphericity	Approx. Chi-Square	873.585
	Df	10
	Sig.	.000

Kaiser-Meyer-Olkin (KMO) test for sampling adequacy and Bartlett's test of sphericity supported the appropriateness of using factor analysis. KMO test shows a value of .793, which is well above the cut-off value of 0.5. Bartlett's Test of Sphericity is also significant at  $p < .01$ . Hence data is suitable for factor analysis.

Exploratory factor analysis with principal component analysis was performed and PCA extracted a single factor.

**Table 5.14: Factor loading matrix of psychological Availability**

Component Matrix	
Items in Psychological availability scale	Component
	1
a1	.803
a2	.795
a3	.831
a4	.732
a5	.664

The single component accounted for 58.87% of the total variance of the scale and is more than 50%, which is considered acceptable (Hair et al., 1998).

### **5.3.9 Reliability analysis of Employee Engagement**

Employee Engagement scale consists of nine items. Cronbach's alpha of the nine item employee engagement scale was calculated using SPSS 21.0.

**Table 5.15: Reliability statistics of Employee Engagement**

Component	Cronbach's Alpha	No. of Items
Employee Engagement	.874	9

The coefficient of Cronbach's alpha of the scale is .874, which is greater than the widely accepted threshold of .7 (Nunally, 1978). Hence the scale of employee engagement is reliable for further analysis.

### **5.3.10 Factor analysis of Employee Engagement**

Factor analysis was carried out using SPSS 21.0. KMO and Bartlett's Test of Sphericity for Employee Engagement scale were calculated.

**Table 5.16: KMO and Bartlett's Test of Sphericity for Employee Engagement**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.901
Bartlett's Test of Sphericity	Approx. Chi-Square	1817.964
	Df	36
	Sig.	.000

KMO test shows a value of .901 which is well above the cut-off value of 0.5. Bartlett's Test of Sphericity is also significant at  $p < .01$ . Hence data is suitable for factor analysis.

Exploratory Factor Analysis using principal component analysis with Varimax rotation was done for confirming the factor dimension of Employee Engagement using SPSS 21.0. Exploratory factor analysis with principal component analysis resulted in a single component and it

explained 52.01 percent variance and this is more than 50%, which is considered acceptable (Hair et al., 1998). The results are given below.

**Table 5.17: Factor Loading Matrix of Employee Engagement**

<b>Component Matrix</b>	
Items in Employee Engagement scale	Component
	1
E1	.667
E2	.509
E3	.707
E4	.749
E5	.719
E6	.737
E7	.724
E8	.812
E9	.820

#### **5.4 Distributional Characteristics of Variable Data**

This section deals with the data distribution of all the variables of the conceptual framework. Analysis of data distribution is an essential requisite for determining the statistical method to be employed because the tools of statistical analysis are based on data distributions. All parametric tests of hypothesis assume that population is normally distributed. Therefore the following analysis of normality is important for assessing the data distribution and suitability of statistical tests for analysis.

For sample sizes greater than 300, researcher should depend on the histograms and the absolute values of skewness and kurtosis without

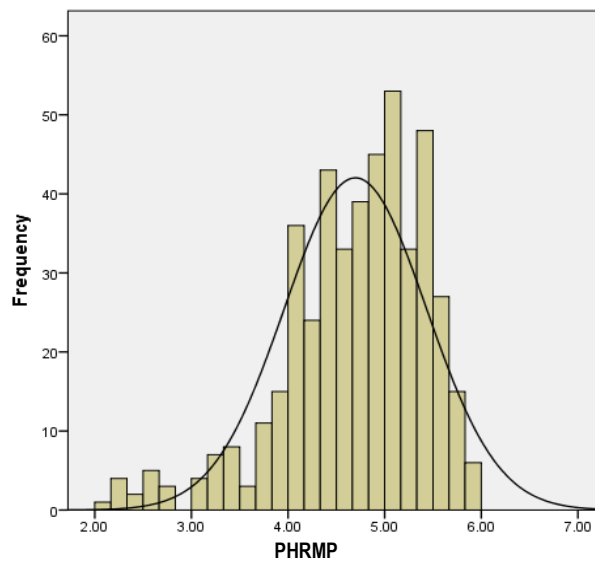


considering z-values. Either an absolute skew value larger than 2 or an absolute kurtosis (proper) larger than 7 may be used as reference values for determining substantial non-normality (Kim, 2013).

Initially normality is assessed using histograms. The histograms for the variables are presented below.

#### **5.4.1 Data distribution of Perceived Human Resource Management Practices (PHRMP)**

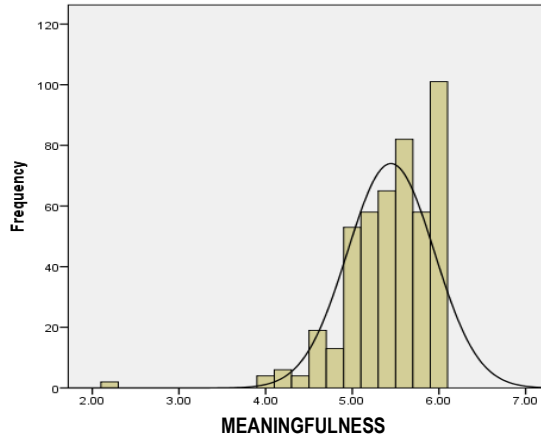
The scores of respondents on perceived human resource management practices are represented by the histogram below. A normal curve is also plotted for the distribution.



**Figure 5.4: Histogram of Perceived Human Resource Management Practices**

Eyeballing the normal curve plotted for the data indicates that the data is distributed approximately normally.

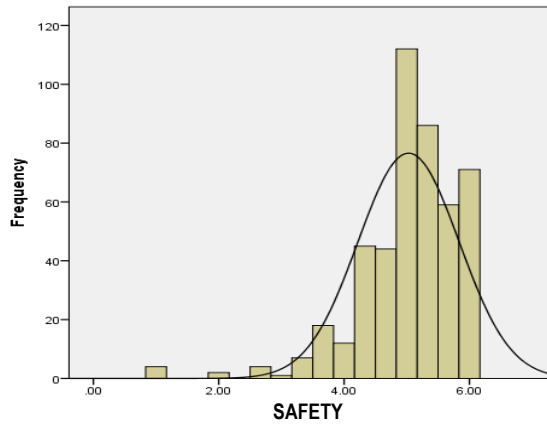
### 5.4.2 Data distribution of psychological meaningfulness



**Figure 5.5: Histogram of Psychological Meaningfulness**

The histogram of psychological meaningfulness is presented above. The data distribution of psychological meaningfulness appears non-normal with some skewness to the left.

### 5.4.3 Data distribution of Psychological safety



**Figure 5.6: Histogram of Psychological Safety**

The eyeballing of the histogram with normal curve shows a non-normal distribution with skewness to left.

#### 5.4.4 Data distribution of Psychological Availability

Histogram of psychological availability is presented.

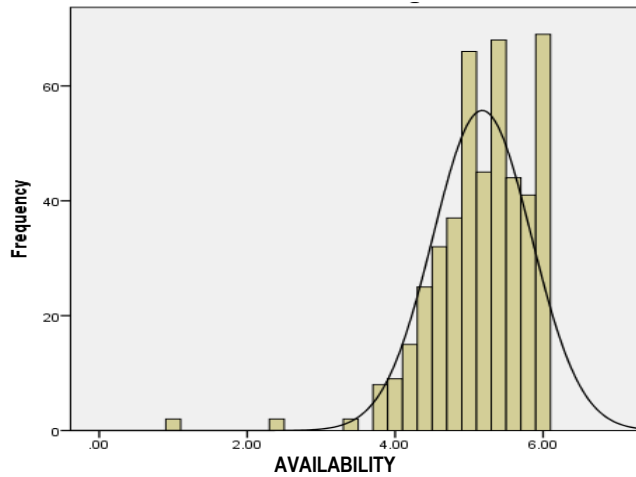


Figure 5.7: Histogram of Psychological Availability

The histogram with normal curve plot of the variable, psychological availability represents a non-normal data which is skewed to left.

#### 5.4.5 Data distribution of Employee Engagement

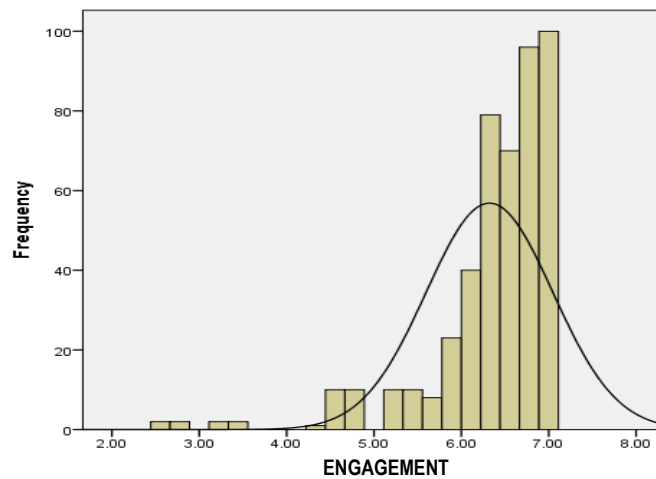
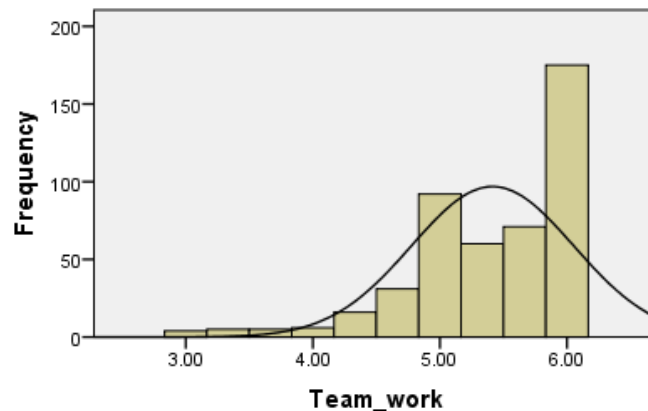


Figure 5.8: Histogram of Employee Engagement

The scores of respondents on employee engagement are represented by the above histogram. A normal curve is also plotted for the distribution. Eyeballing the normal curve plotted for the data indicates that the data is distributed non- normally and is left skewed.

#### 5.4.6 Data Distribution of Teamwork

The histogram with normal curve of teamwork is presented.



**Figure 5.9: Histogram of Teamwork**

The scores of respondents on teamwork are represented by the above histogram. A normal curve is also plotted for the distribution. Eyeballing the normal curve plotted for the data indicates that the data is distributed non- normally and is left skewed.

### 5.4.7 Data distribution of Communication

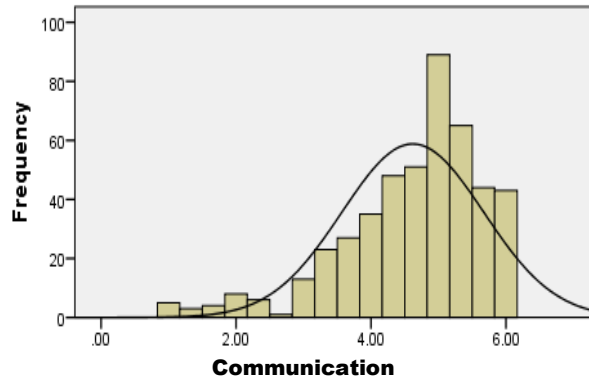


Figure 5.10: Histogram of Communication

The histogram with normal curve plot of the variable, communication represents a non-normal data which is slightly skewed to left.

### 5.4.8 Data distribution of Grievance Handling & Employee Empowerment

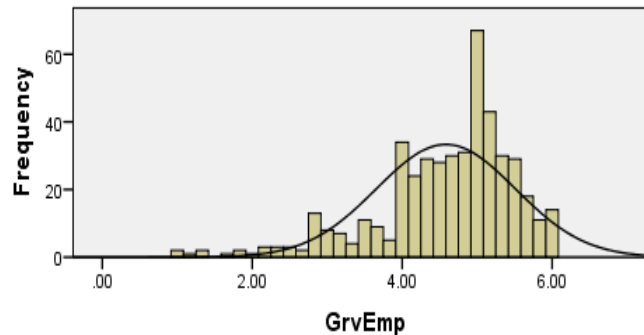
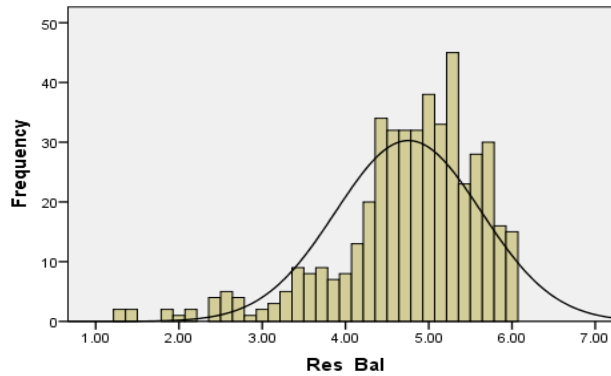


Figure 5.11: Histogram of Grievance Handling & Employee Empowerment

The scores of respondents on grievance and empowerment dimension of perceived human resource management practices are represented by the above histogram. A normal curve is also plotted for the distribution. Eyeballing the normal curve plotted for the data indicates that the data is distributed approximately normally

### 5.4.9 Data Distribution of Workplace Resources & Work Life Balance

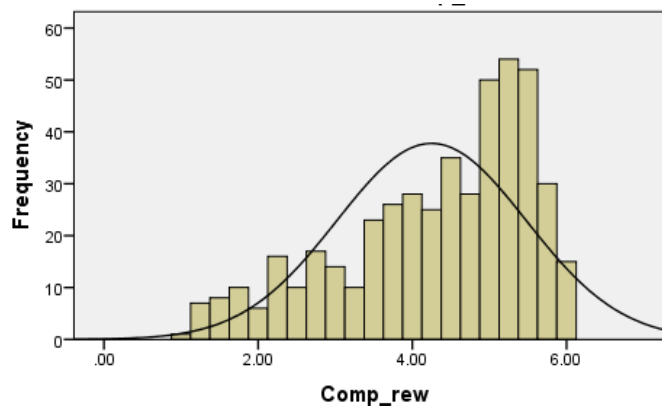


**Figure 5.12: Histogram of Workplace Resources & Work Life Balance**

The histogram with normal curve plot of the dimension, workplace resources and work life balance represents a slightly non-normal data which is slightly skewed to left.

### 5.4.10 Data distribution of Compensation, and Rewards and Recognition

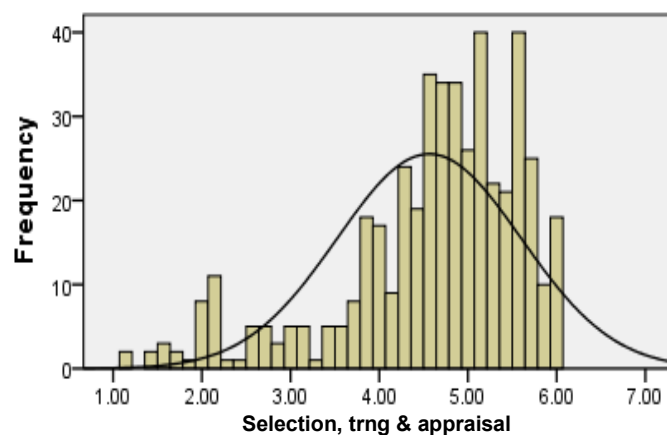
The histogram with normal curve of compensation and rewards & recognition is presented below.



**Figure 5.13: Histogram of Compensation, and Rewards and Recognition**

The histogram with normal curve plot of the dimension, compensation and rewards represents a slightly non-normal data which is slightly skewed to left.

#### **5.4.11 Data distribution of Selection, Training, and performance appraisal**



**Figure 5.14: Histogram of Selection, Training, and Performance Appraisal**

The histogram with normal curve of employee selection, training, and performance appraisal is shown above. The histogram with normal curve plot of the dimension, selection, training and appraisal represents a slightly non-normal data which is slightly skewed to left.

### **5.5 Analysis of Normality of Data using Skewness and Kurtosis Values**

Skewness is a measure of the asymmetry and kurtosis is a measure of peakedness of a distribution. Either an absolute skew value larger than 2 or an absolute kurtosis (proper) larger than 7 may be used as reference

values for determining substantial non-normality (Kim, 2013). The skewness and kurtosis values of the variables are given in the table.

**Table 5.18: Skewness and Kurtosis Values of the Variables**

<b>Variables</b>	<b>Skewness</b>	<b>Kurtosis (Proper)</b>
Perceived Human Resource Management Practices	-0.985	3.204
Psychological Meaningfulness	-1.669	9.786
Psychological Safety	-1.666	8.104
Psychological Availability	-1.592	9.545
Employee Engagement	-2.333	10.228
Teamwork	-1.233	4.652
Communication	-1.143	4.398
Grievance Handling and Employee Empowerment	-1.164	4.598
Work Place Resources and Work Life Balance	-1.283	5.099
Compensation, and Reward and Recognition	-0.772	3.320
Selection, Training, and Performance Appraisal	-1.187	4.087

The skewness values are all negative indicating a left skewed distribution. The proper kurtosis values of all variables except human resource management practices are greater than 7 indicating a leptokurtic distribution, meaning high peak. By the above criterion, it must be concluded that there is slight deviation from normality for the variables under study.

However, there is common understanding among researchers that true normality is a rare occurrence in education and psychology research areas (Micceri, 1989; Dunlap, Burke & Greer, 1995; Schafer & Graham, 2002).



Researchers can improve normality of data through the use of different transformations (Dunlap et al., 1995). A log transformation was done in this study to convert non-normal data to a normal data set. For negatively skewed data, it is important to reflect data to do log transformation.

Field (2009) describes the idea of transforming data as follows:

The idea behind transformations is that you do something to every score to correct for distributional problems, outliers or unequal variances. Although some students often (understandably) think that transforming data sounds dodgy (the phrase ‘fudging your results’ springs to some people’s minds!), in fact it isn’t because you do the same thing to all of your scores. As such, transforming the data won’t change the relationships between variables (the relative differences between people for a given variable stay the same), but it does change the differences between different variables (because it changes the units of measurement). Therefore, even if you only have one variable that has a skewed distribution, you should still transform any other variables in your data set if you’re going to compare differences between that variable and others that you intend to transform. (p. 79)

A log transformation was done to convert non-normal data to a normal data set. For negatively skewed data, we have to reflect data to do log transformation. After log transformation, the data set was found to be normal. The skewness and kurtosis values of the variables and dimensions of human resource management practices are given below.

**Table 5.19: Skewness and Kurtosis Values of the Variables after Transformation**

<b>Variables</b>	<b>Skewness</b>	<b>Kurtosis (Proper)</b>
Perceived Human resource management practices	0.107	-3.162
Psychological meaningfulness	0.395	-3.031
Psychological safety	0.188	-3.003
Psychological availability	0.133	-3.84
Employee engagement	.991	4.054
Teamwork	0.473	-3.758
Communication	0.049	-3.377
Grievance handling and employee empowerment	0.144	-3.076
Work place Resources and work life balance	.201	-4.33
Compensation and Reward and recognition	0.080	-3.874
Selection, training and performance appraisal	0.242	-3.332

From the table it is clear that after log transformation the data set turned out to be normal. This transformed data is used for further parametric test which is built on the assumption of normality of study variables.

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**DESCRIPTIVE AND ASSOCIATIONAL  
INFORMATION ABOUT THE VARIABLES**

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- 6.1 *Descriptive Statistics of Variables*
- 6.2 *Respondents' Perception on the Study Variables*
- 6.3 *The Effect of Background Variables on PHRMP*
- 6.4 *Correlation among Study Variables*
- 6.5 *Influence of PHRMP on Psychological Meaningfulness*
- 6.6 *Influence of PHRMP on Psychological Safety*
- 6.7 *Influence of PHRMP on Psychological Availability*
- 6.8 *Influence of Psychological Meaningfulness on Employee Engagement*
- 6.9 *Influence of Psychological Safety on Employee Engagement*
- 6.10 *Influence of Psychological Availability on Employee Engagement*
- 6.11 *Influence of Psychological Safety on Psychological Meaningfulness*
- 6.12 *Influence of Psychological Safety on Psychological Availability*

*This chapter brings out the findings of analysis from 465 respondent nurses. The chapter presents the results of objectives and various hypotheses of the present study proposed based on the conceptual framework. Statistical tools including descriptive statistics, t Test, One-way ANOVA, correlation and regressions were used for analysing the data.*

## 6.1 Descriptive Statistics of Variables

Five variables are incorporated in the conceptual framework of the study. The independent variable is perceived human resource management practices (PHRMP) and employee engagement serves as the outcome variable. The relationship between human resource management practices and employee engagement is indirectly established through three variables, psychological meaningfulness, psychological safety, and psychological availability.

The table below presents the descriptive statistics of the variables of the study.

**Table 6.1: Descriptive Statistics of the Variables of the Study**

Variables	N	Mean	Median	SD
PHRMP	465	4.69	4.80	.736
Psychological Meaningfulness	465	5.45	5.6	.501
Psychological Safety	465	5.03	5.00	.807
Psychological Availability	465	5.18	5.2	.666
Employee Engagement	465	6.32	6.55	.725

The descriptive statistics of the dimensions of PHRMP is also provided.

**Table 6.2: The Descriptive Statistics of the Dimensions of PHRMP**

Dimensions of PHRMP	N	Mean	Median	SD
Teamwork	465	5.41	5.67	.638
Communication	465	4.62	5	1.05
Grievance Handling & Employee Empowerment	465	4.58	4.83	.927
Work Place Resources & Work Life Balance	465	4.76	4.85	.875
Compensation, Rewards & Recognition	465	4.25	4.5	1.23
Selection, Training & Performance Appraisal	465	4.56	4.79	1.03

Maximum mean value possible for PHRMP, psychological meaningfulness, psychological safety, and psychological availability is six. For employee engagement, the maximum mean score is seven. N is the total number of respondents of the study and it is 465.

## **6.2 Respondents' Perception on the Study Variables**

The first three objectives of the study aim to understand nurses' perception on the HRMP, and also to comprehend the level of psychological meaningfulness, psychological safety, psychological availability, and engagement experienced by them in their job.

From Table 6.1, it can be observed that, for all the five variables the mean of responses is greater than the midpoint of the scale which shows that nurses' perception of all the variables under study are favourable. The median values of the variables also confirms that overall, the respondents have positive perception on the study variables.

Table 6.2 shows that among the six dimensions of the PHRMP. This table reveals that nurses show highest regard towards the team work activities in their organizations, followed by Work-place resources and Work-life balance, Communication, Grievance handling & Employee empowerment, Selection, training & performance appraisal and Compensation & rewards and Recognition. Recent state-wide strike by nurses in private hospitals in Kerala was withdrawn after the Government of Kerala promised to ensure a minimum salary of ₹ 20,000. This study reveals that the perception of nurses' regarding compensation is relatively lesser compared to other human resource practices. Following government intervention a positive change can be expected in this factor.

The respondents' overall perception on the study variables can be summarised as follows:

- i) Nurses perceive the HRMP of their organisation as favourable.
- ii) Their levels of psychological meaningfulness, psychological safety, psychological availability, and employee engagement are exceeding the average level.

### **6.3 The Effect of Background Variables on PHRMP**

One of the objectives of the present study was to explore whether employees' perception of HRMP varies across the demographic factors such as gender, age, educational qualification and organisational tenure. One way ANOVA and Independent Sample t test were used for testing the hypothesis H1, H2 & H3 which were about the influence of age, educational classification and years of experience on perceived human resource management practices. Influence of gender on PHRMP was not looked into as 90% of the respondents were female nurses.

In this study perceived human resource management practices have six dimensions namely i) Teamwork ii) Communication iii) grievance handling & employee empowerment iv) workplace resources & work-life balance v) compensation & rewards and recognition vi) selection, training & performance appraisal. The mean and standard deviation scores of nurses for the above dimensions are shown in Table 6.2.

#### **6.3.1 Effect of Age on PHRMP**

This section tests and presents the result of the study hypothesis H1. H1 is stated as follows:

H1: There is significant difference in the perception of HRM practices of nurses across their age categories.

Data for the study is collected across five age groups. Classification of nurses based on age reveals that the number of nurses across the five categories, Less than 25 years, 25 -30 years, 31-35 years, 36-40 years and Above 40 years are 166,193, 36, 29 and 41 respectively. To find out whether there is a statistically significant difference on perceived human resource management practices across age groups, one-way ANOVA was done using SPSS 21.0.

**Table 6.3: One-way ANOVA Results for Age Groups with Perceived HRMP**

Dimensions of PHRMP		Sum of Squares	Df	Mean Square	F	Sig.
Teamwork	Between Groups	0.064	3	0.021	0.052	0.984
	Within Groups	188.938	461	0.41		
	Total	189.003	464			
Communication	Between Groups	8.147	3	2.716	2.479	0.061
	Within Groups	505.034	461	1.096		
	Total	513.181	464			
Grievance handling & Employee Empowerment	Between Groups	0.854	3	0.285	0.33	0.804
	Within Groups	398.264	461	0.864		
	Total	399.118	464			
Workplace resources & Work-life balance	Between Groups	1.61	3	0.537	0.699	0.553
	Within Groups	353.79	461	0.767		
	Total	355.401	464			
Compensation & Rewards and Recognition	Between Groups	0.897	3	0.299	0.197	0.898
	Within Groups	698.54	461	1.515		
	Total	699.437	464			
Selection, Training & Performance Appraisal	Between Groups	2.979	3	0.993	0.921	0.53
	Within Groups	496.791	461	1.078		
	Total	499.769	464			

From the above table it was found that there is no significant difference on the perceptions of various dimensions of human resource management practices across the different age groups of nurses. Hence the hypothesis that, there is significant difference in the perception of HRM practices of nurses across their age categories is not supported.

### 6.3.2 Effect of Educational Qualification on PHRMP

To find out whether there is a difference in perceptions of human resource management practices based on educational qualification of nurses, data was collected from both GNM and B. SC. nurses. In the sample 42% of the nurses' possessed B. Sc Nursing qualification and the rest 58% were GNM nurses. Independent sample t test was carried out using SPSS 21.0 to test the hypothesis H2. Hypothesis H2 is stated as follows.

H2: There is significant variation in the perception of HR practices of nurses across their educational classification

**Table 6.4: t-test Results of Educational Qualification and Perceived HRMP**

Dimensions of PHRMP	F	Df	Sig.
Teamwork	4.26	463	0.414
Communication	0.807	463	0.766
Grievance handling & Employee Empowerment	0.679	463	0.637
Workplace resources & Work-life balance	2.832	463	0.485
Compensation & Rewards and Recognition	3.657	463	0.077
Selection, Training & Performance Appraisal	0.848	463	0.737



The above table shows the results of Independent sample t- test done on perceived human resource management practices with educational qualification of nurses. The test output shows that the values are not significant at 5% level. It was observed that there was no significant difference on the perception of various dimensions of human resource management practices across their educational qualification. The hypothesis H2 was not supported.

### **6.3.3 Effect of Years of Experience on PHRMP**

To find out whether there was a significant difference on perceived HRMP based on employees' years of experience in the current hospital data was collected in four categories: 1-2 years, 2-3 years, 3-4 years and greater than 4 years. The number of nurses in the above categories was 34, 160, 102 and 169 respectively. To test hypothesis H3, one-way ANOVA was done using SPSS 21.0. Hypothesis H3 is stated as follows,

H3: There is a significant difference in the perception of HR practices of nurses across their years of experience

The table 6.5 shows the results of one-way ANOVA and it can be seen that the values are not significant at 5% level. Perceptions of nurses on HRMP do not vary across their years of experience. Hence, H3 is not supported in the present study.

**Table 6.5: One-Way ANOVA Results of Years of Experience on Perceived HRMP**

		Sum of Squares	Df	Mean Square	F	Sig.
Teamwork	Between Groups	4.889	4	1.222	3.054	0.077
	Within Groups	184.114	460	0.4		
	Total	189.003	464			
Communication	Between Groups	2.205	4	0.551	0.496	0.738
	Within Groups	510.976	460	1.111		
	Total	513.181	464			
Grievance handling & Employee Empowerment	Between Groups	4.717	4	1.179	1.375	0.241
	Within Groups	394.401	460	0.857		
	Total	399.118	464			
Workplace resources & Work-life balance	Between Groups	3.014	4	0.754	0.984	0.416
	Within Groups	352.386	460	0.766		
	Total	355.401	464			
Compensation & Rewards and Recognition	Between Groups	0.884	4	0.221	0.145	0.965
	Within Groups	698.553	460	1.519		
	Total	699.437	464			
Selection, Training & Performance Appraisal	Between Groups	4.485	4	1.121	1.041	0.385
	Within Groups	495.284	460	1.077		
	Total	499.769	464			

Overall it was found that nurses' perception of human resource management practices do not vary across any of the demographic factors taken in this study. Though the results appear surprising, the cause of converging opinion among various biosocial groups on their perception of human resource management practices may be reliably due to the uniform

quality and standards mandatorily adopted in the implementation of HRM practices across the NABH accredited hospitals that offered the venue of the study.

#### **6.4 Correlation among Study Variables**

The conceptual framework of the present study revolves around five variables. These variables are Perceived Human Resource Management Practices (PHRMP), Psychological Meaningfulness, Psychological Safety, Psychological Availability and Employee Engagement. The independent variable is PHRMP. Psychological Meaningfulness, Psychological Safety and Psychological Availability are the intervening variables. Employee Engagement is the dependent variable. The conceptual framework proposes that perceived human resource management practices are positively associated with psychological meaningfulness, psychological safety and psychological availability. The conceptual model further postulates that the psychological conditions, in terms of, meaningfulness, safety and availability are positively correlated with employee engagement in its own right. The theoretical background of the conceptual framework evidenced that all the variables of the study are positively related to each other. Therefore, before proceeding to the testing the hypotheses derived from the conceptual model it is relevant to check the nature and direction of the association between variables under study.

To assess the nature of relationship between study variables Pearson Correlation was performed using SPSS 21.0.

**Table 6.6: Correlation among Study Variables**

Constructs	1	2	3	4	5
1. PHRMP	1				
2. Psychological Safety	.356**	1			
3. Psychological Meaningfulness	.213**	.410**	1		
4. Psychological Availability	.400**	.565**	.492**	1	
5. Employee Engagement	.185**	.432**	.488**	.425**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

The results show that all the variables are positively related to each other. The correlation coefficients vary from 0.185 to 0.565. As seen from the table the correlation coefficient between psychological safety and psychological availability is 0.565 and the correlation coefficient between the relation PHRMP and employee engagement is 0.185. All the values are significant at .01 levels. Therefore the present study also supports the background literature that testifies a positive correlation among the study variables. Also it can be seen that, the correlation values are below 0.8 and hence multi-collinearity can be ruled out.

### 6.5 Influence of PHRMP on Psychological Meaningfulness

Employees experience meaningfulness when they are given due consideration and respect. Human resource management practices of the organization help employees to route their efficiency, vitality, and know how into the assignments that are capable of achieving business success and competitive edge. The conceptual framework of the study hypothesizes that perceived human resource management practices positively influence psychological meaningfulness. To test the hypothesis

H4, a simple regression was carried out using SPSS 21.0. The hypothesis H4 is stated as follows,

H4: Perception of human resource practices positively influence psychological meaningfulness.

Here, the independent variable is perceived human resource management practices and the dependent variable is psychological meaningfulness. The statistical significance of the regression model shows that  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable psychological meaningfulness.

R and R square are provided in the table below. R value represents simple correlation and is 0.213 ( $p < 0.05$ ), this indicates that there is a positive relation between perceived human resource management practices and psychological meaningfulness. The R square value indicates how much of the total variation in psychological meaningfulness can be explained by perceived human resource management practices. In this case  $R^2$  is 0.045. This means that perceived human resource management practices explain 4.5% of variance in psychological meaningfulness.

**Table 6.7: Simple Regression Analysis Results for Perceived HRMP with Psychological Meaningfulness**

<b>Independent Variable</b>	<b>B value</b>	<b>Beta value</b>	<b>Standard Error</b>	<b>Sig.</b>	<b>R</b>	<b>R Square</b>
Perceived HRMP	0.204	0.213	0.044	.000*	0.213	0.045

\* Indicates items significant at 5% significance level

The above table provides us with the necessary information to predict psychological meaningfulness from perceived human resource

management practices. Thus the hypothesis H4 that perceived human resource management practices positively influence psychological meaningfulness is supported.

The six factors constituting PHRMP are teamwork, communication, grievance handling and employee empowerment, workplace resources and work-life balance, compensation & rewards and recognition and selection, training and performance appraisal. A multiple regression was carried out using these six factors as independent variables and psychological meaningfulness as the dependent variable to know the influence of each of these practices on the dependent variable.

**Table 6.8: Multiple Regression Analysis Results for Dimensions of Perceived HRMP with Psychological Meaningfulness**

Independent Variables	B value	Beta value	Standard Error	Sig.	R	R Square	Durbin Watson
Teamwork	0.093	0.115	0.039	0.017*	0.256	0.054	1.715
Communication	0.026	0.037	0.044	0.558			
Grievance handling & Employee Empowerment	0.063	0.078	0.06	0.294			
Workplace resources & Work-life balance	0.133	0.165	0.054	0.014*			
Compensation & Rewards and Recognition	0.041	0.061	0.046	0.375			
Selection, Training & Performance Appraisal	0.047	0.063	0.05	0.349			

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p < 0.05$ , indicates that overall, the regression model statistically fit and significantly predicts the outcome variable psychological meaningfulness. The Durbin-Watson coefficient is 1.715 showing no autocorrelation. R and R square are provided in the above table. The results reveal that teamwork and workplace resources & work-life balance are the two factors that significantly influenced psychological meaningfulness at 5% significance level.

The present study established that perceived human resource management practices positively influence psychological meaningfulness. The study shows that the employees who perceive human resource management as favourable, experience increased feelings of meaningfulness in their job. He, Luo, & Jiang (2014) found out that human resource practices may help employees' perceive the task to be important and meaningful. Thus the result of the present study is supported by earlier research findings.

Nurses by virtue of their being primary constituents in the shopfloor healthcare system, are likely to experience considerable stress while being on the job. But the satisfaction they have about the HR practices in there organisation seem to have led them to appreciate themselves to be significant, thereby view their job in a broader canvass and find themselves to be playing a very meaningful role in the context of hospitals and, in the process, accept problems and discomforts in a lighter view. On a broader plain it may be inferred that when employees perceive that their employer/organisation are treating them fairly with acceptable

HR practices, they are inclined to take their routines as more interesting and their duties psychologically more meaningful.

## 6.6 Influence of PHRMP on Psychological Safety

Healthy and effective HRM practices help in tapering off the fear and uncertainty of employees by giving them a secure and reliable work environment. Hence the present study upholds the logic that perceived HRM practices is positively related to psychological safety. The conceptual framework of the study hypothesizes that perceived human resource management practices positively influence psychological safety. To test the hypothesis H5, a simple regression was carried out using SPSS 21.0. The hypothesis H5 is stated as follows.

H5: There is a significant influence of perception of human resource practices on psychological safety.

The independent variable is perceived human resource management practices and the dependent variable is psychological safety. The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable psychological safety.

The test results are presented below.

**Table 6.9: Simple Regression Analysis of Perceived HRMP on Psychological Safety**

Independent Variable	B value	Beta value	Standard Error	Sig.	R	R Square
Perceived HRMP	0.437	0.356	0.053	.000*	0.356	0.127

\* Indicates items significant at 5% significance level



R and R square are provided in the above table. R value represents simple correlation and is 0.356 ( $p < .05$ ), this indicates that there is a positive relation between perceived human resource management practices and psychological safety. The R square value indicates how much of the total variation in psychological safety can be explained by perceived human resource management practices. In this case  $R^2$  is 0.127. This means that perceived human resource management practices explain 12.7% of variance in psychological safety.

Thus the hypothesis H5, perceived human resource management practices positively influence psychological safety, is supported in the present study.

The six factors constituting perceived human resource management practices are teamwork, communication, grievance handling and employee empowerment, workplace resources and work-life balance, compensation & rewards and recognition and selection, training and performance appraisal. A multiple regression was carried out using these six factors as independent variables and psychological safety as the dependent variable to know the influence of each of these practices on the dependent variable

**Table 6.10: Multiple Regression Analysis Results for Dimensions of Perceived HRMP with Psychological Safety**

Independent Variables	B value	Beta value	Standard Error	Sig.	R	R Square	Durbin Watson
Teamwork	0.13	0.127	0.046	0.005*	0.438	0.181	1.919
Communication	0.03	0.033	0.052	0.569			
Grievance handling & Employee Empowerment	0.337	0.326	0.072	.000*			
Workplace resources & Work-life balance	0.174	0.168	0.064	0.007*			
Compensation & Rewards and Recognition	0.116	0.135	0.055	0.034*			
Selection, Training & Performance Appraisal	0.217	0.229	0.059	.000*			

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable psychological meaningfulness. The Durbin-Watson coefficient is 1.919 showing no autocorrelation. R and R square are provided in the above table. The results reveal that all the factors of perceived human resource management practices except communication is significantly predicting psychological safety. Among the five dimensions, the strength of the relationship between grievance handling & employee empowerment and psychological safety is very strong followed by selection, training & performance appraisal, workplace resources and work life balance, compensation and rewards &

recognition and teamwork. The beta values are 0.326, 0.229, 0.168, 0.135 and 0.127 respectively.

The present study established that perceived human resource management practices positively influences psychological safety. Binyamin and Carmeli (2010) found out that well maintained human resource management systems help to reduce employees' perceptions of uncertainty and stress by providing them with a clearer and more stable work environment and thus enhances feelings of psychological safety. Thus the finding of the present study is in line with the existing literature.

Structured and favorable HR practices of the hospital will help to develop a good impression about the employer among the employees therein. Nurses' satisfaction with HR practices help to generate feelings of psychological safety in them. Nurses who are working in a stressful environment require support from the organisation to improve their feeling of psychological safety. Such a feeling will undoubtedly encourage them to communicate their concerns and inspire them to come up with novel ideas and great questions which in turn will affect their performance.

### **6.7 Influence of PHRMP on Psychological Availability**

Sound HRP of the organization help employees to apply their whole being in work. HRP can aid employees have a great sense of possessing physical, emotional and cognitive abilities in work. The conceptual framework of the study hypothesizes that perceived human resource management practices positively influence psychological availability. To

test the hypothesis H6, a simple regression was carried out using SPSS 21.0. The hypothesis H6 is stated as follows.

H6: There is a positive influence of perception of human resource practices on psychological availability.

In order to test the influence of perceived human resource management practices on psychological availability, a simple regression was carried out using SPSS 21.0. The independent variable is perceived human resource management practices and the dependent variable is psychological availability.

**Table 6.11: Simple Regression Analysis of Perceived HRMP on Psychological Availability**

<b>Independent Variable</b>	<b>B value</b>	<b>Beta value</b>	<b>Standard Error</b>	<b>Sig.</b>	<b>R</b>	<b>R Square</b>
Perceived HRMP	0.447	0.400	0.048	.000*	0.400	0.16

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model is statistically fit and it significantly predicts the outcome variable psychological availability. R and R square are provided in the model summary table below. R value represents simple correlation and is 0.400 ( $p < .05$ ), this indicates that there is a positive relation between perceived human resource management practices and psychological availability. The R square value indicates how much of the total variation in psychological availability can be explained by perceived human resource management practices. In this case  $R^2$  is 0.160. This means that perceived

human resource management practices explain 16% of variance in psychological availability. Thus the hypothesis H6, perceived human resource management practices positively influence psychological availability is accepted in the present study.

The six factors constituting perceived human resource management practices are teamwork, communication, grievance handling and employee empowerment, workplace resources and work-life balance, compensation & rewards and recognition and selection, training and performance appraisal. A multiple regression was carried out using these six factors as independent variables and psychological availability as the dependent variable to know the influence of each of these dimensions on the dependent variable

**Table 6.12: Multiple Regression Analysis Results for Dimensions of Perceived HRMP with Psychological Availability**

Independent Variables	B value	Beta value	Standard Error	Sig.	R	R Square	Durbin Watson
Teamwork	.182	.195	.042	.000*	.450	.192	1.620
Communication	.092	.113	.047	.05 *			
Grievance handling & Employee Empowerment	.163	.173	.065	.012*			
Workplace resources & Work-life balance	.179	.190	.058	.002*			
Compensation & Rewards and Recognition	.003	.004	.049	.948			
Selection, Training & Performance Appraisal	-.071	-.082	.053	.184			

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p < 0.05$ , indicates that overall, the regression model is statistically fit and significantly predicts the outcome variable psychological availability. The Durbin-Watson coefficient is 1.620 showing no autocorrelation. R and R square are provided in the above table. The results reveal that all the factors of perceived human resource management practices except compensation & rewards and recognition and selection, training & performance appraisal, are significantly predicting psychological availability. Among the four dimensions, the strength of the relationship between teamwork and psychological availability is higher with beta value 0.195.

The present study established that perceived human resource management practices positively influences psychological availability. Gruman and Saks (2011) have pointed out that job resources can enhance psychological availability. Human resource management literature also supports the finding that perception of human resource management is positively related to psychological availability (Binyamin & Carmeli, 2010). Thus the finding of the present study is in line with the existing literature.

Nurses work in physically and emotionally demanding work settings. Human resource departments of the hospitals undeniably play a key role in restoring the physical, emotional and mental resources of nurses and thus making them more confident and available in their work settings. To be precise, human resource management practices focused at developing and maintaining the skill and motivation of nurses' help

them to perceive the human resource management initiative more favourable and positive thereby support them to enhance their availability in work.

It can be summarized that perceived HRM practices positively influence psychological meaningfulness, psychological safety and psychological availability. From the tables 6.9, 6.10, 6.11, it can be inferred that while team work and, workplace resources and work life balance influences all the three psychological conditions, communication influences only psychological availability. Compensation and, rewards and recognition and Selection, Training and performance appraisal affects only psychological safety. Grievance handling and employee empowerment influences both psychological safety and psychological availability.

## **6.8 Influence of Psychological Meaningfulness on Employee Engagement**

Employees who perceived their job to be meaningful make an attempt to be diligent and industrious. Also they are committed to work and display increased levels of work engagement. The present study proposes an association between psychological meaningfulness and employee engagement. Based on the conceptual model the study hypothesised that psychological meaningfulness positively influences employee engagement. To test this hypothesis H7 a simple regression was carried out in SPSS 21.0.

H7: Psychological meaningfulness positively influences employee engagement

The independent variable is psychological meaningfulness and the dependent variable is employee engagement. The output table of simple regression is given below.

**Table 6.13: Simple Regression Analysis of Psychological Meaningfulness on Employee Engagement**

Independent Variable	B value	Beta value	Standard Error	Sig.	R	R Square
Psychological Meaningfulness	0.577	0.488	0.048	.000*	0.488	.239

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable employee engagement. R and R square are provided in the above table. R value represents simple correlation and is 0.488 ( $p < .05$ ), this indicates that there is a positive relation between psychological meaningfulness and employee engagement. The R square value indicates how much of the total variation in employee engagement can be explained by psychological meaningfulness. In this case  $R^2$  is 0.239. This means that psychological meaningfulness explain 23.9% of variance in employee engagement.

Thus the hypothesis H7, psychological meaningfulness positively influences employee engagement is supported in the present study.



The present study established that psychological meaningfulness positively influences employee engagement. Psychological meaningfulness emerged as a significant predictor of employee engagement, consistent with previous research, highlighting the importance of perceiving work as meaningful for promoting engagement (Kahn, 1990; May et al., 2004; Saks, 2006). Thus the finding of the present study is in line with the existing literature.

Absence or lack of psychological meaningfulness is associated to employees' feeling that little was expected from them in their work. Lack of meaningfulness is also associated with the feeling that they have little opportunity to voice their ideas. Hence the level of their engagement in work starts lessening. Nurses spend a majority of their working time in interacting with care seekers. Bellah, Madsen, Sullivan, Swidler and Tipton (1985) asserted that the effect of meaning of work is especially visible in an occupation where individuals are constantly interacting with various social systems within an organisation. Nurses constitute the vital part of healthcare and unfortunately very often they are affected by high levels of job stress, which adversely impact their meaningfulness and in turn engagement. The critical thing for employers to understand here is that for people to be fully engaged, they should be able to see a meaning and return on for their personal investment at work.

## **6.9 Influence of Psychological Safety on Employee Engagement**

A sense of psychological safety helps employees to take up challenging tasks and express their authentic selves at work. Employees also feel comfortable to engage their interests and passion in work and

experiment innovative and unique way of doing it. The conceptual model of the present study hypothesised that psychological safety positively influences employee engagement. To test this hypothesis H8, a simple regression was carried out in SPSS 21.0. The hypothesis H8 is stated as follows.

H8: There is a significant influence of psychological safety on employee engagement

The independent variable is psychological safety and the dependent variable is employee engagement. The output table of simple regression is given below.

**Table 6.14: Simple Regression Analysis of Psychological Safety on Employee Engagement**

Independent Variable	B value	Beta value	Standard Error	Sig.	R	R Square
Psychological Safety	.399	.432	.039	.000*	.432	.187

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable employee engagement. R and R square are provided in the model summary table below. R value represents simple correlation and is 0.432 ( $p < 0.05$ ), this indicates that there is a positive relation between psychological safety and employee engagement. The R square value indicates how much of the total variation in employee engagement can be explained by psychological safety. In this case  $R^2$  is

0.187. This means that psychological safety explains 18.7% of variance in employee engagement.

Thus the hypothesis H8, psychological safety positively influences employee engagement is supported in the present study.

The present study established that psychological safety positively influences employee engagement. The relation between psychological safety and engagement is receiving increasing support from academicians. Higher the psychological safety experienced by the nurses higher is their engagement. This research finding is in line with the previous research literature (Kahn, 1990; May et al., 2004).

As the basic duty of nurses is to care of the sick, it unavoidably generates high levels of stress and tension. The task of paying attention to and caring for patients with empathy and compassion is anticipated to be extended to everyone no matter when. Nurses are often confronted with the most concealed subject – death – every day. Their jobs often include affectionate contact with care seekers, including performing personal tasks that people would normally shy away from and consider disgusting. There is no doubt that the task of caring for others can be stressful and unglamorous and that healthcare organisations are often not very favourable places to work. Space to think, to review, problem-solve and learn from experience should be provided by hospital management in all care settings. Such mechanisms provide a place to unburden, to think about the unconscious processes at work and in turn help to enhance psychological safety and thus engagement and provide quality care.

## 6.10 Influence of Psychological Availability on Employee Engagement

Psychological availability is the characteristic of having the physical, emotional, and cognitive resources to do a job. Psychologically available person can direct his/her energies to work and become more engaged. Thus the conceptual model of the study hypothesised that psychological availability positively influences employee engagement. To test this hypothesis H9, a simple regression was carried out with SPSS 21.0. The independent variable is psychological availability and the dependent variable is employee engagement. The result of simple regression is given below.

**Table 6.15: Simple Regression Analysis of Psychological Availability on Employee Engagement**

Independent Variable	B value	Beta value	Standard Error	Sig.	R	R Square
Psychological Availability	.432	.425	.043	.000*	.425	.181

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable employee engagement. R and R square are provided in the model summary table below. R value represents simple correlation and is 0.425 ( $p < .05$ ), this indicates that there is a positive relation between psychological availability and employee engagement. The R square value indicates how much of the total variation in employee engagement can be explained by psychological availability.

In this case  $R^2$  is 0.181. This means that psychological availability explains 18.1% variance in employee engagement. Thus the hypothesis H9 that psychological availability positively influences employee engagement is supported.

The present study established that psychological availability positively influences employee engagement. Past researches have established a positive relationship between psychological availability and work engagement (Kahn, 1990; May et al., 2004). Higher the psychological availability experienced by the nurses higher is their engagement. This research finding is consistent with the results of previous research literature.

Nursing profession involves a hard emotional, physical, and mental work, but it is also very rewarding and satisfying. The strains of the job can in course of time lead to physical, mental and emotional exhaustion. Nurses need to provide quality care but when they feel they do not have the resources it may spill over to their work and result in low engagement. Thus establishing the positive relationship between psychological availability and engagement empirically with a sample of nurses in Kerala has significance.

### **6.11 Influence of Psychological Safety on Psychological Meaningfulness**

An employee can find meaning in their job only when they feel secure and work in a non threatening environment. Hence the study, based on the conceptual model hypothesised that psychological safety positively influences psychological meaningfulness. To test this hypothesis H10, a

simple regression was carried out in SPSS 21.0. The hypothesis H10 is stated as follows.

H10: Psychological safety positively influences psychological meaningfulness

The independent variable is psychological safety and the dependent variable is psychological meaningfulness. The result table of simple regression is given below.

**Table 6.16: Simple Regression Analysis of Psychological Safety on Psychological Meaningfulness**

<b>Independent Variable</b>	<b>B value</b>	<b>Beta value</b>	<b>Standard Error</b>	<b>Sig.</b>	<b>R</b>	<b>R Square</b>
Psychological Safety	.321	.410	.033	.000*	.410	.168

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable psychological meaningfulness. R and R square are provided in the model summary table below. R value represents simple correlation and is 0.410 ( $p < .05$ ), this indicates that there is a positive relation between psychological safety and psychological meaningfulness. The R square value indicates how much of the total variation in psychological meaningfulness can be explained by psychological safety. In this case  $R^2$  is 0.168. This means that psychological safety explain 16.8% of variance in psychological meaningfulness. Thus the hypothesis H10, psychological safety positively influences psychological meaningfulness is supported in this study.

The present study established that psychological safety positively influences psychological meaningfulness. Only in a safe and non-threatening environment employees can find meaning and motivation in their job so as to meet the needs and the goals of the organization (Gould-Williams & Davies, 2005). The finding of this study is consistent with the views of other researchers.

### **6.12 Influence of Psychological Safety on Psychological Availability**

In an unpredictable and anxious environment psychological availability descends and the individual channels the energies towards finding certainty and security. A sense of safety makes them more available in work. Hence the study proposed a relation between psychological safety and psychological availability. Based on the conceptual model the study hypothesised that psychological safety positively influences psychological availability. To test this hypothesis H11, a simple regression was carried out in SPSS 21.0. Hypothesis H11 is stated as follows.

H11: There is significant influence of psychological safety on psychological availability

The independent variable is psychological safety and the dependent variable is psychological availability. The output table of simple regression is given below.

**Table 6.17: Simple Regression Analysis of Psychological Safety on Psychological Availability**

Independent Variable	B value	Beta value	Standard Error	Sig.	R	R Square
Psychological Safety	.514	.565	.035	.000*	.565	.319

\* Indicates items significant at 5% significance level

The statistical significance of the regression model shows that  $p = 0.00$ ,  $p < 0.05$ , indicates that overall, the regression model statistically significantly predicts the outcome variable psychological meaningfulness. R and R square are provided in the model summary table below. R value represents simple correlation and is 0.565 ( $p < .05$ ), this indicates that there is a positive relation between psychological safety and psychological availability.

The R square value indicates how much of the total variation in psychological availability can be explained by psychological safety. In this case  $R^2$  is 0.319. This means that psychological safety explains 31.9% of variance in psychological availability. Thus the hypothesis H11, psychological safety positively influences psychological availability is supported.

The present study established that psychological safety positively influences psychological availability. In uncertain and stressful situations, psychological availability plunges, because the individual directs energies toward finding certainty and a feeling of security (Binyamin & Carmeli, 2010). The finding of this study is consistent with the views of other researchers.



From Table 6.16 and Table 6.17, it is clear that psychological safety is positively related to psychological meaningfulness, and psychological safety is positively and significantly related to psychological availability. Only in secure and non-threatening environment nurses are able to find meaning in their job and work confidently so as to meet the needs of their patients and their families and the goals of the organization. Ensuring that the nurses are given competency mastery, and rewards for successfully combating the stressful work conditions would itself influence their feelings of psychological safety. Human resource management practices aimed at enhancing the skills, opportunities and motivation help employees experience enhanced feelings of psychological safety which in turn increases their psychological meaningfulness and psychological availability.

In the present study in order to correct the problem of negative skew, the logarithmic transformation was applied to the skewed variables.

As Chughtai (2010) states that:

In order to correct the problem of negative skews, the logarithmic transformation was applied to the skewed variables. In this regard, Vandenberg (2009, personal communication) recommends that one should run the regression models twice – once without transformations and the second time with it to see if there are any differences in the proposed relationships. (p. 325)

Following this recommendation, all the regression models were tested without transformations. It was found that there were no

differences in the results of the proposed relationships. The results of these regression tests (without transformation) are provided in the Appendix 10.

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## VALIDATION OF CONCEPTUAL MODEL & TESTS OF MEDIATION

<b>C</b> <b>o</b> <b>n</b> <b>t</b> <b>e</b> <b>n</b> <b>t</b> <b>s</b>	7.1	<i>PLS Structural Equation Modelling - An Overview</i>
	7.2	<i>Analysis of the Measurement Model of the Study</i>
	7.3	<i>Reliability and Unidimensionality at First Stage Measurement Level</i>
	7.4	<i>Reliability of Constructs in the 2<sup>nd</sup> Stage Measurement Model</i>
	7.5	<i>Convergent validity at 1<sup>st</sup> stage model</i>
	7.6	<i>Convergent Validity Check at the Second Order Level</i>
	7.7	<i>Discriminant Validity Check at the First Order Level</i>
	7.8	<i>Discriminant Validity at Second Order Level</i>
	7.9	<i>Analysis of Structural Model</i>
	7.10	<i>Mediation Effect of Psychological Safety on PHRMP-Psychological Meaningfulness Relationship</i>
	7.11	<i>Mediation Effect of Psychological Safety on PHRMP- Psychological Availability Relationship</i>
	7.12	<i>Mediation effect of Psychological Safety on PHRMP----Employee Engagement relationship</i>
	7.13	<i>Mediation effect of Psychological Meaningfulness on PHRMP- Employee Engagement relationship</i>
	7.14	<i>Mediation effect of Psychological Availability on PHRMP- Employee Engagement relationship</i>
	7.15	<i>Mediation Effect of Psychological Safety on PHRMP-Psychological Meaningfulness Relationship employing Baron and Kenny (1986) procedure</i>
	7.16	<i>Mediation Effect of Psychological Safety on PHRMP- Psychological Availability Relationship Employing Baron and Kenny (1986) Procedure</i>
	7.17	<i>Mediation effect of Psychological Safety on PHRMP----Employee Engagement relationship employing Baron and Kenny (1986) procedure</i>
	7.18	<i>Mediation effect of Psychological Meaningfulness on PHRMP----Employee Engagement relationship employing Baron and Kenny (1986) procedure</i>
	7.19	<i>Mediation effect of Psychological Availability on PHRMP----Employee Engagement relationship employing Baron and Kenny (1986) procedure</i>
	7.20	<i>Analysis of Common Method Variance</i>

*This chapter presents the empirical analysis of the conceptual model of the study. Tests of mediation are also provided in this chapter. Conceptual model was tested using Warp-PLS 4.0. The procedure for conceptual model analysis using PLS method is provided next. The chapter concludes with the analysis of common method variance.*

The conceptual model proposed for the study subsumes five constructs predominantly psychological in nature, namely perceived HRM practices, psychological meaningfulness, psychological safety and psychological availability and the outcome variable employee engagement. The constructs have been configured in such a way that psychological safety is assumed to mediate the relationship between perceived human resource management practices in the organisation on one side and employees' experienced psychological meaningfulness and psychological availability on the other. The conceptual model further postulates that psychological meaningfulness, psychological safety, and psychological availability are directly affecting employee engagement, which has been construed as the outcome phenomenon. Studies have shown that structural equation models can test mediation efficiently than linear regressions (Iacobucci, Saldanha & Deng, 2007; Baluch, Salge & Piening, 2013). Therefore, the present study followed the guidelines by Iacobucci et al. (2007) for examining the mediation hypotheses by means of SEM. The mediation hypotheses were tested after statistically validating the conceptual framework of the study.

Rigdon (1998) states that within the scholarly works, structural equation modeling (SEM) has taken up a prominent role. There are two types of SEM: covariance based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). PLS-SEM is also known as PLS path modeling. The conceptual framework validation and mediation hypotheses testing of the present study were carried out by means of partial least-squares (PLS) SEM using the software Warp PLS 4.0. PLS-SEM has been proposed as a

component based estimation procedure which is different from the classical covariance base approach (Vinzi, Chin, Henseler, & Wang, 2010). This technique maximises the variance explained in the dependent variables under study. PLS is the preferred method when the research objective is prediction of constructs (Hair, Hult, Ringle, & Sarstedt, 2016). PLS is regarded as the preferred method for studies when testing complex models (large number of variables and/or indicators per variable) (Henseler, Ringle & Sinkovics, 2009). In the light of the information presented so far, PLS emerges as the appropriate tool for the current study.

### **7.1 PLS Structural Equation Modelling - An Overview**

PLS path modelling is regarded as a variance based structural equation modelling (SEM) technique and is also known as component based SEM (Hair et al., 2016). PLS- SEM generally makes no assumptions about data distributions. It is widely assumed that PLS does not require a multivariate normal distribution to provide accurate and robust parameter estimates (Fornell & Bookstein 1982; Chin 1998). In situations where theory is less developed the researchers should consider the use of PLS SEM as an alternative to SEM. This is particularly true if the primary objective of applying structural modelling is prediction and explanation of target constructs (Rigdon, 2012).

The overall complexity of structural model has little influence on the sample size requirements for PLS-SEM. The reason is that PLS-SEM uses OLS regressions to estimate the model's partial regression relationships. PLS-SEM is a good choice when sample size is small (Chin & Newsted,

1999; Reinartz et al., 2009). PLS-SEM is very effective method in estimating complex models with large number of variables (Garthwaite, 1994). Also, PLS estimation is robust against multicollinearity (Cassel, Hackl, & Westlund, 1999).

Based on the above discussion it is clear that PLS turn up as the apt statistical tool for the present research. The primary objective of the study is to test the influence of nurses' perception of human resource practices and psychological factors in enhancing engagement. Hence the present study is prediction-oriented rather than theory confirmation. Thus PLS method is the right structural equation modeling method for the study. The fundamental notion and modes in PLS-SEM are discussed below followed by the conceptual model analysis using PLS. PLS analysis was carried out by Warp PLS 4.

A PLS path model consists of two elements. First, there is a structural model (also called the inner model in the context of PLS-SEM) that represent constructs. The structural model also displays the relationships (paths) between constructs. Second there are measurement models (also referred to as the outer models in PLS-SEM) that displays the relationship between the constructs and the indicator variables. PLS is similar to ordinary least-squares regression with regard to output and assumptions (path coefficients, significance levels and  $R^2$  values can be interpreted in the same way), but allows multiple hypotheses to be tested simultaneously (Hulland 1999; Chin, Marcolin & Newsted, 2003).

## **7.2 Analysis of the Measurement Model of the Study**

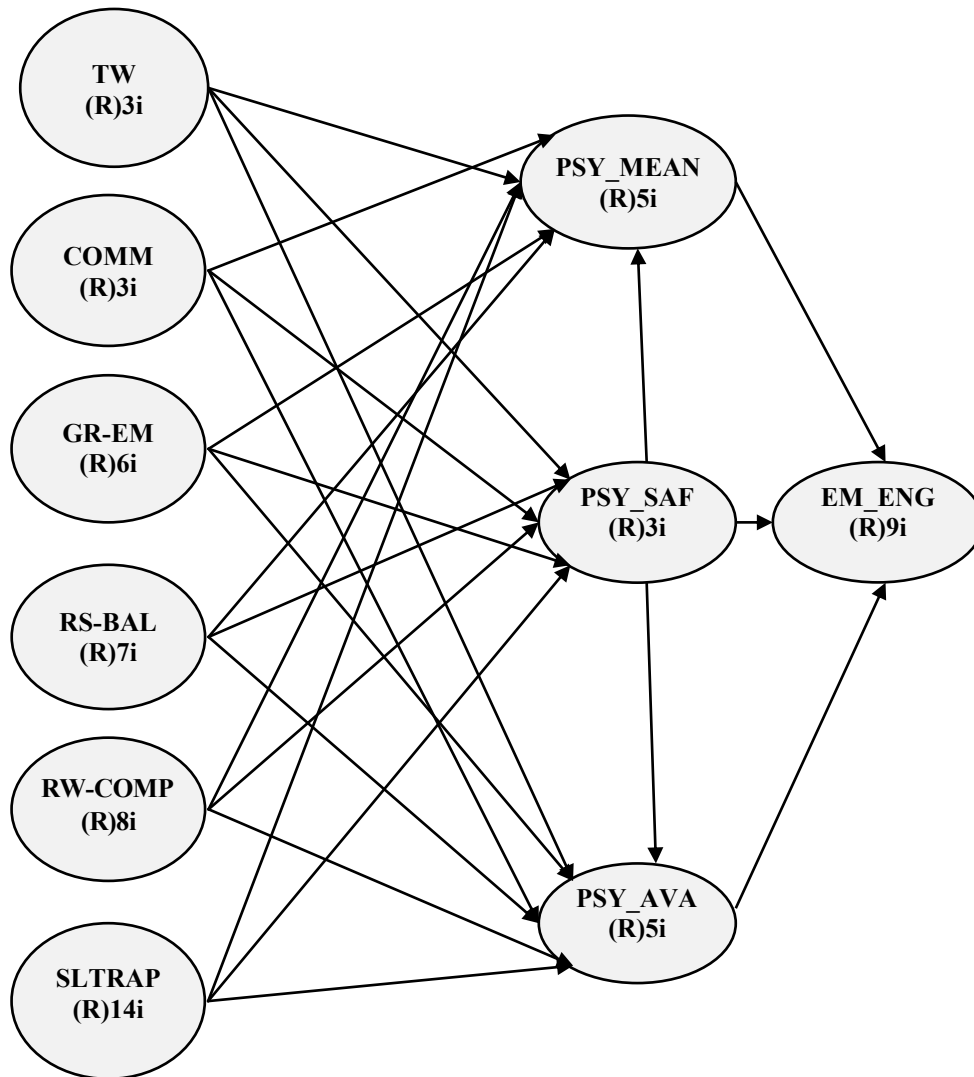
There are five latent constructs in the conceptual framework of the study. These are measured in reflective mode where the construct is assumed to cause the indicators to vary. Perception of human resource management practices is measured using 41 statements. Psychological meaningfulness, psychological safety, psychological availability and employee engagement are measured by five, three, five and nine indicators respectively. Human resource management practices is a second order construct with six latent dimensions –(i) Selection, Training & Performance appraisal (ii) rewards and compensation (iii) workplace resources and work life balance (iv) grievance handling and employee empowerment (v) communication and (vi) teamwork. These latent dimensions were stated as reflective indicators of their second order construct of perceived human resource management practices (PHRMP). PLS requires manifest variables for all latent constructs in the model. Therefore higher order constructs cannot be included directly in the model. Higher order constructs in PLS are modelled using either of the two approaches mentioned in PLS literature. The two approaches are repeated indicators approach and two-stage approach.

In repeated indicators approach, first order dimensions of a construct is measured by their manifest indicators and then, these indicators of all first order dimensions are repeated as indicators of the second order construct (Hair, Hult, Ringle, & Sarstedt, 2016). Thus the indicators of first order dimensions are repeated twice in the model. Though this approach is easy to implement, it works well when the

number of indicators is equal for all the first order dimensions (Chin, Marcolin, & Newsted, 2003; Hair et al., 2016). The two stage approach combines the repeated indicators approach with an analysis of the latent variable scores. In the first stage, the repeated indicators approach is used for obtaining the latent variable scores. These scores are saved in the data set as additional variables for further analysis in the second stage. Then in the second stage the latent variable scores serve as manifest variables for the second order constructs (Hair, Sarstedt, Ringle, & Gudergan, 2017). In this study, two-stage approach is used for modelling human resource management practices, since the number of indicators for the first order dimensions is not equal. Also, two-stage approach has been used in literature for reflective higher order constructs (Agarwal & Karahanna, 2000). In the present study, human resource management practice construct is modelled as a second order construct consisting of six first order latent dimensions. Model is specified as reflective at both first order and second order levels.

Fist stage and second stage measurement models of the study are discussed in detail below.

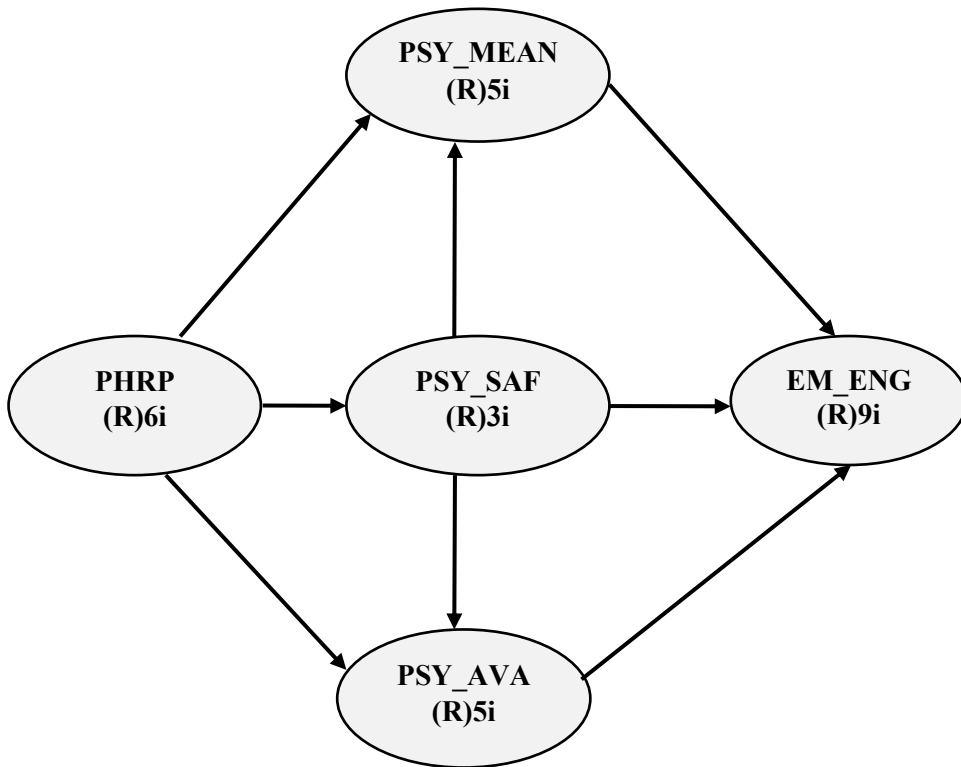




TW – teamwork, COMM – Communication, GR-EM- Grievance Handling and Employee Empowerment, RS-BA- workplace resources & work life balance, RW-COMP – Rewards and recognition and compensation, SL TRAP- Selection, Training and Performance appraisal, PSY\_MEAN – Psychological Meaningfulness, PSY-AVA- Psychological Availability, PSY SAF- Psychological Safety, EE ENG- Employee Engagement

**Figure 7.1: First Stage Measurement Model of the Study**

As explained in the previous paragraphs, the first stage model is formed with just the first-order dimensions and their measured indicators. As can be seen in the figure, first stage model is same as the conceptual model of the study in every way except that perceived human resource management practices (PHRMP) are replaced by their first order dimensions.



**Figure 7.2: Second Stage Measurement Model**

The diagram represents the second order level measurement model. Here the second order construct human resource management practices are modeled as measured by their first order latent dimensions as the

reflective indicators. Latent variable scores obtained in the first stage are used as observed values for the first order dimensions.

### **7.3 Reliability and Unidimensionality at First Stage Measurement Level**

This section deals with the analysis of the measurement model. The measurement model in PLS-SEM is evaluated in terms of reliability, unidimensionality, convergent validity and discriminant validity. The table below presents the reliability measures of variables at the first stage. In the first stage of the measurement model of the study, there are ten measurement blocks corresponding to the ten latent variables of the model. Establishing unidimensionality of each measurement block in the model is the first requirement for checking the measurement-validity, followed by discriminant validity and convergent validity.

For assessing unidimensionality of measurement blocks in a PLS model, literature suggests the use of three different methods - Cronbach's alpha, composite reliability (Dillon-Goldstein's rho), and principal component analysis (PCA) (Tenenhaus, et al., 2005; Vinzi et al., 2010). Cronbach's alpha is a classical index in reliability analysis and represents a strong tradition in SEM community as a measure of internal consistency. Threshold values suggested for Cronbach's alpha and composite reliability is 0.7 (Fornell & Larcker, 1981; Nunnally, 1978; Nunnally & Bernstein, 1994). Using PCA of a measurement block, unidimensionality is established if Eigen value of the first factor extracted in the correlation matrix is greater than one and that of the second factor is less than one (Tenenhaus, et al., 2005; Vinzi et al., 2010).

**Table 7.1: Reliability Measures (First Stage Measurement Level)**

<b>Latent Variables</b>	<b>Composite Reliability</b>	<b>Cronbach's alpha</b>
Teamwork	.855	.744
Communication	.857	.746
Grievance Handling and Employee Empowerment	.887	.846
Workplace resources and Work life balance	.911	.885
Compensation and Rewards & Recognition	.928	.911
Selection, Training and Performance Appraisal	.954	.948
Psychological Meaningfulness	.849	.777
Psychological Safety	.797	.716
Psychological Availability	.877	.823
Employee Engagement	.906	.882

As the table shows Cronbach's alpha values and composite reliability values are above 0.7, the minimum suggested in literature. Composite reliability, which is considered by Chin (1998) as a better measure of unidimensionality than Cronbach's alpha. Composite reliability measures for all constructs are found to be higher than 0.7. Thus, from the figures in the above table, all measurement blocks in the first order measurement model can be considered unidimensional.

The unidimensionality of measurements was assessed using the PCA method also. The result shows that (See Appendix 4) for all the constructs, the first factor extracted has Eigen value over 1. Also, the second factor extracted in every case has value below 1. Therefore unidimensionality of the measurement blocks is confirmed.

## 7.4 Reliability of Constructs in the 2<sup>nd</sup> Stage Measurement Model

**Table 7.2: Reliability of Constructs in the 2<sup>nd</sup> Stage Measurement Model**

Latent Variables	Perceived HRM Practices	Psychological meaningfulness	Psychological safety	Psychological availability	Employee Engagement
<b>Composite Reliability</b>	0.888	0.849	0.797	0.877	0.906
<b>Cronbach's alpha</b>	0.843	0.777	0.716	0.823	0.882

All the variables at the second stage level have Cronbach's alpha and composite reliability in the acceptable limits.

## 7.5 Convergent validity at 1<sup>st</sup> stage model

Factorial validity of the measurement model is established in PLS by convergent and discriminant validities (Gefen & Straub, 2005). Convergent validity of the scale is captured by PLS through the measure of average variance extracted (AVE) of each construct. It indicates the construct's variance explained by all its indicators together. For convergent validity assessment, the AVE threshold frequently recommended for acceptable validity is 0.5 (Fornell & Larcker, 1981). An AVE of 0.5 signifies that 50% of the construct's variation is explained by its measurement block consisting of all indicators. Table 7.3 shows the AVE values of all latent variables.

**Table 7.3: Average Variance Extracted of First Stage Measurement Model (Convergent Validity)**

<b>Latent Variables</b>	<b>Average Variance Extracted</b>
Teamwork	.664
Communication	.668
Grievance Handling and Employee Empowerment	.567
Workplace resources and Work life balance	.594
Compensation and Rewards & Recognition	.619
Selection, Training and Performance Appraisal	.601
Psychological Meaningfulness	.530
Psychological Safety	.568
Psychological Availability	.589
Employee Engagement	.520

AVE values of all constructs were found to be higher than 0.5, thus confirming the convergent validity of the constructs.

Another check for convergent validity is at the indicator level where all indicators should load on their respective latent constructs with significant p values (Gefen & Straub, 2005). The result of convergent validity check at the indicator level is provided in Appendix 5. The outer indicator loadings values are significant at .001 level (see Appendix 5). This confirms convergent validity at indicator level for the first order constructs.

## 7.6 Convergent Validity Check at the Second Order Level

Convergent validity at the second order level is evidenced by AVE values of the constructs as given in the table.

**Table 7.4: Convergent Validity - AVE Values of Constructs (2<sup>nd</sup> Order Level)**

Latent Variables	Perceived HRM Practices	Psychological meaningfulness	Psychological safety	Psychological availability	Employee Engagement
Average variance extracted	.580	.530	.568	.589	.520

An AVE of 0.5 signifies that 50% of the construct's variation is explained by its measurement block consisting of all indicators. AVE values of all constructs were found to be higher than 0.5, thus confirming the convergent validity of the constructs.

The indicator level check of convergent validity (second order) reveals that all loadings are significant at .001 levels (see Appendix 6). Thus convergent validity is found satisfactory at the indicator level for the second order model too.

Thus the convergent validity for the measurement models at first order and second order levels are established by acceptable AVE criteria and the significant indicator loadings on latent constructs.

## 7.7 Discriminant Validity Check at the First Order Level

Discriminant validity of scales used in a model is established by checking whether the square root of AVE of a construct is greater than the inter-construct correlation between the construct concerned and other constructs present in the model (Fornell & Larcker, 1981). Another check for discriminant validity is at the indicator level. Here, absence of cross loadings of indicators indicates discriminant validity, i.e., indicators should indeed load on their respective latent constructs only. In the following paragraphs, discriminant validity of the measurement model is assessed at both construct-level and indicator-level. First order level discriminant validity is presented first followed by the analysis for the second order level model.

**Table 7.5: Comparison of AVE and Inter-Construct Correlations (Discriminant Validity Check – first order level)**

Constructs	1	2	3	4	5	6	7	8	9	10
1.TW	<b>0.815</b>	0.273	0.25	0.168	0.145	0.324	0.132	0.184	0.273	0.156
2.COM	0.273	<b>0.817</b>	0.616	0.476	0.513	0.447	0.176	0.258	0.363	0.119
3.GR_EM	0.25	0.616	<b>0.753</b>	0.653	0.604	0.642	0.217	0.376	0.36	0.245
4.RES_BAL	0.168	0.476	0.653	<b>0.771</b>	0.695	0.592	0.23	0.322	0.32	0.224
5.REW_COM	0.145	0.513	0.604	0.695	<b>0.787</b>	0.613	0.176	0.285	0.261	0.113
6.SELTRPA	0.324	0.447	0.642	0.592	0.613	<b>0.775</b>	0.123	0.178	0.223	0.135
7.PSY_MEA	0.132	0.176	0.217	0.23	0.176	0.123	<b>0.728</b>	0.474	0.57	0.557
8.PSY_SAF	0.184	0.258	0.376	0.322	0.285	0.178	0.474	<b>0.754</b>	0.628	0.545
9.PSY_AVA	0.273	0.363	0.36	0.32	0.261	0.223	0.57	0.628	<b>0.767</b>	0.53
10.EM_ENG	0.156	0.119	0.245	0.224	0.113	0.135	0.557	0.545	0.53	<b>0.721</b>

**Note:** Square roots of average variances extracted (AVEs) shown on diagonal.



Square root of AVE values of every construct is compared with inter-construct correlations of all constructs. The diagonal entries in Table 7.5 (in bold letters) are the square root of AVE values of the constructs. These are greater than any inter-construct correlations as shown. Therefore it is concluded that the measurement model at the first order level possesses discriminant validity.

Cross loadings of latent variables were also checked to establish discriminant validity at the indicator level (see Appendix 7). Therefore, considering the loadings and cross loadings of the indicators, as shown in the table (see Appendix 7) it can be concluded that discriminant validity is established at the indicator level. The above analysis provides ample evidence discriminant validity of the measurement model at the first stage. The analysis now proceeds to examine the validity at second stage measurement model.

### 7.8 Discriminant Validity at Second Order Level

**Table 7.6: Correlations among latent variables with sq. rts. of AVEs**

<b>Constructs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.PHRMP	<b>.762</b>	.234	.356	.391	.216
2.PSY_MEA	.234	<b>0.728</b>	0.474	0.57	0.557
3.PSY_SAF	.356	0.474	<b>0.754</b>	0.628	0.545
4.PSY_AVA	.391	0.57	0.628	<b>0.767</b>	0.53
5.EM_ENG	.216	0.557	0.545	0.53	<b>0.721</b>

The square roots of average variances extracted (AVEs) are shown diagonally in bold digits.

It is clear from the table that the square root of AVE is greater than the inter-construct correlations. Hence discriminant validity is established.

Cross loadings matrix at second order level also confirms the discriminant validity of the measurement model at second order level (see Appendix 8). All indicators have cleanly loaded on their own latent variables as shown in Appendix 8. Cross loadings are not substantial in any case and are substantially lower than the indicator loading. Therefore, the cross loadings analysis can be taken as a further evidence for discriminant validity of the model.

The analysis has provided good results for reliability, unidimensionality, discriminant validity and convergent validity. This indicates soundness of the measurement model. Hence analysis can be taken to the next stage of structural model evaluation.

## **7.9 Analysis of Structural Model**

This section presents the detailed analysis of the structural model which represents the hypothesised relationships among the variables under study. A PLS model is primarily assessed by the weights of the latent constructs and the path coefficients on similar lines of a regression analysis (Chin, 1998). The structural model evaluation is given by the PLS path diagram. Path coefficients indicate whether the hypothesised relationships among the constructs exist or not and if they do, they are in the predicted directions.

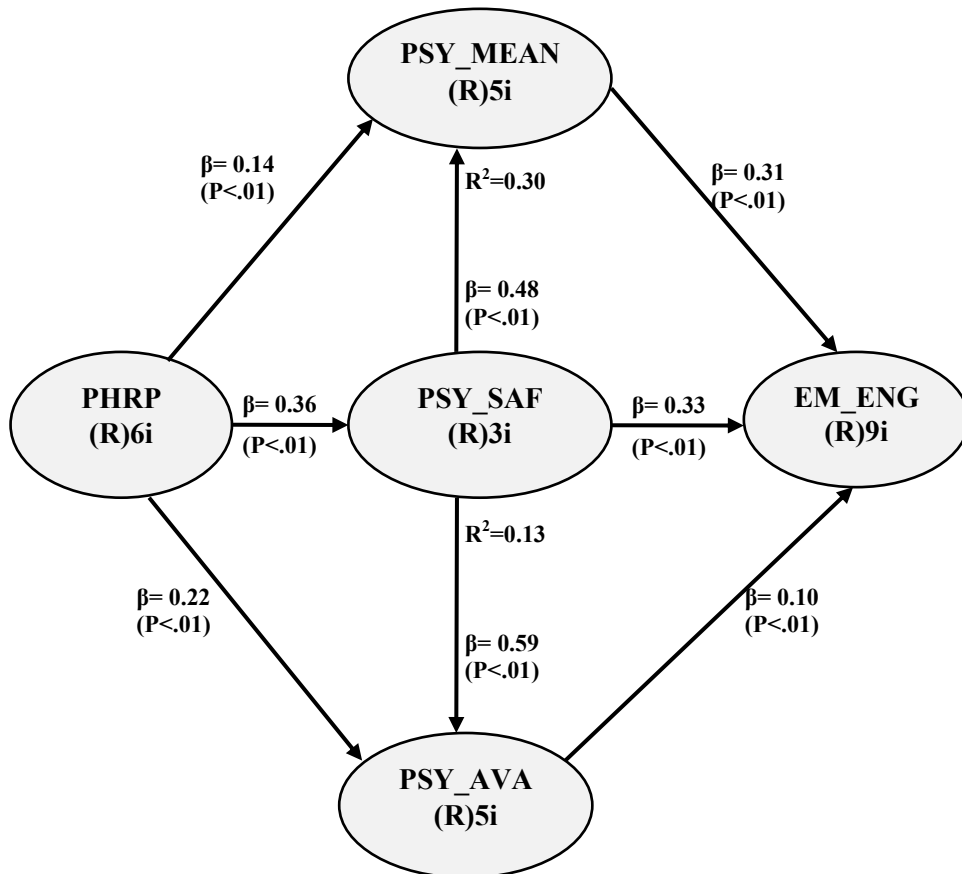


Figure 7.3: Structural Model Representing Hypothesized Relationships

Path coefficients and p-values of the hypothesized paths are given below in the table

**Table 7.7: Path Coefficients and P-Values of the Hypothesized Paths**

Hypothesized Paths	Path Coefficients	Significance Level
HRP → PSY MEAN	0.144	<0.01
HRP → PSY SAFETY	0.364	<0.01
HRP → PSY AVAILABILITY	0.222	<0.01
PSY MEAN → ENGAGEMENT	0.312	<0.01
PSY SAFETY → ENGAGEMENT	0.328	<0.01
PSY AVAIL → ENGAGEMENT	0.102	<0.01
PSY SAFETY → PSY MEAN	0.483	<0.01
PSY SAFETY → PSY AVAILABILITY	0.587	<0.01

As shown in the table all hypothesized paths are significant.

Analysis of structural model shows that Perceived Human resource management Practices positively influenced psychological meaningfulness ( $\beta=.144$ ), psychological safety ( $\beta=0.364$ ) and psychological availability ( $\beta=0.222$ ) at  $P<.01$ . Results show that psychological meaningfulness ( $\beta=0.312$ ,  $p<.01$ ), psychological safety ( $\beta=0.328$ ,  $p<.01$ ) and psychological availability ( $\beta=0.102$ ,  $p=.01$ ) positively influenced employee engagement.

**Table 7.8: R-square Results**

<b>Endogenous Constructs</b>	<b>Psychological Meaningfulness</b>	<b>Psychological Safety</b>	<b>Psychological availability</b>	<b>Employee Engagement</b>
<b>R square</b>	.298	0.132	0.482	0.439

According to Chin (1998),  $R^2$  of 0.67 is termed as substantial, 0.33 as moderate and 0.19 as weak. One has to take into account the number of predictor variables in the model also for assessing the effect of the model on the outcome variable. Hensler, Ringle, and Sinkovics (2009) opines that if the number of exogenous variables for an endogenous construct is only one or two, even a ‘moderate’ effect should be considered substantial. In the present study employee engagement is the most important dependent construct. R square or the weight of the endogenous construct employee engagement is 0.439 and this indicates that the model explains 44% variance in employee engagement. The weight of other endogenous variables, psychological meaningfulness, psychological safety and psychological availability are .298, .132 and .482 respectively. The present model explains 29.8% and 13.2% variance in psychological meaningfulness and psychological safety respectively. The highest explanatory power of the model is for the construct psychological availability which is 48.2%.

In order to lend further support to the path significance, Cohen’s f square values were also computed. F-Square is a measure of the effect size of a path. The criteria suggested by Cohen for interpreting the effect size is given as follows: Small effect size: 0.02, medium effect size: 0.15 and large effect size: 0.35 (Cohen, 1988).

The results are given below

**Table 7.9: F Square Values of Hypothesized Paths**

Hypothesized Paths	F square	Interpretation
HRP → PSY MEAN	0.043	Small
HRP → PSY SAFETY	0.132	Small
HRP → PSY AVAILABILITY	0.093	Small
PSY MEAN → ENGAGEMENT	0.183	Medium
PSY SAFETY → ENGAGEMENT	0.197	Medium
PSY AVAIL → ENGAGEMENT	0.059	Small
PSY SAFETY → PSY MEAN	0.255	Medium
PSY SAFETY → PSY AVAILABILITY	0.389	Large

Effect size of the path PSY SAFETY → PSY AVAILABILITY was found to be the largest (.389). The paths PSY MEAN - ENGAGEMENT, PSY MEAN – ENGAGEMENT and PSY SAFETY – PSY MEAN showed medium effect sizes. All other paths showed small effect sizes.

### 7.9.1 Predictive Value of the Model

Hair et.al (2011) recommends the use of Stone-Geisser's  $Q^2$  value for finding the predictive relevance of the model. A  $Q^2$  value greater than zero indicates the exogenous variables' predictive ability for the relevant endogenous construct (Hair et al; 2011, Chin, 1998). The  $Q$  square values are given below.

**Table 7.10: Q square values of endogenous constructs**

Endogenous Constructs	Psychological Meaningfulness	Psychological Safety	Psychological Availability	Employee Engagement
Q square	0.295	0.133	0.479	0.441

Results shows  $Q^2$  values of all endogenous constructs are greater than zero. Hence, together with the significant path coefficients and R square,  $Q^2$  also helps in confirming the predictions of the conceptual model of the study.

### **7.9.2 Goodness of Fit (GoF)**

Tennenhaus (2004) suggested a goodness of fit index, which can vary from 0 to 1, with a value of 1 indicating perfect fit. Wetzels et al. (2009) propose the following threshold values for the GoF: small = 0.1, medium = 0.25, and large = 0.36. The GoF of the present study is .434. Hence, the present model possesses large goodness-of-fit (GoF).

### **7.9.3 Model Fit and Quality Indices**

Average path coefficient (APC) = 0.318,  $P < 0.001$

Average R-squared (ARS) = 0.338,  $P < 0.001$

Average adjusted R-squared (AARS) = 0.335,  $P < 0.001$

Average block VIF (AVIF) = 1.764, acceptable if  $\leq 5$ , ideally  $\leq 3.3$

Average full collinearity VIF (AFVIF) = 1.736, acceptable if  $\leq 5$ , ideally  $\leq 3.3$

Tennenhaus GoF (GoF) = 0.434, small  $\geq 0.1$ , medium  $\geq 0.25$ , large  $\geq 0.36$

Sympson's paradox ratio (SPR) = 1.000, acceptable if  $\geq 0.7$ , ideally = 1

R-squared contribution ratio (RSCR) = 1.000, acceptable if  $\geq 0.9$ , ideally = 1

Statistical suppression ratio (SSR) = 1.000, acceptable if  $\geq 0.7$

Nonlinear bivariate causality direction ratio (NLBCDR) = 1.000, acceptable if  $\geq 0.7$

It can be observed from the above data that, the model fit and quality indices are in the acceptable limits.

### **7.10 Mediation Effect of Psychological Safety on PHRMP- Psychological Meaningfulness Relationship**

As described earlier, the presents study proposes that psychological safety mediates the relationship between perceived human resource management practices and psychological meaningfulness, and between perceived human resource management practices and psychological availability. The present study followed the guidelines by Iacobucci, Saldanha and Deng (2007) for testing mediation hypotheses by means of SEM. The guidelines of Iacobucci, Saldanha and Deng (2007) for testing mediation are presented in the Appendix 9.

The conceptual framework of the study hypothesizes that the relationship between perceived human resource management practices and psychological meaningfulness is mediated by psychological safety. The hypothesis H12 is stated as follows

H12: Psychological safety mediates the relationship between perception of human resource management practices and psychological meaningfulness.

The steps of Iacobucci, Saldanha and Deng (2007) were followed for testing the mediation hypothesis by using SEM. The output of PLS model showed that there is a significant relationship between employees' perception of HRMP and psychological safety ( $\beta= 0.36, p< .01$ ), as well as between psychological safety and psychological meaningfulness ( $\beta= 0.48, p< .01$ ), providing some evidence for mediation.



A Sobel test (Sobel, 1982) was conducted. The fact that both the Sobel test statistic ( $z = 5.34, p < 0.05$ ) and the direct effect between employees' perception of HR practices and psychological meaningfulness are statistically significant ( $\beta = .14, p < .01$ ) indicates that the relationship between PHRMP and psychological meaningfulness is partially mediated by psychological safety (Iacobucci et al. 2007).

An alternative model was checked in such a way that psychological safety is the independent variable, psychological availability is the mediating variable and perceived human resource management practices as the dependent variable. The Tenenhaus GoF (Goodness of Fit) of the alternate model is 0.302, which is less than the Tenenhaus GoF (0.432) of the proposed model. Thus the alternate model is less preferred than the proposed mediation model. Thus the hypothesis H12, psychological safety mediates the relationship between perception of human resource management practices (PHRMP) and psychological meaningfulness, is supported in the present study.

### **7.11 Mediation Effect of Psychological Safety on PHRMP-Psychological Availability Relationship**

The conceptual framework of the study hypothesizes that the relationship between perceived human resource management practices and psychological availability is mediated by psychological safety. The hypothesis H13 is stated as follows

H13: The relationship between perception of human resource management practices and psychological availability is mediated by psychological safety.

The steps of Iacobucci, Saldanha and Deng (2007) were followed for testing the mediation hypothesis by using SEM. The output of PLS model showed that there is a significant relationship between employees' perception of human resource management practices and psychological safety ( $\beta = 0.36$ ,  $p < .01$ ), as well as between psychological safety and psychological availability ( $\beta = 0.59$ ,  $p < .01$ ), providing some evidence for mediation.

A Sobel test (Sobel, 1982) was conducted. The fact that both the Sobel test statistic ( $z = 5.83$ ,  $p < 0.05$ ) and the direct effect between employees' perception of HR practices and psychological availability are statistically significant ( $\beta = .22$ ,  $p < .01$ ) indicates that the relationship between perceived human resource management practices and psychological availability is partially mediated by psychological safety (Iacobucci et al. 2007).

An alternative model was checked in such a way that psychological safety is the independent variable, perceived human resource management practices as the mediating variable and psychological availability as the dependent variable. The Tenenhaus GoF (Goodness of Fit) of the alternate model is 0.375, which is less than the Tenenhaus GoF (0.432) of the proposed model. Thus the alternate model is less preferred than the proposed mediation model. Thus the hypothesis H13, psychological safety mediates the relationship between perception of human resource management practices and psychological availability, is supported in the present study.

### **7.12 Mediation Effect of Psychological Safety on PHRMP- Employee Engagement Relationship**

The conceptual framework of the study hypothesizes that the relationship between perceived human resource management practices and employee engagement is mediated by psychological safety. The hypothesis H15 is stated as follows

H14: The relationship between perceived human resource management practices and employee engagement is mediated by psychological safety.

The steps of Iacobucci, Saldanha and Deng (2007) were followed for testing the mediation hypothesis by using SEM. The output of PLS model showed that there is a significant relationship between employees' perception of human resource management practices and psychological safety ( $\beta = 0.364$ ,  $p < .01$ ), as well as between psychological safety and employee engagement ( $\beta = 0.561$ ,  $p < .01$ ), providing some evidence for mediation.

A Sobel test (Sobel, 1982) was conducted and the test statistic was found significant ( $z = 5.13$ ,  $p < 0.05$ ). Also the direct effect between employees' perception of HR practices and employee engagement are statistically significant ( $\beta = .097$ ,  $p < .01$ ). This indicates that the relationship between perceived human resource management practices and employee engagement is partially mediated by psychological safety (Iacobucci et al. 2007).

An alternative model was checked in such a way that psychological safety as the independent variable, perceived human resource management practices as the mediating variable and employee engagement as the dependent variable. The Tenenhaus GoF (Goodness of Fit) of the alternate model is 0.224, which is less than the Tenenhaus GoF (0.371) of the proposed model. Thus the alternate model is less preferred than the proposed mediation model. Thus the hypothesis H14, psychological safety mediates the relationship between perceived human resource management practices and employee engagement is supported in the present study.

### **7.13 Mediation Effect of Psychological Meaningfulness on PHRMP- Employee Engagement relationship**

The conceptual framework of the study hypothesizes that the relationship between perceived human resource management practices and employee engagement is mediated by psychological meaningfulness. The hypothesis H15 is stated as follows

H15: The relationship between perceived human resource management practices and employee engagement is mediated by psychological meaningfulness.

The steps of Iacobucci, Saldanha and Deng (2007) were followed for testing the mediation hypothesis by using SEM. The output of PLS model showed that there is a significant relationship between employees' perception of human resource management practices and psychological meaningfulness ( $\beta = 0.3$ ,  $p < .01$ ), as well as between psychological meaningfulness and employee engagement ( $\beta = 0.553$ ,  $p < .01$ ), providing some evidence for mediation.

A Sobel test (Sobel, 1982) was conducted and the test statistic was found significant ( $z = 5.85$ ,  $p < 0.05$ ). Also it was found that the direct effect between employees' perception of HR practices and employee engagement is statistically significant ( $\beta = .12$ ,  $p < .01$ ). This indicates that the relationship between perceived human resource management practices and employee engagement is partially mediated by psychological meaningfulness (Iacobucci et al. 2007).

An alternative model was checked in such a way that psychological meaningfulness is the independent variable, perceived human resource management practices as the mediating variable and employee engagement as the dependent variable. The Tenenhaus GoF (Goodness of Fit) of the alternate model is 0.190, which is less than the Tenenhaus GoF (0.349) of the proposed model. Thus the alternate model is less preferred than the proposed mediation model. Thus the hypothesis H15, psychological meaningfulness mediates the relationship between perceived human resource management practices and employee engagement is supported in the present study.

#### **7.14 Mediation effect of Psychological Availability on PHRMP-Employee Engagement relationship**

The conceptual framework of the study hypothesizes that the relationship between perceived human resource management practices and employee engagement is mediated by psychological availability. The hypothesis H16 is stated as follows

H16: The relationship between perceived human resource management practices and employee engagement is mediated by psychological availability.

The steps of Iacobucci, Saldanha and Deng (2007) were followed for testing the mediation hypothesis by using SEM. The output of PLS model showed that there is a significant relationship between employees' perception of human resource management practices and psychological availability ( $\beta = 0.421$ ,  $p < .01$ ), as well as between psychological availability and employee engagement ( $\beta = 0.541$ ,  $p < .01$ ), providing some evidence for mediation.

A Sobel test (Sobel, 1982) was conducted and the test statistic was found significant ( $z = 5.66$ ,  $p < 0.05$ ). Also it was found that the direct effect between employees' perception of HR practices and employee engagement is statistically significant ( $\beta = .089$ ,  $p < .01$ ). This indicates that the relationship between perceived human resource management practices and employee engagement is partially mediated by psychological availability (Iacobucci et al. 2007).

An alternative model was checked in such a way that psychological availability as the independent variable, perceived human resource management practices as the mediating variable and employee engagement as the dependent variable. The Tenenhaus GoF (Goodness of Fit) of the alternate model is 0.241, which is less than the Tenenhaus GoF (0.378) of the proposed model. Thus the alternate model is less preferred than the proposed mediation model. Thus the hypothesis H16, psychological availability mediates the relationship between perceived human resource

management practices and employee engagement is supported in the present study.

As an additional robustness check for mediation Baron and Kenny (1986) procedure was also employed. Baron and Kenny's (1986) procedure, is the most prevalent mediation test in organisational and management research.

### **7.15 Mediation Effect of Psychological Safety on PHRMP-Psychological Meaningfulness Relationship employing Baron and Kenny (1986) procedure**

Baron and Kenney (1986) approach was followed for testing mediation. The method followed is described in details below. Baron and Kenney approach is one of the most widely used procedure to test the effect of a mediator on a relationship between an independent variable and a dependent variable. Baron and Kenney procedure confirms mediating influence when the following conditions are satisfied in a relationship.

- a) Independent variable should have significant effect on the mediator
- b) The mediator should have significant effect on the dependent variable
- c) Independent variable should have a direct significant effect on dependent variable.
- d) The effect of independent variable on the dependent variable when the effect of mediator is also controlled should be less than its direct effect on dependent variable.

There is perfect or total mediation when the direct path is non-significant in a mediation model.

The table below gives the path coefficients for analysing the mediation-effect of psychological safety on the relationship between perceived human resource management practices and psychological meaningfulness.

**Table 7.11: Path Coefficients with Psychological Safety**

Hypothesized Paths	Path coefficients	Significance level
Perceived HRMP -----Psychological meaningfulness	0.144	<0.001
Perceived HRMP -----Psychological safety	0.364	<0.001
Psychological safety-----Psychological meaningfulness	0.483	<0.001

**Table 7.12: Path Coefficient without Psychological Safety**

Hypothesized Path	Path coefficients	Significance level
Perceived HRMP-----Psychological meaningfulness	0.3	<0.001

From the above tables it is clear that all the conditions for testing the mediation influence of psychological safety in the relationship between perceived human resource management practices and psychological meaningfulness are satisfied. The direct effect of perceived human resource practices on psychological meaningfulness reduced but remained significant while controlling for the mediator, psychological safety. Hence, as per Baron & Kenny’s (1986) guidelines it is interpreted that



psychological safety partially mediates the relationship between perceived human resource management practices and psychological meaningfulness.

### **7.16 Mediation Effect of Psychological Safety on PHRMP- Psychological Availability Relationship Employing Baron and Kenny (1986) Procedure**

**Table 7.13: Path coefficients with psychological safety**

Hypothesized Paths	Path coefficients	Significance level
Perceived HRMP-----Psychological availability	0.22	<0.001
Perceived HRMP-----Psychological Safety	0.36	<0.001
Psychological Safety-----Psychological availability	0.59	<0.001

**Table 7.14: Path coefficients without psychological safety**

Hypothesized Path	Path coefficients	Significance level
Perceived HRMP-----Psychological availability	0.42	<0.001

The results of the above tables reveal that all the conditions for checking the mediation effect of psychological safety on the perceived human resource practices to psychological availability linkage has been met. The direct effect of HRP on psychological availability,  $\beta=.42$ ,  $p< .001$ , reduced to  $\beta= .222$ ,  $p< .001$ , while controlling for the mediator psychological safety. Hence it can be concluded that psychological safety partially mediates the relationship between perceived human resource practices and psychological availability.

### 7.17 Mediation effect of Psychological Safety on PHRMP- Employee Engagement relationship employing Baron and Kenny (1986) procedure

**Table 7.15: Path coefficients with psychological safety**

Hypothesized Paths	Path coefficients	Significance level
Perceived HRMP-----Employee engagement	0.097	<0.05
Perceived HRMP-----Psychological Safety	0.364	<0.05
Psychological Safety-----Employee Engagement	0.561	<0.05

**Table 7.16: Path coefficients without psychological safety**

Hypothesized Path	Path coefficients	Significance level
Perceived HRMP-----Employee Engagement	0.233	<0.05

The results of the above tables reveal that all the conditions for checking the mediation effect of psychological safety on the perceived human resource practices to employee engagement linkage has been met. The direct effect of HRP on employee engagement,  $\beta = .233$ ,  $p < .05$ , reduced to  $\beta = .097$ ,  $p < .05$ , while controlling for the mediator psychological safety. Hence it can be concluded that psychological safety partially mediates the relationship between perceived human resource practices and employee engagement.

### 7.18 Mediation Effect of Psychological Meaningfulness on PHRMP- Employee Engagement Relationship Employing Baron and Kenny (1986) Procedure

Table 7.17: Path coefficients with psychological meaningfulness

Hypothesized Paths	Path coefficients	Significance level
Perceived HRMP-----Employee engagement	0.12	<0.05
Perceived HRMP-----Psychological Meaningfulness	0.3	<0.05
Psychological Meaningfulness-----Employee Engagement	0.553	<0.05

Table 7.18: Path coefficients without psychological meaningfulness

Hypothesized Path	Path coefficients	Significance level
Perceived HRMP-----Employee Engagement	0.233	<0.001

The results of the above tables reveal that all the conditions for checking the mediation effect of psychological safety on the perceived human resource practices to psychological availability linkage has been met. The direct effect of HRP on employee engagement,  $\beta = .233$ ,  $p < .05$ , reduced to  $\beta = .12$ ,  $p < .05$ , while controlling for the mediator psychological meaningfulness. Hence it can be concluded that psychological meaningfulness partially mediates the relationship between perceived human resource practices and employee engagement.

### 7.19 Mediation Effect of Psychological Availability on PHRMP- Employee Engagement Relationship Employing Baron and Kenny (1986) Procedure

**Table 7.19: Path coefficients with psychological availability**

Hypothesized Paths	Path coefficients	Significance level
Perceived HRMP-----Employee engagement	0.089	<0.05
Perceived HRMP-----Psychological Availability	0.421	<0.05
Psychological Availability-----Employee Engagement	0.541	<0.05

**Table 7.20: Path coefficients without psychological availability**

Hypothesized Path	Path coefficients	Significance level
Perceived HRMP-----Employee Engagement	0.233	<0.05

The results of the above tables reveal that all the conditions for checking the mediation effect of psychological availability on the perceived human resource practices to employee engagement linkage has been met. The direct effect of HRP on employee engagement,  $\beta = .233$ ,  $p < .05$ , reduced to  $\beta = .089$ ,  $p < .05$ , while controlling for the mediator psychological availability. Hence it can be concluded that psychological availability partially mediates the relationship between perceived human resource practices and employee engagement.

As such, the Baron and Kenny (1986) procedure provides additional support for mediation hypotheses H12, H13, H14, H15 & H16.

It was proved that psychological safety partially mediated the above relationships. The results revealed that human resource management practices influenced psychological meaningfulness and psychological availability indirectly via psychological safety. Though previous literatures have not tested the above links explicitly, from a practical and realistic perspective, this finding assumes special significance among the nurses working the healthcare sector of Kerala. Stress is a commonly arising episode in the work life of a nurse. Nurses regularly witness the pain and suffering of others and work under demanding conditions in stressful environment. Also nurses voice concern and moral distress about the deterioration of healthcare work environments which again adds to physical and mental exhaustion. Attention to psychologically safe work place is often dismissed as unworthy of resource allocation in healthcare today, especially when those resources are in actuality intended to heighten motivation and development of essential skills. This is because of the mistaken perception that effective workplace support or unambiguous or stable environment does not affect an organization's financial health. Only in secure and non- threatening environment nurses are able to find meaning in their job and work confidently so as to meet the needs of their patients and their families and the goals of the organization.

The present study established that the psychological meaningfulness, availability and psychological safety partially mediate the relationship between PHRMP and employee engagement in its own right.

## **7.20 Verification for Common Method Variance**

Since all the constructs were measured using self-reporting method by a single questionnaire administered at the same time, the measurement is susceptible to common method variance. According to Podsakoff and Organ (1986), common method variance is a serious issue in organisational research and proof of validity of the measures cannot guarantee its absence from a measurement scheme. Therefore it was considered necessary for the present study to investigate this aspect closely so as to ensure the validity of measurement of variables. In the present study Common method variance was analysed through Harman's single factor method and correlation method (Pavlou, Liang, & Xue, 2007).

### **7.20.1 Harman's One Factor Test**

Harman's one factor test is one of the most widely-used tests by researchers to analyse common method variance. First, Harman's one-factor test was conducted by including all items in a principal components factor analysis (Podsakoff et al. 2003). Proof for common method bias occurs when a single factor accounts for most of the covariance. Unrotated factor analysis, using principal component analysis of all 63 items, together, yielded 12 components with Eigen values greater than 1. The total variance explained by the 12 components is 66.95%. The first factor extracted was not found to account for substantial variance in the variables of interest (16.3%). Therefore Harman Single Factor Test rules out the presence of common method variance.

### 7.20.2 Correlation of Latent Variables

The correlation matrix obtained from PLS path modelling is shown below. Inter-correlation of constructs greater than 0.9 which is considered as a signal of common method bias.

**Table 7.21: Correlation of Latent Variables**

Constructs	1	2	3	4	5	6	7	8	9	10
1.TW	1									
2.COM	0.273	1								
3.GR_EM	0.25	0.616	1							
4.RES_BAL	0.168	0.476	0.653	1						
5.REW_COM	0.145	0.513	0.604	0.695	1					
6.SELTRPA	0.322	0.468	0.642	0.609	0.643	1				
7.PSY_MEA	0.116	0.182	0.201	0.211	0.157	0.115	1			
8.PSY_SAF	0.184	0.258	0.376	0.322	0.285	0.185	0.494	1		
9.PSY_AVA	0.273	0.363	0.36	0.32	0.261	0.241	0.589	0.628	1	
10.EM_ENG	0.156	0.119	0.245	0.224	0.113	0.14	0.587	0.545	0.53	1

The correlation matrix does not show any highly correlated constructs. Since even the highest inter-correlation is below .90, the threshold recommended by Pavlou et al., (2007), common method bias is not a major concern for the present study. Common method bias in measurement which is a potential problem in self-reporting studies in social science was diagnosed using two different post-hoc statistical methods and all the two methods reached the same inference that common method bias does not exist in the measurement model of the present study.

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**FINDINGS, DISCUSSION & CONCLUSION**

<b>C</b> <b>o</b> <b>n</b> <b>t</b> <b>e</b> <b>n</b> <b>t</b> <b>s</b>	8.1 Findings
	8.2 Discussion of Findings
	8.3 Theoretical Implications
	8.4 Practical and Managerial Implications
	8.5 Scope for further research
	8.6 Conclusion

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*This chapter summarizes the findings of the present study followed by the discussions of findings in detail. The chapter also presents its implications for theory, practice and management. The conclusions drawn from the study are also presented.*

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The major objective of the study was to explore the relationships among perceived human resource management practices, psychological meaningfulness, psychological safety, psychological availability and employee engagement of nurses working in the NABH accredited hospitals in Kerala. Variation in employee engagement based on selected demographic characteristics was also explored here. The study was based on primary data collected through a questionnaire survey conducted among the nurses in these selected hospitals. Analysis of data was carried out by employing appropriate statistical methods including structural equation modeling. The summary of findings as per the data analysis and interpretation are presented below followed by detailed discussion of findings.

## 8.1 Findings

- The demographic profile of the nurses' reveals that literally vast majority (about 90%) of the nurses are females. Majority of nurses are below thirty years of age. 58% of the respondents are GNM nurses. 93% of the nurses are having more than two years of experience in the present hospital.

The researcher analysed and found that there is no significant difference in employee engagement across female and male nurses. Also, in the present study the representation of male and female nurses were highly disproportionate, hence an analysis based on gender appeared unwarranted. This study did not include testing of gender influence on subsequent variables in the model because nurses claimed that as they go through a kind of value oriented training and experience in their career, they develop a commonality of outlook towards life situations which erased any substantial different gender wise. The conceptual model adopted for the study precludes any analysis of the effect of biosocial variables. The information on the systemic variables of the respondents have been collected and used to explain the variation if any in their perception of HR practices to only answer the curiosity of the researcher. To sum up, the professional nurses working in the NABH accredited hospitals in Kerala are mostly young females, relatively stable in their employment with more than two years of experience in the

same agency, but divided in their educational background with almost equal representation of graduates and non-degree holders in nursing.

- Nurses perceive that the HRM practices implemented in their respective organisations are favourable. Their levels of psychological meaningfulness, psychological safety, psychological availability, and employee engagement are commendable as the scores exceed the average levels.
- It was found that nurses' perception of human resource management practices does not vary across any of the demographic factors taken in this study. Though the results appear intriguing, the cause of homogenous perceptions of human resource management practices among various biosocial groups may be attributed to the quality and standards in the implementation of HRM practices maintained across the NABH accredited hospitals.
- Analysis to identify and capture the contextually relevant perceptions of the nurses on HRM practices revealed six dimensions of the practices followed in hospitals namely, those related to team work, communication, grievance handling – employee empowerment, work-place resources and work-life balance, compensation-rewards and recognition and Selection-training and performance appraisal. The nurses had highest regard towards efforts aimed at Teamwork followed by Work-place resources and Work-life balance, Communication,

Grievance handling – employee empowerment, Selection-training – performance appraisal and Compensation –rewards and recognition. The above HR practices were the employee engagement initiatives of the selected hospitals. These initiatives were a part of the budget policy of the selected healthcare organizations.

The study revealed that the nurses experienced the psychological conditions of meaningfulness, safety and availability in varying degrees while being on-the-job. The linkages between the nurses’ perception of HR practices and their psychological conditions were concluded as under.

- Perception of human resource practices positively influence psychological meaningfulness.
- Nurses’ perception of human resource practices positively influences their psychological safety.
- There is a positive influence of perception of human resource practices on psychological availability.

Nurses’ levels of engagement as employees of their respective hospitals were ascertained and the attestations of hypothesised relationships among the variables in the conceptual framework adopted for the study were explored to reach the following conclusions.

- Higher the psychological meaningfulness, higher the employee engagement.
- There exists a positive relationship between psychological safety and employee engagement

- Psychological availability and employee engagement are positively correlated.
- Psychological safety and psychological meaningfulness are positively related.
- Higher the psychological safety higher is the psychological availability among the nurses.

The dynamics involved in the linkage between human resource practices and the dimensions of psychological conditions of meaningfulness and availability have also been brought to manifestation by explicating the mediating role of psychological safety.

- Psychological safety mediates the relationship between perception of human resource management practices and psychological meaningfulness.
- The relationship between perception of human resource management practices and psychological availability is mediated by psychological safety.

The relationship between perceived human resource management practices and employee engagement is mediated by three psychological conditions. The dynamics involved in the linkage between human resource practices and employee engagement have also been brought to manifestation by explaining the mediating roles of psychological meaningfulness, psychological safety and psychological availability.

- Psychological meaningfulness partially mediated the relationship between perceived human resource practices and employee engagement.
- The relationship between human resource practices and employee engagement is partially mediated by psychological safety.
- Psychological availability partially mediated the relationship between perceived human resource practices and employee engagement.

## **8.2 Discussion of Findings**

This study sheds lights on how perceived HRP enables employee engagement in workplace. The findings suggest that employees' perception of human resource management practices is a key mechanism for cultivating engagement in workplace. It was found that employees' perception of human resource management practices influenced psychological meaningfulness, psychological availability and psychological safety. Also it was found that psychological meaningfulness, psychological availability and psychological safety experienced by nurses are positively correlated with their employee engagement.

The present study established a positive link between nurses' perception of human resource management practices and psychological meaningfulness. The study shows that nurses' who perceive human resource management as favourable, experience increased feelings of meaningfulness in their job. Though the relationship between perceived

human resource management practices and psychological meaningfulness is not extensively addressed in the human resource management literature, there are a few studies available to support this finding (Jie, 2013). Nurses constitute the primary part of healthcare and unfortunately they often experience high levels of job stress, which negatively impact their meaningfulness. Satisfaction with human resource practices help employees to view their role more broadly and they become more willing to take on duties beyond their job description and this helps to incorporate meaning and variety in their work. Also when employees' feel that the organisation treats them fairly in term of human resource management practices employees' are likely to view their work as challenging, interesting and meaningful.

The link between perceived human resource practices and psychological safety feeling of nurses was examined in the present study. The analysis revealed that nurses' perception of human resource management practices of the hospital significantly and positively influenced the psychological safety of nurses. The above finding is in line with other findings in the existing literature (Binyamin & Carmeli, 2010). Well maintained human resource management systems help to reduce employees' perceptions of uncertainty and stress by providing them with a clearer and more stable work environment and thus enhances feelings of psychological safety. In most of the hospitals nurses' are overworked, stressed out and frustrated by the demands of the care seekers. In such a work environment it is imperative that they receive support of the organisation to meet the competing demands and perform the work efficiently and effectively. So when human resource departments create a

positive work environment by incorporating appropriate human resource management practices, employees' perceive the workplace to be favourable and experience increased feelings of psychological safety.

The current study examined the association between perception of human resource management practices and psychological availability and found that nurses' perception of human resource management practices significantly and positively influence their psychological availability. Psychological availability is the quality of possessing the physical, emotional and mental resources to do a job, i.e., the readiness or confidence of a person to do the work effectively (May et al., 2004). Human resource management literature renders supports to the result that perception of human resource management is positively related to psychological availability (Binyamin & Carmeli, 2010; Bakker & Demerouti, 2010). Nurses work in physically and emotionally demanding work environment. Human resource departments play a cardinal role in replenishing the physical, emotional and mental resources of nurses and thus making them more confident and available in their work. Specifically, human resource management practices aimed at developing and maintaining the skill and motivation of nurses help them to perceive the human resource management initiative more favourable and thereby aid them to enhance their availability.

The results of the present study revealed a positive relationship between psychological meaningfulness and employee engagement. This outcome implies that that nurses' who experience more psychological meaningfulness are more engaged than those nurses who experience less



meaningfulness. Psychological meaningfulness emerged as a predictor of engagement, consistent with previous research, highlighting the importance of perceiving work as meaningful for promoting engagement (Kahn, 1990; May et al., 2004; Saks, 2006). A lack of meaningfulness is connected to employees' feeling that little was asked or expected of their selves and that there was little room for them to give or receive in work role performances and hence the level of their engagement decreases. Nurses spend a majority of their working time in interacting with care seekers. Bellah, Madsen, Sullivan, Swidler and Tipton (1985) asserted that the effect of meaning of work is especially visible in an occupation where individuals are constantly interacting with various social systems within an organisation. Nurses constitute the primary part of healthcare and unfortunately they often might experience high levels of job stress, which negatively impact their meaningfulness and in turn engagement. The critical thing for employers to understand here is that for people to be fully engaged, they should be able to see a meaning and return on for their personal investment at work.

The influence of psychological safety on employee engagement was tested empirically and it was found the psychological safety significantly predicted engagement. The link between psychological safety and engagement has received growing support from researchers. Higher the psychological safety experienced by the nurses higher is their engagement. This research finding is in line with the previous research literature (Kahn, 1990; May et al., 2004). Kark and Carmeli (2009) suggested if individuals feel psychologically safer, they may feel personally engaged in their work without fear of negative consequence to

self-image, status or career. Psychological safety is believed to lead to engagement, because it reflects one's belief that a person can employ himself/herself without fear of negative consequences. As the primary task of nurses is care of the sick and involves dealing with highly vulnerable people, babies, children, sick adults, the elderly and disabled, it inevitably creates high levels of stress, tension, fear and distress. The task of caring for others with empathy and compassion is expected to be offered to everyone, at all times. In addition, they are confronted with the most hidden, taboo subject – death – every day. Their jobs often involve intimate contact with patients, including performing personal tasks that people would normally shy away from and consider disgusting, frightening and repellent. There is no doubt that the task of caring for others can be stressful, endless and unglamorous and that healthcare organisations are often not very supportive places to work. The sheer complexity of the job will challenge even the most well managed hospital and it is impossible to avoid feelings of failure and dependence. Space to think, to review, problem-solve and learn from experience should be provided by management in all care settings. Such mechanisms provide a place to unburden, to think about the unconscious processes at work and in turn help to enhance psychological safety and thus engagement and provide quality care.

The study also examined the relationship between psychological availability and engagement and it was found that psychological availability predicted engagement. The more psychologically available the employee more is their job engagement. Psychological availability, or the characteristic of having the physical, emotional and mental resources to do a job, is

essential to engagement of nurses. As educators, caretakers and lifelines, nurses take on several roles as they routinely care for sick people day in and day out. Nursing is a hard emotional, physical, and mental work, but it is also very rewarding and satisfying. Tension and turmoil come within the territory of being a nurse. Lack of social support, inability to control one's work schedule or assignments, a chaotic or monotonous job, work-life imbalance, shortage of staffs are some of the reasons for experiencing decreased psychological availability. The strains of the job can eventually lead to physical, mental and emotional exhaustion. Nurses need to provide quality care but when they feel they do not have the resources it may spill over to their work and result in low engagement. Thus establishing the positive relationship between psychological availability and engagement empirically with a sample of nurses in Kerala has significance.

The present study also examined the mediating role of psychological safety in the perceived human resource management practices to psychological availability relationship and perceived human resource management practices to psychological meaningfulness relationship and it was proved that psychological safety partially mediated the above relationships. The results revealed that human resource management practices influenced psychological meaningfulness and psychological availability indirectly via psychological safety. Though previous literatures have not tested the above links explicitly, from a practical and realistic perspective, this finding assumes special significance among the nurses working the healthcare sector of Kerala. Stress is a commonly arising episode in the work life of a nurse. Nurses regularly witness the

pain and suffering of others and work under demanding conditions in stressful environment. Also nurses voice concern and moral distress about the deterioration of healthcare work environments which again adds to physical and mental exhaustion. Attention to psychologically safe work place is often dismissed as unworthy of resource allocation in healthcare today, especially when those resources are in actuality intended to heighten motivation and development of essential skills. This is because of the mistaken perception that effective workplace support or unambiguous or stable environment does not affect an organization's financial health. Only in secure and non- threatening environment nurses are able to find meaning in their job and work confidently so as to meet the needs of their patients and their families and the goals of the organization. Ensuring that the nurses are provided education, competency mastery, and rewards for effectively tackling the stressful work conditions would itself dramatically influence their feelings of psychological safety. Based on the above logic the above propositions were tested empirically and were proved as predicted. Human resource management practices aimed at enhancing the skills, opportunities and motivation help employees experience enhanced feelings of psychological safety which in turn increases psychological meaningfulness and psychological availability. Thus the present study reveals that psychological safety is a mechanism through which human resource management practices influences psychological meaningfulness and psychological availability of nurses.

The present study examined the mediating role of psychological conditions in the relationship between perceived human resource

management practices and employee engagement. The three psychological conditions in terms of psychological meaningfulness, psychological availability and psychological safety partially mediated the relationships between human resource management practices and employee engagement. Kahn's theory of psychological conditions is integrated with the human resource management practices literature to understand the black box between human resource practices and employee engagement. The first path, psychological meaningfulness, explains the influence of human resource management practices on employees' perception of value and virtue of work, hence motivating employees to engage in their job. The second path is through psychological safety. It spotlights another psychological outcome of perceived human resource management practices, i.e., disposition for self-expression without fear of negative consequences which in turn is important for engagement. The third path, psychological availability, links human resource management practices to engagement by understanding how perceived human resource management practices shape employees' perception of the personal capacity in terms of their physical, cognitive and emotional resources to engage in their work role.

### **8.3 Theoretical Implications**

The focus of the study was to provide a richer and deeper understanding of the linkages between human resource practices and employee engagement. Results revealed that perception of human resource management practices influenced employee engagement indirectly through psychological meaningfulness, psychological availability and psychological

safety. At a broad level, this study contributes to the strategic HRM literature by shedding light on the process through which employees' perceptions of HR systems are linked to employee engagement. Despite recent research that advances our knowledge of employee engagement very few studies have been undertaken that explore the impact of HR system perceptions on engagement. The present study also addressed the relative shortage of literature on psychological antecedents of employee engagement in the Indian context by examining the role of psychological meaningfulness, psychological safety and psychological availability.

Furthermore, the study contribute to the small but growing body of research on HRM in the hospital realm that demonstrates a positive relationship between nurses' perception of human resource management practices and their engagement. By explaining the need and significance of nurse engagement and in healthcare setting, new theoretical insights are provided into the underlying linkages in the HRM to engagement, which have been neglected thus far, especially in the healthcare sector. Also the importance of nurses' psychological conditions in terms of psychological meaningfulness, psychological availability and psychological safety in enhancing engagement has been opened up. In light of the increasing attention that is devoted towards improving standards of dignity and care for patients in the hospital, the present findings point to the importance of hospitals' HR systems as determinants of the nurses' engagement which serves as the cornerstone of quality care.

The results of this study indicate that when employees' form positive perception of human resource management practices in the

workplace their psychological conditions of psychological safety, psychological meaningfulness, and psychological availability are likely to emerge. These results provide insights into the importance of favourable human resource management practices as a dimension that is rooted in the very essence of an organization whose goals are centered on developing employees' psychological conditions and thus manifesting engagement.

Prior research has examined various work conditions that may foster employee engagement, but studies and evidence about the relational context that cultivates positive psychological states and leads to engagement has only begun to accumulate (Carmeli & Spreitzer, 2009). The present study also highlights the intervening role of psychological safety in the human resource management practices to psychological availability and human resource management practices to psychological meaningfulness relationship which are the two links those remain untested in the previous studies. Finally, the current study answers the call to focus further research on employee engagement in India, especially in the context of nurses. The findings indicate that psychological conditions of psychological safety, psychological meaningfulness, and psychological availability are keys to motivating an employee to display personal engagement in work tasks.

Various studies have well established that the connection between HRMP and employee/behavioural outcomes, but there exists a relative shortage of literature on ways through which value is generated (Wright & Gardner, 2002). Many academicians have noticed this as a black box issue in the area of HRM research. Personal resources are important in

disclosing the progression from job resources to employee engagement. The present study verifies the role of psychological conditions (personal resources) in improving employee engagement. The present study also extends the previous research works on employee engagement by examining the associations among HRM practices and employee engagement by considering the intervening role of the psychological conditions of availability, meaningfulness and safety. Thus, the present study made a modest attempt to verify and extend the previous scholarly works on employee engagement.

#### **8.4 Practical and Managerial Implications**

The results suggest that developing and sustaining a favourable employees' perception of human resource management practices forms a significant means by which employees can be motivated to engage in job. Interventions should be implemented by human resource practitioners in organisations, to raise awareness of what engagement is, how to recognise it, and how to promote it. Our findings demonstrate that a human resource manager's investment in designing and implementing human resource management practices goes beyond maintaining a harmonious and healthy work environment. Such practices add value to organizations in terms of producing meaningful and powerful momentum, which drives employees' engagement. Moreover, the study points to a critical path for human resource practitioners to exert influence and achieve employee engagement. By obtaining a positive perception of human resource system from employees, practitioners activate the fundamental psychological forces sustaining employees' job activities and create an environment facilitating



engagement in the workplace. In short, the study offers pragmatic reasons for human resource managers to engage in actions aimed at building positive employee perception of human resource management practices in the organisation.

Regarding implications for hospital managers, this entails investing in a sophisticated HR system that focuses on skill, motivation and opportunity enhancing practices. Keeping in mind that HR practices send signals about the attitudes and behaviours that are expected and rewarded (Bowen & Ostroff 2004; Sanders et al. 2008), HR systems need to convey that the organisation is concerned about employee support and well-being, if they are to contribute to employee engagement and quality care towards patients. Highly satisfied patients are shown to recommend the hospital to their friends and return when they need care again (Lee, 2005), thereby contributing to the hospital's financial success (Nelson et al. 1992).

Managers should note the important and motivating role of psychological meaningfulness in improving employee engagement. Employees who experience psychological meaningfulness will be more engaged in their work. Studies show that all employees want their work to be meaningful, even when the work is repetitive (Isaksen, 2000; Treadgold, 1999). Workers' well-being depends, in large part, on managers' ability and willingness to facilitate workers' accomplishments — by removing obstacles, providing help and acknowledging strong effort. Psychological meaningfulness can be promoted by attending to the work-role fit of employees through proper selection, placement, training, and performance

management. Enriching the jobs of employees should be considered, to make work more meaningful. Managers should realise that psychological meaningfulness or meaninglessness are not only effects of specific working conditions but also a result of individuals' spontaneous and continuous effort to find meaning, no matter what kinds of conditions they experience. It is therefore important to consider the meaning-making processes of employees to understand their engagement or disengagement. By treating employees as unique individuals, and by allowing them to develop their talents into strengths, it will be possible to understand and affect their work engagement (Lewis, 2011). This kind of rich inner work life improves performance, which further supports inner work life — a positive spiral. In other words, if individuals feel as though their job gives them an avenue through which to express their own personal beliefs and values while also allowing them to utilize the abilities that they have, they will be more likely to feel as though they are doing meaningful work and, as a result, be engaged in their job. Organizations would benefit from selecting employees that demonstrate higher fit with positions for which they are hiring. Such fit could initially be observed during interviews as well as through assessments used during selection to determine applicants' knowledge, skills, abilities, and other characteristics. Individuals that seem to have beliefs and values in line with those of the organization and requirements of the job will be more likely to perceive it as meaningful and, in turn, be more engaged in it. Realistic job previews could also help the employee and company ensure that a good fit is achieved between a new hire and the position.

Perceptions of psychological safety also influenced engagement of employees. Perception of human resource management practices affected the feelings of psychological safety. The organization can foster higher levels of self-efficacy and emotional stability among its employees to enhance psychologically safer feeling. One way to do so is to select employees that score high on self efficacy and emotional stability and this can be achieved through the interview as well as other assessment tools. Skill, motivation and opportunity enhancing human resource practices will help employees feel more confident in their abilities to perform the job and will likely foster higher levels of self-efficacy and help to keep anxieties down to a minimum.

Managers should be concerned about the importance of psychological availability (competence) of employees as a prerequisite for their engagement. Employees should have sufficient physical, cognitive and emotional resources to feel competent and avail themselves psychologically to engage at work. Therefore, it would be in the best interest of the organization to try to help employees become more psychologically available for their positions. One way to do this, again, would be to select employees with higher levels of self-efficacy. However, organizations could try to foster higher levels of self-efficacy and emotional stability in employees by alleviating some outside stressors and responsibilities. Workshops to reduce stress and promote psychological well-being should be implemented to assist them to develop the skills they need to manage their physical, cognitive and emotional energies effectively and efficiently. Finally, given the importance for engagement of social exchanges at work, managers could use team building exercises to improve supervisor and co-

worker relations, psychological availability, and also indirectly, employee engagement.

### **8.5 Scope for further research**

The findings so far presented, though convincingly meaningful and dependable, as they are both statistically and methodologically sound, are not robust enough to infer indisputable causal relationships among the variables incorporated. Such a claim would warrant a longitudinal, if not purely experimental, approach from the part of other researchers.

In most of the studies, including the present, employee engagement has been conceptualised as an individual level variable. Since most of the emerging business organisations are keenly interested in team level performance than at the individual level, it would be practically useful to conceptualise employee engagement as a collective concept.

There is further scope for future work to verify whether the relationships identified in this study remains valid in the case of hospitals without NABH accreditation.

### **8.6 Conclusion**

Although the nature of each healthcare system and the subsequent use of human resource practices differ depending on national context, the importance of human resource management in its ability to impact employee outcomes such as engagement remains unchallenged. These results of the present research provide insights into the importance of favourable human resource management practices as a dimension that is

rooted in the very essence of an organization whose goals are centered on developing employees' psychological conditions and thus precipitating engagement.

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# Appendices

## Appendix 1

### Data Collection Instrument

**Dear Sir/Madam,**

The following questionnaire is a part of my doctoral research in the area of Human Resource Management. There is no right or wrong answer. Please give your **spontaneous** and **frank** opinion. The researcher assures you that your responses will be kept strictly confidential.

With thanks,

Geetha Jose

Research Scholar

School of Management Studies

Cochin University of Science and Technology

Kerala

**The questionnaire is divided into three parts. Kindly go through the instructions carefully and respond to all the statements that follow. Please answer all the items**

#### **Part 1:**

The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, **tick (√)** the “1” in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 2 to 7) that best describes how frequently you feel that way.

**7- Everyday, 6- A few times a week, 5- Once a week, 4- A few times a month, 3- Once a month or less, 2- A few times a year, 1 - Never**

	7	6	5	4	3	2	1
At my work, I feel bursting with energy.	7	6	5	4	3	2	1
At my job, I feel strong and vigorous.	7	6	5	4	3	2	1
I am enthusiastic about my job.	7	6	5	4	3	2	1
My job inspires me.	7	6	5	4	3	2	1
I am immersed in my work.	7	6	5	4	3	2	1
When I get up in the morning, I feel like going to work.	7	6	5	4	3	2	1
I feel happy when I am working intensely	7	6	5	4	3	2	1
I am proud of the work that I do.	7	6	5	4	3	2	1
I get carried away when I am working.	7	6	5	4	3	2	1

**Part 2**

Following are a set of statements about how you generally experience in you job. Please read each statement carefully and **tick (√)** the choice that best reflects your opinion

**6- Completely true, 5- Mostly true, 4- Slightly true 3- Slightly false, 2- Mostly false, 1 – Completely false**

	6	5	4	3	2	1
The work I do on this job is very important to me	6	5	4	3	2	1
My job activities are personally meaningful to me	6	5	4	3	2	1
The work I do on this job is sensible	6	5	4	3	2	1
My job activities are significant to me	6	5	4	3	2	1
The work I do on this job is meaningful to me	6	5	4	3	2	1



I feel that the work I do on my job is valuable	6	5	4	3	2	1
I am not afraid to be myself at work	6	5	4	3	2	1
I have the confidence to express my opinions at work	6	5	4	3	2	1
There is a safe environment ( not threatening) at work	6	5	4	3	2	1
I am confident in my ability to handle competing demands at work	6	5	4	3	2	1
I am confident in my ability to deal with problems that come up at work	6	5	4	3	2	1
I am confident in my ability to think clearly at work	6	5	4	3	2	1
I am confident in my ability to display the appropriate emotions at work	6	5	4	3	2	1
I am confident that I can handle the physical demands at work	6	5	4	3	2	1

**Part 3:** Please read each statement carefully and **tick (√)** the choice that best reflects your opinion in the following scale

**6- Completely agree, 5- Mostly agree, 4- Slightly agree 3- Slightly disagree, 2- Mostly disagree, 1 – Completely disagree**

	6	5	4	3	2	1
Employees in my section are cooperative	6	5	4	3	2	1
Employees in my section share information	6	5	4	3	2	1
Employees in my section are friendly	6	5	4	3	2	1
Employees in this hospital are involved in workplace decisions	6	5	4	3	2	1
My hospital has proper two way communication system	6	5	4	3	2	1
I have occasions to interact with top management	6	5	4	3	2	1
I have reasonable opportunities to express complaints and raise personal concerns	6	5	4	3	2	1

I can meet my senior officers easily when I have a problem	6	5	4	3	2	1
My company has proper grievance management system	6	5	4	3	2	1
I am given adequate flexibility in deciding how to do my job	6	5	4	3	2	1
My hospital encourages employees to be creative and do new things	6	5	4	3	2	1
Supervisory employees are consulted to take decisions on matters relating to their subordinates such as allocation and supervision of work/ transfer/ promotion/ grant of leave/disciplinary action	6	5	4	3	2	1
Workplace arrangement at my job is adequate to become highly productive	6	5	4	3	2	1
Work environment in my hospital is pleasant	6	5	4	3	2	1
I am provided sufficient resources to perform my job effectively	6	5	4	3	2	1
Hospital helps employees to achieve a balance between work and home life	6	5	4	3	2	1
Job security is almost guaranteed in this hospital	6	5	4	3	2	1
I have sufficient opportunities to develop relationship and build a positive society	6	5	4	3	2	1
There is provision for adequate welfare facilities (eg. Drinking water, restroom, canteens, short break etc.)and services to employees at workplace	6	5	4	3	2	1
I am happy with my salary I get for the work here	6	5	4	3	2	1
My salary is decent compared with others doing a similar job in other hospitals	6	5	4	3	2	1
Pay increments for employees in this hospital are based on job performance	6	5	4	3	2	1
I am provided with sufficient benefits and facilities for a good living	6	5	4	3	2	1
The rewards and other benefits (eg. Bonus) I receive are reasonable in comparison to my contribution	6	5	4	3	2	1

The rewards in my hospital are directly related to work performance	6	5	4	3	2	1
My services are recognized and accepted	6	5	4	3	2	1
Company recognizes and appreciates the contribution of sincere and hardworking employees	6	5	4	3	2	1
The selection systems followed in our hospital are highly systematic and strict	6	5	4	3	2	1
Hospital tries to ensure proper match between employees' values and company's values at the time of selection	6	5	4	3	2	1
The hiring practices help to have high performing employees	6	5	4	3	2	1
Hospital selects those having the suitable knowledge, skills and attitudes	6	5	4	3	2	1
Employees physical fitness for the job is sought at the time of selection	6	5	4	3	2	1
Training programs are conducted for employees to bring quality in all aspects	6	5	4	3	2	1
Employees in each job normally go through training programs every year	6	5	4	3	2	1
Training needs are identified through a formal performance evaluation mechanism	6	5	4	3	2	1
Training needs identified are realistic, useful and based on needs of the hospital	6	5	4	3	2	1
Performance of the employees is measured on the basis of unbiased measurable results	6	5	4	3	2	1
Performance evaluation system in our hospital is growth and development oriented	6	5	4	3	2	1
Employees are provided performance based feedback and counseling	6	5	4	3	2	1
Employees have faith in the performance appraisal system	6	5	4	3	2	1
The appraisal data is used for making decisions like job rotation/ promotion/ training / pay	6	5	4	3	2	1

**Part 4**

**Personal Details**

1. Gender: Female  Male
2. Department .....
3. Experience in this hospital .....years.....months
4. Age .....
5. Highest educational qualification .....

**\*\*\*Thank you for your participation\*\*\***

## Appendix 2

**Table A: Literature support on thematic antecedents of employee engagement**

Sl. No.	Year	Antecedents	Broader theme	Author (s)
1	1990	Psychological conditions	Psychological conditions/ resources	Kahn
2	2004	Psychological conditions	Psychological conditions/ resources	May et al.
3	2004	Job resources	Organisational resources/initiatives	Schaufeli and Bakker
4	2005	Job resources	Organisational resources/initiatives	Hakanen, Bakker, and Demerouti
5	2006	Job characteristics	Organisational resources/initiatives	Saks
		Recognition and rewards		
		Supervisor support		
		Perceived organisational support		
		Procedural justice and distributive justice		
6	2006	Worklife experiences	Psychological conditions/ resources	Koyuncu et al.
7	2006	Job resources	Organisational resources/initiatives	Hakanen, Bakker, and Schaufeli
8	2007	Self-efficacy	Psychological conditions/ resources	Xanthopoulou, Bakker, Demerouti, and Schaufeli
		OBSE		
		Optimism		

9	2007	Job resources	Organisational resources/initiatives	Bakker and Demerouti
10	2007	Efficacy beliefs	Psychological conditions/ resources	Llorens, Schaufeli, Bakker, and Salanova
		Task resources	Organisational resources/initiatives	
11	2009	Supervisory communication	Organisational resources/initiatives	Attridge
		Job design		
		Resource support		
		Style of leadership		
		Working conditions		
12	2009	Job search behavior	Attitudinal situations	Simpson
		Job satisfaction		
		Turnover cognitions		
13	2010	Value congruence	Attitudinal situations	Rich et al.
		POS	Organisational resources/initiatives	
		core self-evaluation	Attitudinal situations	
14	2010	Proactive personality	Attitudinal situations	Dikkers et al.
15	2010	Occupational self-efficacy	Psychological conditions/ resources	Pati and Kumar
		POS	Organisational resources/initiatives	
		PSS	Organisational resources/initiatives	
16	2011	HRD climate	Organisational resources/initiatives	Chaudhary et al.
17	2011	Internal communication	Organisational resources/initiatives	Welch

18	2011	Job fit	Attitudinal situations	Shuck et al.
		Psychological climate	Psychological conditions/ resources	
		Affective commitment	Attitudinal situations	
19	2011	Employee involvement climate	Attitudinal situations	Medhurst and Albrecht
		Psychological capital	Psychological conditions/ resources	
20	2011	Performance management	Organisational resources/initiatives	Gruman and Saks
21	2011	Empowering leadership	Organisational resources/initiatives	Albrecht and Andreetta
		Empowerment	Psychological conditions/ resources	
22	2011	Leader behavior	Organisational resources/initiatives	Xu and Thomas
23	2011	Role benefit	Organisational resources/initiatives	Slatten and Mehmetoglu
		Strategic attention		
		Job autonomy		
24	2011	Hope	Psychological conditions/resources	Othman and Nasurdin
		Resilience		
25	2012	Leader-member exchange	Organisational resources/initiatives	Agarwal et al.
26	2012	Performance appraisal justice	Organisational resources/initiatives	Gupta and Kumar
27	2012	Emotion regulation strategies	Psychological conditions/ resources	Yagil
28	2013	Affective commitment	Attitudinal situations	Yalabik et al.
		Job satisfaction		
29	2015	Perceived supervisor support	Organisational resources/initiatives	Jose and Mampilly
		Psychological empowerment	Psychological conditions/resources	

**Table B: Literature support on thematic consequences of employee engagement**

Sl. No.	Year	Consequences	Broader theme	Author (s)
1	2004	Burnout (negative)	Positive organisational outcome	Schaufeli and Bakker
		Turnover intention (negative)		
2	2006	Job satisfaction	Job related attitude	Saks
		OCB	Task related Behaviour	
		Organisational commitment.	Job related attitude	
3	2006	Job satisfaction	Job related attitude	Koyuncu et al.
		Intention to quit (negative)	Positive organisational outcome	
		Psychological wellbeing.	Psychological wellbeing	
4	2006	Organisational commitment	Job related attitude	Hakanen, Bakker, and Schaufeli
5	2010	Task performance	Task related Behaviour	Rich et al
		OCB		
6	2011	Discretionary effort	Task related Behaviour	Shuck et al.
		Intention to turnover (negative)	Positive organisational outcome	
7	2011	Salesperson performance	Task related Behaviour	Medhurst and Albrecht
8	2011	Affective commitment	Job related attitude	Albrecht and Andreetta
		Turnover intention (negative)	Positive organisational outcome	
9	2011	Innovative behavior	Task related Behaviour	Slatten and Mehmetoglu
10	2012	Innovative work behavior	Task related Behaviour	Agarwal et al.
		Intention to quit(negative)	Positive organisational outcome	
11	2012	Organizational citizenship behavior	Task related Behaviour	Rurkkhum and Bartlett
12	2012	Customer satisfaction	Positive organisational outcome	Yagil
		Loyalty intentions		
13	2013	Job performance	Task related Behaviour	Yalabik et al.
		Intention to quit(negative)	Positive organisational outcome	



### Appendix 3

#### Factor Loading Matrix of PHRMP

	Component					
	1	2	3	4	5	6
TW1						.809
TW2						.811
TW3						.724
COM2				.658		
COM3				.733		
COM5				.721		
GR1					.500	
GR2					.606	
GR3					.585	
EMP1					.552	
EMP2					.491	
EMP3					.440	
RES1			.543			
RES2			.665			
RES3			.606			
BAL1			.568			
BAL2			.729			
BAL3			.711			
BAL4			.640			
COMP1		.735				
COMP2		.725				

*Appendices*

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COMP3		.553				
COMP4		.784				
REW1		.762				
REW2		.599				
REW3		.621				
REW4		.568				
SEL1	.757					
SEL2	.581					
SEL3	.799					
SEL4	.515					
SEL 5	.798					
APR1	.581					
APR2	.795					
APR3	.790					
APR4	.771					
APR5	.845					
TRN1	.629					
TRN2	.800					
TRN3	.564					
TRN4	.508					

## Appendix 4

### Unidimensionality of Measurements Using PCA

Component	No. of items	Eigen values
<b>Selection, Training and Performance Appraisal</b>	14	8.409
		.925
		.812
		.717
		.604
		.450
		.375
		.344
		.324
		.256
		.234
		.201
		.182
		.170
<b>Compensation and Rewards &amp; Recognition</b>	8	4.95
		.842
		.651
		.395
		.352
		.347
		.284
		.180
<b>Work-life Balance and Resources</b>	7	4.16
		.784
		.617
		.428
		.364
		.341
		.307

<b>Grievance Handling and Employee Empowerment</b>	6	3.405 .9021 .535 .470 .358 .208
<b>Communication</b>	3	2.191 .506 .303
<b>Teamwork</b>	3	2.038 .592 .370
<b>Psychological meaningfulness</b>	5	2.650 .713 .651 .526 .460
<b>Psychological Safety</b>	3	1.704 .775 .521
<b>Psychological Availability</b>	5	2.944 .892 .435 .399 .330
<b>Employee Engagement</b>	9	4.681 .919 .804 .590 .503 .466 .412 .328 .298

## Appendix 5

### Convergent Validity Check at Indicator Level (First Order)

Indicators	Loadings	P value
Teamwork_1	0.861	<0.001
Teamwork_2	0.848	<0.001
Teamwork_3	0.728	<0.001
Communication_1	0.695	<0.001
Communication_2	0.891	<0.001
Communication_3	0.853	<0.001
Grievance Handling_1	0.732	<0.001
Grievance Handling_2	0.653	<0.001
Grievance Handling_3	0.749	<0.001
Employee Empowerment_1	0.831	<0.001
Employee Empowerment_2	0.791	<0.001
Employee Empowerment_3	0.752	<0.001
Workplace resources_1	0.655	<0.001
Workplace resources_2	0.806	<0.001
Workplace resources_3	0.778	<0.001
Work life Balance_1	0.819	<0.001
Work life Balance_2	0.851	<0.001
Work life Balance_3	0.767	<0.001
Work life Balance_4	0.703	<0.001
Rewards and Recognition_1	0.849	<0.001
Rewards and Recognition_2	0.737	<0.001
Rewards and Recognition_3	0.742	<0.001
Rewards and Recognition_4	0.774	<0.001
Compensation_1	0.808	<0.001
Compensation_2	0.795	<0.001
Compensation_3	0.694	<0.001
Compensation_4	0.878	<0.001
Selection_1	0.834	<0.001
Selection_2	0.715	<0.001
Selection_3	0.829	<0.001

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Selection_4	0.83	<0.001
Selection_5	0.659	<0.001
Training_1	0.743	<0.001
Training_2	0.822	<0.001
Training_3	0.72	<0.001
Training_4	0.644	<0.001
Performance Appraisal_1	0.618	<0.001
Performance Appraisal_2	0.854	<0.001
Performance Appraisal_3	0.821	<0.001
Performance Appraisal_4	0.855	<0.001
Performance Appraisal_5	0.846	<0.001
Psychological Meaningfulness_1	0.679	<0.001
Psychological Meaningfulness_2	0.76	<0.001
Psychological Meaningfulness_3	0.689	<0.001
Psychological Meaningfulness_4	0.736	<0.001
Psychological Meaningfulness_5	0.771	<0.001
Psychological Safety_1	0.827	<0.001
Psychological Safety_2	0.676	<0.001
Psychological Safety_3	0.75	<0.001
Psychological Availability_1	0.803	<0.001
Psychological Availability_2	0.795	<0.001
Psychological Availability_3	0.831	<0.001
Psychological Availability_4	0.732	<0.001
Psychological Availability_5	0.664	<0.001
Employee Engagement_1	0.749	<0.001
Employee Engagement_2	0.719	<0.001
Employee Engagement_3	0.812	<0.001
Employee Engagement_4	0.82	<0.001
Employee Engagement_5	0.737	<0.001
Employee Engagement_6	0.667	<0.001
Employee Engagement_7	0.724	<0.001
Employee Engagement_8	0.707	<0.001
Employee Engagement_9	0.509	<0.001

## Appendix 6

### Indicator Level Check of Convergent Validity (Second Order)

Variable	Loadings	P value
Psychological Meaningfulness_1	0.679	<0.001
Psychological Meaningfulness_2	0.76	<0.001
Psychological Meaningfulness_3	0.689	<0.001
Psychological Meaningfulness_4	0.736	<0.001
Psychological Meaningfulness_5	0.771	<0.001
Psychological Safety_1	0.827	<0.001
Psychological Safety_2	0.676	<0.001
Psychological Safety_3	0.75	<0.001
Psychological Availability_1	0.803	<0.001
Psychological Availability_2	0.795	<0.001
Psychological Availability_3	0.831	<0.001
Psychological Availability_4	0.732	<0.001
Psychological Availability_5	0.664	<0.001
Employee Engagement_1	0.749	<0.001
Employee Engagement_2	0.719	<0.001
Employee Engagement_3	0.812	<0.001
Employee Engagement_4	0.82	<0.001
Employee Engagement_5	0.737	<0.001
Employee Engagement_6	0.667	<0.001
Employee Engagement_7	0.724	<0.001
Employee Engagement_8	0.707	<0.001
Employee Engagement_9	0.509	<0.001
Latent Variable_(Teamwork)	0.38	<0.001
Latent Variable_(Communication)	0.74	<0.001
Latent Variable_(Grievance Handling and Employee Empowerment)	0.856	<0.001
Latent Variable_(Workplace resources and work life balance)	0.828	<0.001
Latent Variable_(Compensation and Rewards & Recognition)	0.83	<0.001
Latent Variable_(Selection, Training and Performance Appraisal)	0.828	<0.001

Appendix 6

Cross Loadings of Latent Variables in First Stage  
(Discriminant Validity at Indicator Level)#

	TW	COM	GR_EM	RES_BAL	REW_COM	SELTRPA	PSY_MEA	PSY_SAF	PSY_AVA	EM_ENG
TW1	<b>0.861</b>	0.014	-0.001	-0.029	0.03	0.077	-0.014	-0.057	0.028	-0.054
TW2	<b>0.848</b>	0.01	-0.114	0.109	0.037	0.024	-0.002	0.037	-0.103	0.109
TW3	<b>0.728</b>	-0.028	0.134	-0.093	-0.078	-0.119	0.019	0.024	0.086	-0.063
COM1	0.097	<b>0.695</b>	0.019	-0.083	-0.045	-0.031	0.061	-0.169	0.155	0.114
COM2	-0.013	<b>0.891</b>	0.116	0.009	0.013	-0.055	-0.042	-0.068	-0.031	0.019
COM3	-0.065	<b>0.853</b>	-0.137	0.058	0.024	0.082	-0.006	0.209	-0.094	-0.113
GR1	0.018	0.204	<b>0.732</b>	-0.017	0.3	-0.309	-0.044	0.123	-0.077	-0.013
GR2	0.044	0.152	<b>0.653</b>	-0.118	0.25	-0.326	-0.003	0.112	-0.148	0.198
GR3	-0.035	-0.043	<b>0.749</b>	0.028	0.04	0.027	0.08	0.078	-0.217	0.059
EMP1	0.022	-0.158	<b>0.831</b>	0.004	-0.216	0.141	0.057	-0.033	0.132	-0.169
EMP2	-0.045	-0.081	<b>0.791</b>	0.009	-0.257	0.178	-0.037	-0.124	0.263	-0.095
EMP3	0.003	-0.028	<b>0.752</b>	0.077	-0.041	0.214	-0.06	-0.129	-0.004	0.068
RES1	0.149	-0.004	-0.223	<b>0.655</b>	-0.055	0.175	-0.058	0.088	0.032	-0.264
RES2	0.04	-0.048	0.182	<b>0.806</b>	-0.01	-0.052	0.026	-0.097	-0.038	0.096
RES3	-0.017	0.025	-0.047	<b>0.778</b>	0.109	0	-0.076	-0.069	0.157	0.05
BAL1	0.005	0.028	-0.028	<b>0.819</b>	0.267	-0.032	-0.081	-0.111	0.081	0.093
BAL2	-0.031	0.049	0.047	<b>0.851</b>	0.086	-0.175	0.115	0.071	-0.134	-0.055
BAL3	0.04	-0.082	0.052	<b>0.767</b>	-0.303	0.127	0.068	0.002	0.035	-0.033



BAL4	-0.178	0.03	-0.03	<b>0.703</b>	-0.144	0.006	-0.01	0.146	-0.13	0.075
REW1	-0.012	0.007	-0.072	-0.044	<b>0.849</b>	-0.006	-0.052	-0.107	0.084	0.079
REW2	-0.056	0.045	-0.149	-0.123	<b>0.737</b>	0.316	0.013	0.041	0.052	-0.225
REW3	0.081	-0.154	0.075	0.15	<b>0.742</b>	-0.096	0.094	-0.09	-0.059	0.098
REW4	0.053	-0.047	0.026	0.256	<b>0.774</b>	0.035	-0.002	0.18	-0.21	-0.009
COMP1	-0.03	0.076	-0.078	0.171	<b>0.808</b>	-0.219	-0.008	0.02	0.029	0.031
COMP2	-0.07	0.108	0.028	-0.108	<b>0.795</b>	-0.117	0.001	0.03	-0.052	0.059
COMP3	0.087	-0.053	0.172	-0.398	<b>0.694</b>	0.337	-0.02	-0.07	0.14	-0.137
COMP4	-0.036	0.001	0.019	0.047	<b>0.878</b>	-0.167	-0.017	-0.003	0.02	0.063
SEL1	0.019	-0.141	0.217	-0.052	-0.131	<b>0.83</b>	0.031	-0.008	-0.082	0.024
SEL2	0.041	-0.105	0.256	-0.099	0.071	<b>0.834</b>	0.043	-0.05	0.011	-0.051
SEL3	-0.06	-0.004	-0.375	0.306	0.214	<b>0.715</b>	-0.01	-0.015	0.027	0.002
SEL4	0.008	-0.133	0.048	0.009	-0.096	<b>0.829</b>	-0.024	-0.1	0.146	-0.004
SEL5	-0.002	0.093	-0.336	0.208	0.252	<b>0.659</b>	-0.081	-0.082	-0.157	0.321
TRN1	-0.005	0.067	-0.096	0.182	0.071	<b>0.644</b>	0.047	-0.146	-0.093	0.276
TRN2	0.086	0.012	-0.058	0.132	-0.087	<b>0.743</b>	0.134	0.16	-0.139	-0.076
TRN3	0.063	-0.029	-0.061	-0.029	-0.163	<b>0.822</b>	0.018	-0.01	0.1	-0.087
TRN4	0.105	0.104	0.022	0.054	0.086	<b>0.72</b>	0.151	-0.01	-0.081	-0.022
Apr1	-0.109	0.186	-0.1	-0.251	0.158	<b>0.618</b>	-0.193	0.118	0.221	-0.17
Apr2	-0.035	0.168	0.029	-0.127	-0.055	<b>0.854</b>	0.05	-0.053	-0.009	-0.015
Apr3	-0.078	0.015	-0.002	-0.075	-0.078	<b>0.821</b>	-0.169	0.186	0.009	-0.036
Apr4	-0.012	-0.027	0.053	0.002	-0.005	<b>0.855</b>	-0.032	0.01	0.035	-0.033
Apr5	-0.036	-0.112	0.221	-0.169	-0.098	<b>0.846</b>	0.01	-0.002	-0.007	-0.053

PM1	-0.012	0.001	0.057	-0.059	0.115	0.059	<b>0.679</b>	-0.131	-0.05	-0.139
PM2	0.018	-0.07	0.169	0.066	0.044	-0.159	<b>0.76</b>	-0.185	-0.111	0.095
PM3	0.11	-0.253	0.07	-0.111	0.09	0.023	<b>0.689</b>	0.011	0.082	-0.045
PM4	-0.076	0.131	-0.07	0.148	-0.224	0.11	<b>0.736</b>	0.182	0.069	-0.167
PM5	-0.032	0.169	-0.213	-0.055	-0.011	-0.021	<b>0.771</b>	0.114	0.013	0.229
PS1	0.01	0.024	-0.06	-0.018	-0.07	-0.012	0.051	<b>0.827</b>	-0.168	0.057
PS2	-0.015	0.082	0.082	-0.207	-0.143	0.168	-0.058	<b>0.676</b>	0.261	0.024
PS3	0.002	-0.101	-0.008	0.207	0.207	-0.138	-0.004	<b>0.75</b>	-0.051	-0.085
PA1	0.111	0.103	-0.201	0.048	0.071	-0.057	0.083	0.118	<b>0.803</b>	0.141
PA2	0.001	0.164	-0.159	0.05	0.08	-0.05	0.023	-0.044	<b>0.795</b>	0.231
PA3	0.012	-0.015	-0.106	-0.015	0.043	0.042	-0.091	0.026	<b>0.831</b>	0.029
PA4	0.005	-0.213	0.342	-0.082	-0.045	0.029	0.033	-0.177	<b>0.732</b>	-0.134
PA5	-0.156	-0.068	0.19	-0.008	-0.186	0.044	-0.05	0.074	<b>0.664</b>	-0.335
AB4	0.04	0.088	-0.155	-0.154	-0.023	0.08	0.26	0.11	-0.056	<b>0.749</b>
AB5	-0.062	0.106	-0.142	0.028	0.152	-0.038	0.193	-0.075	0.008	<b>0.719</b>
DE4	0.037	0.076	-0.165	0.044	0.013	0.018	0.139	0.172	-0.215	<b>0.812</b>
VI3	-0.026	-0.075	0.115	0	0.099	-0.071	-0.092	0.03	0.11	<b>0.82</b>
DE2	0.02	-0.047	0.018	-0.02	-0.106	0.037	-0.187	0.05	-0.011	<b>0.737</b>
AB1	-0.153	-0.085	0.034	-0.011	0.027	0.091	-0.165	-0.148	0.269	<b>0.667</b>
DE3	0.076	-0.079	0.118	0.12	-0.099	-0.025	-0.029	0.061	-0.225	<b>0.724</b>
AB3	-0.05	-0.004	0.164	0.025	-0.074	-0.019	0.061	-0.064	0.055	<b>0.707</b>
AB2	0.146	0.017	0.043	-0.046	0.001	-0.089	-0.286	-0.255	0.143	<b>0.509</b>

## Appendix 8

### Cross Loading Matrix of the Measurement Model at Second Order Level (Discriminant Validity at Second Order Level)

Indicators	Psychological Meaningfulness	Psychological Safety	Psychological Availability	Employee Engagement	Perceived HRMP
Psychological Meaningfulness_1	<b>0.679</b>	-0.131	-0.078	-0.144	0.17
Psychological Meaningfulness_2	<b>0.76</b>	-0.111	-0.162	0.098	0.057
Psychological Meaningfulness_3	<b>0.689</b>	0.012	0.074	-0.02	-0.083
Psychological Meaningfulness_4	<b>0.736</b>	0.139	0.084	-0.14	0.039
Psychological Meaningfulness_5	<b>0.771</b>	0.081	0.083	0.182	-0.169
Psychological Safety_1	0.045	<b>0.827</b>	-0.104	0.047	-0.136
Psychological Safety_2	-0.101	<b>0.676</b>	0.305	0.046	-0.03
Psychological Safety_3	0.041	<b>0.75</b>	-0.161	-0.093	0.177
Psychological Availability_1	0.081	0.096	<b>0.803</b>	0.121	-0.013
Psychological Availability_2	0.042	-0.06	<b>0.795</b>	0.178	0.041
Psychological Availability_3	-0.095	0.003	<b>0.831</b>	0.017	-0.039
Psychological Availability_4	0.02	-0.105	<b>0.732</b>	-0.082	0.073
Psychological Availability_5	-0.051	0.069	<b>0.664</b>	-0.29	-0.064
Employee Engagement_1	0.244	0.062	0.014	<b>0.749</b>	-0.151

Employee Engagement_2	0.223	-0.059	-0.021	<b>0.719</b>	0.065
Employee Engagement_3	0.156	0.156	-0.197	<b>0.812</b>	-0.01
Employee Engagement_4	-0.081	0.071	0.061	<b>0.82</b>	0.07
Employee Engagement_5	-0.194	0.023	0.008	<b>0.737</b>	-0.095
Employee Engagement_6	-0.146	-0.134	0.18	<b>0.667</b>	0.028
Employee Engagement_7	-0.064	0.089	-0.217	<b>0.724</b>	0.061
Employee Engagement_8	0.054	-0.048	0.05	<b>0.707</b>	0.06
Employee Engagement_9	-0.304	-0.289	0.217	<b>0.509</b>	-0.035
Latent Variable_ (Teamwork)	-0.114	-0.139	0.314	0.083	<b>0.38</b>
Latent Variable_ (Communication)	-0.031	-0.073	0.245	-0.108	<b>0.74</b>
Latent Variable_ (Grievance Handling and Employee Empowerment)	-0.049	0.094	-0.017	0.049	<b>0.856</b>
Latent Variable_ (Workplace resources and work life balance)	0.058	0.078	-0.141	0.043	<b>0.828</b>
Latent Variable_ (Compensation and Rewards & Recognition)	0.088	0.113	-0.174	-0.099	<b>0.83</b>
Latent Variable_ (Selection, Training and Performance Appraisal)	-0.016	-0.16	-0.031	0.063	<b>0.828</b>

## Appendix 9

### Summary of steps of mediation by Iacobucci, Saldanha, and Deng (2007)

1. To test for mediation, fit one model via SEM, so the direct and indirect paths are fit simultaneously so as to estimate either effect while partialling out, or statistically controlling for, the other. a. “Some” mediation is indicated when both of the  $X \rightarrow M$  and  $M \rightarrow Y$  coefficients are significant. b. If either one is not significant (or if both are not significant), there is no mediation, and the researcher should stop.
2. Compute the  $z$  to test explicitly the relative sizes of the indirect (mediated) vs. direct paths. Conclusions hold as follows: a. If the  $z$  is significant and the direct path  $X \rightarrow Y$  is not, then the mediation is complete. b. If both the  $z$  and the direct path  $X \rightarrow Y$  are significant, then the mediation is “partial” (with a significantly larger portion of the variance in  $Y$  due to  $X$  being explained via the indirect than direct path). c. If the  $z$  is not significant but the direct path  $X \rightarrow Y$  is (and recall that the indirect, mediated path,  $X \rightarrow M$ ,  $M \rightarrow Y$  is significant, or we would have ceased the analysis already), then the mediation is “partial” (with statistically comparable sizes for the indirect and direct paths), in the presence of a direct effect. d. If neither the  $z$  nor the direct path  $X \rightarrow Y$  are significant, then the mediation is “partial” (with statistically comparable sizes for the indirect and direct paths), in the absence of a direct effect.

3. The researcher can report the results:
  - a. Categorically: “no,” “partial,” or “full” mediation,
  - b. As a “proportion of mediation” (in the variance of  $Y$  explained by  $X$ ):  $\frac{\hat{a} \times \hat{b}}{(\hat{a} \times \hat{b}) + \hat{c}}$ ,
  - c. Or comparably, as the ratio of the “indirect effect” to the “total effect.”
4. Each construct should be measured with three or more indicator variables.
5. The central trivariate mediation should be a structural subset of a more extensive nomological network that contained at least one more construct, as an antecedent of  $X$  or a consequence of  $X$ ,  $M$ , or  $Y$ .
6. The researcher should acknowledge the possibility of rival models, and test several, at least  $Y \rightarrow M \rightarrow X$ , and something such as  $M \rightarrow X \rightarrow Y$ . Ideally these rivals would be fit with  $Q$ , to have diagnostic fit statistics. However, alternative models should be run even with only  $X$ ,  $M$ , and  $Y$ , and the researcher should be able to argue against the different parameter estimates as being less meaningful than their preferred model.

Source: Iacobucci, D., Saldanha, N., & Deng, X. (2007). Meditation on mediation: Evidence that structural equations models perform better than regressions a meditation on mediation. *Journal of Consumer Psychology*, 17, 2, 140–154.

## Appendix 10

### Results of Regression Models with Untransformed Data

Hypothesized Paths	B	Significance
HRP → PSY MEAN	0.143	Significant
HRP → PSY SAFETY	0.389	Significant
HRP → PSY AVAILABILITY	0.337	Significant
PSY MEAN → ENGAGEMENT	0.548	Significant
PSY SAFETY → ENGAGEMENT	0.526	Significant
PSY AVAIL → ENGAGEMENT	0.510	Significant
PSY SAFETY → PSY MEAN	0.478	Significant
PSY SAFETY → PSY AVAILABILITY	0.518	Significant

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## List of Publications and Presentations

### Paper Publications

- [1] Geetha Jose and Sebastian Rupert Mampilly, "Satisfaction with HR practices and Employee Engagement: A Social Exchange Perspective" in *Journal of Economics and Behavioural Studies*, Vol. 4, No.7, July 2012 (ISSN: 2220-6140),pp. 423-430.
- [2] Geetha Jose and Sebastian Rupert Mampilly, "Psychological Empowerment and Employee Engagement: An Empirical Attestation", in *Global Business Review (Sage Publications)*, Vol. 15, No. 1, March 2014 (ISSN 0972-1509),pp 93-104.
- [3] Geetha Jose and Sebastian Rupert Mampilly, "Relationships Among Perceived Supervisor Support, Psychological Empowerment and Employee Engagement in Indian Workplaces" in *Journal of Workplace Behavioural health*", Volume 30, Issue 3, August 2015, pages 231- 250 (Taylor and Francis Group)(ISSN: 1555-5240 print=1555-5259 online DOI:10.1080/15555240.2015.1047498), pp. 231-250.
- [4] Geetha Jose and Sebastian Rupert Mampilly, "The Mediating Role of Employee Engagement on the Relationship between Perceived Supervisor Support and Job Satisfaction" in *Trends and Challenges in Global Business Management*, Bonfring Publishers, November 2013 (ISBN 978-93-82338-84-0). Pp. 282-286.
- [5] Geetha Jose and Sebastian Rupert Mampilly, "Relationships among Student Academic Optimism, Student Engagement and Student Satisfaction" in *Let's Learn*, Indian Institute of Management Kozhikode (IIM K), Bloomsbury Publishing India, March 2014 (ISBN 978-93-84052-22-5)

## **Paper Presentations**

- [1] “Psychological Empowerment and Employee Engagement” in the Seventh National Conference on Business Research held during 23<sup>rd</sup> – 24<sup>th</sup> November 2012 at PSG Institute of Management, Coimbatore.
- [2] “Perceived Supervisor Support and Person-Job fit on Employee Engagement” in the National Conference on Excellence in Human Resource Practices held on 26<sup>th</sup> August 2013 at Bharata Mata Institute of Management, Kochi.
- [3] “The Mediating Role of Employee Engagement on the Relationship between Perceived Supervisor Support and Job Satisfaction” in the International conference on Trends and Challenges in Global Business Management” PLACITUM 2013 held during 22<sup>nd</sup>- 23<sup>rd</sup> November 2013 at Sree Narayana Gurukulam College of Engineering, Kolenchery.
- [4] “Relationships among Student Academic Optimism, Student Engagement and Student Satisfaction” in Indian Institute of Management Kozhikode (IIM K) HR Summit 2014, held during March 14-16, 2014 at IIM K Kochi Campus.

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