

Analysis of talent training demand and future development trend of health care industry in Hainan

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Abstract: This study aims to analyze the talent demand and future prospects of the health care industry in Hainan, considering the rise of population aging and advancements in healthcare. The steady increase of chronic diseases is notably enhancing the demand for healthcare services. This article offers an in-depth understanding of how the development of healthcare talent can help mitigate these challenges in Hainan. It further reviews an exploratory case study of talent development needs within the sector from diverse educational institutions, highlighting the importance of strategically analyzing talent demands in health care industry.

Keywords: Health and Wellness Industry, Talent Cultivation, Hainan Province, Demand Analysis, Development Trends

1. Introduction

In today's fast-changing medical landscape, continuous training and development is becoming increasingly vital for healthcare professionals. Evolving disease patterns, aging population, and advances in healthcare technology are continually modifying skillsets and knowledge profiles required in the healthcare industry in Hainan. One pertinent change is the rising demand for healthcare services due to the steady increase of chronic diseases, triggered by demographic changes and lifestyle shifts. Therefore, an effective training and development system to support talent development has become crucial, not only for organizations but also for individuals operating in the health sector.

Part of the health industry's success lies in constant improvements and the ability to attract and retain high-quality, skilled personnel. ^[1] Talent management becomes pivotal for both the organizations' perspective, to ensure their competitiveness, and the employees' standpoint, for their career growth and job satisfaction. To this end, this study explores the perception of healthcare workers in Hainan regarding training and development initiatives supporting their career and talent development.

Subsequently, this study aims to investigate and characterize the talent demand, effective training and development activities in Hainan's health care industry, and how it shapes the industry's future trends. The insights gathered may contribute to developing strategies for training and development that could assist in reducing costs related to unwanted labor turnover and poor performance. Furthermore, it might also contribute to fostering a culture of continuous learning and development, subsequently empowering healthcare professionals and enhancing the quality of healthcare services.

1.1. Background of Hainan's healthcare industry

The healthcare industry in Hainan province, located on the largest island in the South China Sea, has been experiencing significant growth over the past years. This progression can be traced back to China's initiation to modernize its healthcare system and provide accessible, affordable, and effective health services for its people. Hainan is no exception and enjoys a uniquely advantageous position due to its geographical location and favourable climate, which has attracted a shifting demographic, predominately with an aging population.

Within this context, Hainan's healthcare sector faces an imminent challenge to meet the growing healthcare needs. It steps towards this challenge by developing and implementing comprehensive strategies that encompass various facets, namely the provision of quality healthcare services, efficient disease management, improving workforce efficiency, and fostering talent ^[2].

The strategic focus on talent development derives from the understanding that a skilled and motivated

workforce is a fundamental pillar of an efficient healthcare system. Thus, the healthcare sector in Hainan is actively investing in talent training and development initiatives. This step is taken to ensure its capacity to deliver high-quality services in a rapidly evolving healthcare context.

Hence, this background lays the groundwork for our study, providing a comprehensive view of the current state of Hainan's healthcare industry. The relevance and importance of understanding how talent development can shape and influence the future progress and capacity of Hainan's healthcare sector could not be more evident.

1.2. Purpose and significance of the study

The purpose of this study is to explore and analyze the talent training demand and future development pattern of the health care industry in Hainan. With the escalation of population aging and the growing prevalence of chronic diseases, the demand for healthcare services is projected to surge significantly in the future. Correspondingly, the sustained development and efficient utilization of healthcare talents, equipped with the necessary skills and knowledge, is critical in mitigating these healthcare challenges in Hainan.

Therefore, this research will involve an exhaustive examination of the talent development requirements within the healthcare sector, considering the role and influence of diverse educational institutions. This study will facilitate an informed strategic analysis of talent demands in the health care industry, aiming to offer targeted recommendations for training and developing healthcare talents. The insights derived from this study are expected to encourage the application of proactive human resource strategies in educational institutions and healthcare organizations, promoting the career management and talent development effectiveness.

2. Research Methodology

This study employs both descriptive and inferential statistical techniques to analyze the talent training demand and future development trends of the healthcare industry in Hainan.

The research variables comprise different aspects of talent development, such as the frequency of training needs assessment, provision of mentors, career-focused training programs, induction, and career-focused job rotation practices. These variables are selected based on their perceived relevance and impact on talent development in the healthcare industry.

The data for this study is primarily obtained from various educational institutions within Hainan involved in providing healthcare training and development. Several individual and institutional stakeholders in the healthcare sector were consulted to gather data and to better understand the challenges and opportunities, hence providing a nuanced view of the industry's talent training necessities.

The data was then analyzed using SPSS version 22.0. Descriptive statistics were computed to provide a basic understanding of the variables. Following this, inferential statistical techniques such as Ordinary Least Squares (OLS) regression analysis were used to measure the relationship between the variables concerning talent development in the healthcare industry.

2.1. Selection of research variables and model

The selection of research variables and model to be utilized within this research is crucial. The primary intent of this selection is the creation of a reliable and sustainable underpinning for the investigation of the projected demand for skilled professionals and the future progression of the healthcare sector within Hainan. This selection considers the view of aligning the prospective talent demands in the health care sector with the educational resources available with the sphere, shedding light on the necessary qualifications and skills sets required in the future.

The model utilized is primarily based on Pearson's product moment correlations aided by ordinary least squares (OLS) regression analysis. The former is selected to evaluate the relationship between different variables involved in this research. It is chosen due to its ability to decipher the correlation between different variables, thus presumably giving a direct standpoint of how the variables influence each other. On the other hand, OLS regression analysis is opted for to ascertain the extent to which the constituents of talent demand and prospective evolution trends are clarified within the work setting.

Directly associated variables identified in this research include the efficiency of training and

development practices, frequency of training needs assessment, availability of mentors, and induction and rotation practices focused on career development. The latter are seen as crucial towards understanding the demands of talents and forecasting future development trends in health care industry in Hainan. Moreover, employee development plans and growth and development plans form part of the overarching model, both considered to have a great influence on the efficacy of talent management in this sector.

2.2. Data collection

To gather comprehensive and diverse insights into the talent training demand and future development trend of the health care industry in Hainan, a purposive sample was formed. The sample consisted of 110 health care practitioners employed in diverse capacities within the health care industry in Hainan (47% females, 53% males). It included professionals from various hierarchical levels - hospital administrators, doctors, nurses, allied health professionals, and health education specialists. The participants held an in-depth understanding of health care practices, dynamics, and the talent development needs of the industry, thus serving as reliable sources of valuable information.

The recruitment of participants was carried out through a unique blend of convenience sampling and snowball sampling. The initial group of participants ($n = 35$) identified through convenient sampling, formed the foundation for the next phase of respondent identification. Their professional networks and knowledge were utilized to identify additional respondents ($n = 75$) from within the health care sector through referrals. This approach ensured the breadth of our sample, covering various occupational specialties within the health care industry.

Quantitative data were collected via self-administered online questionnaires. These questionnaires were designed to assess their views and experiences regarding talent training strategies, needs, challenges, opportunities, and the future development trend of the healthcare sector in Hainan. Open-ended questions were included for capturing qualitative insights and perspectives for richer data.

2.3. Data analysis and validation

The collected data was given a meticulous statistical analysis using SPSS version 22.0. Primarily, descriptive statistics was utilized, succeeded by ordinary least squares (OLS) regression analysis, to ascertain the depth to which facets of health care talent needs and future prospects were explicated by the variables identified within the collected data.

A variety of variables were considered in this analysis, including the present training management efficacy, the frequency of training needs assessment, implementation of mentorship programs, job rotation practices, along with the establishment of employee and growth development plans.^[3] Pearson product moment correlations were computed between these variables for analytical purpose.

Our results reveal a statistically significant, positive correlation between the functionality of talent training management and various variables such as mentorship programs, training needs assessments and job rotation practices. These correlations manifest the importance of these factors in the overall effectiveness and efficiency of talent training in the health care sector^[4].

The dominating indicators from this data analysis build a solid foundation to propose strategic plans to meet and develop talent in Hainan's health care industry. However, it is suggested that future studies may seek to replicate and extend the findings from this study with a larger sample size to further strengthen and validate these findings.

3. Results and Analyses

Descriptive statistics and Pearson's product moment correlations were utilized to ascertain the impact of various predictors on the persisting talent demand, training requisites, and future trends in the healthcare industry of Hainan.

Our analysis, reveals a significant positive association between talent demand in the healthcare sector and an array of elements such as systematic training programmes ($r = 0.614$; $p = 0.000$), provision of qualified mentors ($r = 0.675$; $p = 0.000$), targeted talent development strategies ($r = 0.742$; $p = 0.000$), and periodical assessment of training needs ($r = 0.599$; $p = 0.000$).

Unpacking the existing problems in talent training, our study indicates a statistically significant

influence of elements like inadequate material and human resources, unstandardised training, and gaps in policy implementation ($F = 28.265$; $p = 0.000$).

However, it is also pivotal to note the inherent limitations of this study. The investigation is primarily confined to the healthcare industry of Hainan, which may not wholly represent the wider regional or national context. There is a critical need for future research to expand upon these findings, both in breadth through inclusion of a larger sample size, and in depth through the exploration of potential benefits that effective talent development and training can impart on the healthcare industry of Hainan.

3.1. Current status of talent demand in Hainan's healthcare industry

The current state of talent demand in Hainan's healthcare industry presents an interesting paradoxical situation. As in other parts of the globe, the healthcare industry in Hainan is also grappling with the issue of talent shortage. Advancements in healthcare and the steady rise of aging population and chronic diseases have significantly increased the demand for healthcare services. This, in turn, has amplified the need for competent healthcare professionals in Hainan.

Data analysis from various healthcare institutions in Hainan showcases the apparent scarcity of skilled health professionals such as doctors, nurses, and working staff, creating a significant gap between demand and supply. The increase in demand for health services cannot be met with the current workforce, which is primarily due to the unprecedented increase in the older population and chronic disease prevalence in Hainan.

3.2. Factors influencing talent training demand

Several factors have been identified that influence the demand for talent training in the healthcare industry in Hainan. The most noteworthy of these are population aging, the increasing prevalence of chronic diseases, advancements in healthcare technology, and changing healthcare practices. As the population in Hainan grows older, there is a rising demand for healthcare services, mainly attributed to the increased occurrence of age-associated diseases. This demographic shift is exerting a significant influence on the need for skilled health practitioners who can provide needed services.

In addition, changing healthcare practices have a substantial impact on talent training demand. The shift toward value-based care systems and personalized healthcare treatments are necessitating advanced skills and knowledge, thereby increasing the need for talent training.

Moreover, the different perspectives, personalities, strengths, and experiences of the healthcare sector's workforce are expected to defend and advance the presence of a diverse talent landscape, thus elevating the demand for talent training.

3.3. Existing problems in talent training

Despite the evident demand for talent in the health care industry in Hainan, there exist several challenges that are hindering the achievement of optimal talent training. First and foremost, there is a noticeable gap in the congruence between the current training and the actual industry needs. Specifically, the training programs largely fall short of providing the required multidimensional perspective needed for understanding the evolving healthcare dynamics. This, in turn, escalates the problem of talent derailment, where the potential talents fail to reach their peak due to a lack of requisite skills and knowledge.

Additionally, while there is an increased commitment towards developing emerging leaders in the Hainan health care industry, the training programs fail to fully appreciate and embed diversity in their strategies. Talent development needs to encompass different genders, perspectives, personalities, strengths, and experiences to fully equip the healthcare workforce with the adequate skills to address the varying healthcare demands. Regrettably, the current training strategies have shown a preference to a particular gender, seemingly favoring the males, and leaving the female talent pipeline underutilized.

3.4. The development trend of the healthcare industry in Hainan

Future trends in the healthcare sector in Hainan point to a rising demand for skilled healthcare practitioners due to the combined effects of population growth and increased prevalence of chronic conditions. Given the increased demands and a corresponding rise in healthcare costs,^[5] the role played

by healthcare professionals would be expected to intensify, with more emphasis on managing and treating chronic illnesses.

From a talent development perspective, this necessitates specific focus on training programs targeted towards managing these prevalent chronic conditions. For example, the inclusion of special training modules that focus on arthritis, asthma, cancer, dementia and heart diseases among others. The trends also point towards a need for developing a multi-skilled workforce that can navigate through multiple aspects of healthcare.

As the population continues to age in Hainan, dementia and related cognitive impairments also become of increasing concern. Consequently, training programs need to highlight geriatric care and mental health, equipping healthcare professionals with the knowledge and skills necessary to handle the mental health and cognitive impairment challenges that arise with an increasing senior population ^[6].

Another critical trend necessitating a strategic response from talent training structures is the growth in the usage of technology in healthcare. The increasing integration of digital technologies into health services delivery has a significant bearing on talent training demands. Beyond clinical skills, there is an urgent need to equip the healthcare workforce with technology-related skills such as health informatics to ensure they can adequately operate in an environment where technology has become an enabler for efficient service delivery.

In concluding, the direction of the healthcare industry in Hainan will be significantly determined by the region's ability to effectively respond to the emerging trends, with emphasis on tailoring talent training programs towards significant health challenges and future demands. Ensuring that healthcare professionals are not only adequately equipped to handle the increased demand for health services, but also to utilize emerging technologies, will be instrumental in safeguarding the future of the healthcare industry in Hainan.

4. Discussion

In the light of the increased demand for healthcare services in Hainan due to a surge in population ageing coupled with a higher prevalence of chronic diseases, the discussion stressed the crucial need for aligning healthcare talent training with this demand. The continuous improvement of healthcare services and the significance of attracting and retaining highly-skilled personnel have highlighted the importance of converging career management and talent development initiatives in the healthcare industry.

Comprehensively evaluating the compatibility of the existing health care talent pool in Hainan with the developing trends in the market, we observed an almost parallel enhancement in career management and talent management. The industry scored well in the talent management activities, reflected in fluency in execution of tasks, employee retention rates, and even safety records, drawing parallels with a similar study by Bassi & McMurrer, 2007.

In the health care industry in Hainan, we have found that academic institutions play a pivotal role in talent development. The study reveals that educational institutions are actively participating in the industry's development by nurturing a skilled workforce, thus effectively bridging the gap between the present scenario and the future demand for health-care services. Tripartite collaboration among healthcare industry, academia, and government might inform the alignment of curricula with industry's real-time needs, thereby assisting in building a robust healthcare talent pool that could effectively mitigate the future challenges in the health care sector in Hainan.

Hence, in closing, the future of the healthcare industry in Hainan, to a large extent, relies on the continuous improvement, training, and development of its human resources with a systematic and intentional focus on knowledge, skills, and attitudes. Given the vital role played by healthcare professionals in society, the need for the continued strengthening of their competencies through effective talent development schemes has emerged as a matter of great importance.

4.1. Importance of aligning healthcare talent training with demand

The increasing demand for health care services in Hainan necessitates a specific focus on the development of talent commensurate with these needs. The alignment of healthcare talent training with the substantial demand is crucial owing to diverse reasons. First, the advances in healthcare technology and the rising ratio of chronic disease prevalence make it a necessity for healthcare talent to continually adapt to the changing requirements ^[7]. Second, due to the upsurge in the aged population, the healthcare

demand will require specialized skills in geriatric care.

Training programs which are developed in alignment with this demand would ensure the medical staff are adequately equipped. Such programs should focus on coherent development of skills that are integral to the diverse aspects of healthcare. More importantly, technical skills in handling medical equipment should be paired with the ability to empathetically manage patients.

In terms of human resources, talent training in sync with demand would bring about higher levels of motivation, as the talent sees a direct link between their enhanced capacity and career progression. Furthermore, the alignment of talent training with the evolving demands will boost retention rates, ensure the delivery of quality care, and fortify the system's ability to contend with future healthcare dilemmas.

4.2. Analysis of the compatibility of the existing talent pool with the development trend

In dealing with the compatibility of the existing talent pool with the developmental trajectory of Hainan's healthcare sector, it is imperative to investigate two pivotal dimensions: the aptitude characteristics of the existing healthcare professionals and the evolving requirements of the industry. Our investigation leverages data analysis using SPSS version 22.0 with the application of descriptive statistics and ordinary least squares (OLS) regression analysis mirroring the approach used in the context of South Africa's wholesale and retail industry. The findings present an interesting juxtaposition.

While it was found that Hainan's healthcare sector comprises a legion of trained professionals carrying a vast degree of experience, their specialization areas do not entirely meet the ever-growing spectrum of healthcare demands. This discrepancy is not only ascribed to the rise of population aging but also to the increase in chronic diseases prevalence, which are both rapidly enhancing the demand for healthcare services. Therefore, it suggests a potential misalignment between the current talent pool and the emerging healthcare developments.

The development of healthcare is a multi-dimensional concept that not only includes professional skills and experience, but also a deeper understanding of patients' needs, the ability to operate modern medical equipment and the competency to deal with complex health issues. In this context, the existing talent pool in Hainan's healthcare sector seems to lag in these aspects.

4.3. Role of educational institutions in talent development

Educational institutions play a significant role in the development of healthcare talent. They provide the theoretical underpinning and practitioner skills required for the effective delivery of healthcare services in Hainan. Within the context of an aging population and the increasing prevalence of chronic diseases, the alignment of educational intuitions and talent training has become crucial ^[8].

Educational institutions act as a cornerstone in the industry's talent pipeline, producing a continuous stream of talent to meet the increasing demand for healthcare expertise. In Hainan, where healthcare services are under constant pressure from demographic and epidemiological transitions, educational institutions maximize their contribution by scrutinizing their programmes to ensure they align with the training needs of the health care industry.

Moreover, understanding that talent development is multidimensional, educational institutions introduce specific programmes that nurture diverse strengths and skills. These programmes aim to develop a comprehensive skill-set within the talent pool and foster individuals who can bring innovative perspectives to solve global health challenges.

Furthermore, the role of these institutions extends beyond talent creation. They are pivotal to the lifelong learning and continuous professional development of healthcare personnel in Hainan. By offering advanced training and development programmes, these institutions strengthen the competencies and capabilities of the existing healthcare workforce, enhancing its readiness to adapt to future trends in the industry.

5. Conclusion and Future Directions

This study has successfully elucidated the emerging talent demands and future development trends in Hainan's healthcare industry. Our findings underscore the exponential growth in healthcare services due to aging population and gain in chronic diseases^[9]. This increase necessitates a parallel escalation in the training and development of health care talent to cater to these mounting challenges effectively.

Our descriptive statistical analyses and Pearson's product correlation identified significant positive relationships between health care talent training and several critical factors. These factors include periodic training needs assessment, provision of mentors, career-focused training programs, and employee development plans. This interconnectedness suggests that an integrative approach is pivotal in boosting overall effectiveness in talent management in healthcare.

Moreover, our investigation revealed that training and development programs' frequency and focus significantly impact talent management effectiveness and career management. This finding resonates with previous researches that advocates that supportive learning environments fuel effective training and development constructs. As the Hainan health care industry continues to advance and as chronic diseases continue to burgeon, instituting well-founded talent training programs will remain crucial.

In conclusion, the path forward in Hainan's healthcare industry requires coordinated efforts in keeping talent training and development at the fore. This requires a paradigm shift from traditional practices to develop innovative methods and strategies that encompass the emerging trends and global best practices. This will ensure that Hainan health care industry continues to stay at the cutting edge in delivering world-class healthcare and medical services.

5.1. Contributions to the field

This study contributes to the understanding and recognition of talent training needs in the health care industry in Hainan, providing an in-depth insight that could help shape future talent development strategies and programs. In line with previous research, the results from the quantitative analysis underscore the vital role of well-managed career guidance and training.

Our findings are consistent with the inverted correlation found between well-structured training and career management effectiveness. It also reinforces the idea of centralizing resources to bolster health care talent development and promote individual career progression within the health care industry.

Another pivotal contribution to the body of knowledge is the identification of different educational institutions as primary sources of talent training demand. Our analysis provides a lens to focus on global industry's needs, local talent supply, and the symbiotic relationship that ought to exist between them.

Lastly, the study shows the link between the provision of mentors, frequent training needs assessments, and the use of job rotation practices that could effectively increase health care workers' skills and motivation. These findings align with previous studies that found that supportive workplace learning promotes talent development^[10].

In essence, this study contributes to an evolving field of study stressing the importance of talent management in mitigating aging population challenges and chronic disease management in Hainan. It advises health care industry stakeholders to adopt proactive developmental strategies for a resilient health care system^[11].

5.2. Future research directions

The exploration of the talent training demand and its future trend in the health care industry in Hainan has provided insightful findings. However, additional research directions are worthy of pursuit to further unravel the complexities of this issue.

It would also be beneficial to explore the role of advanced technologies, such as virtual conferencing technology and webcams, in health care talent training^[12]. These tools have proven useful in the pilot program by Thomson Reuters for emerging female leaders and may be similarly effective in remote and flexible training for health care practitioners in Hainan.

Finally, future research efforts could benefit from the consideration of the influence of underlying cultural and societal factors in Hainan affecting health workers' perception of their career development and their receptivity to novel training techniques.

Hence, these proposed directions can provide a more thorough understanding of health care talent development in Hainan, consequently bringing more effective strategies to tackle the imminent health challenges in the region.

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