



Research Article



A Review of Upskilling in The Healthcare Sector With Special Emphasis On Nurses

¹Simran Sethi, ²Dr. Vijit Chaturvedi, and ³Dr. Pushpa Kataria

¹Research Scholar, Amity Business School, Amity University, Noida Uttar Pradesh, India

²Professor-HR, OB & Psychology, Amity Business School, Amity University, Noida Uttar Pradesh, India

³Associate Professor, Management (HR & OB), Doon Business School, India

Abstract: The healthcare industry faces significant challenges, such as skills gaps, labor shortages, and the impact of the pandemic, making upskilling the workforce increasingly critical. Hospitals, as major providers of healthcare services, have a crucial role to play in preparing their employees for the long-term aspect and addressing required gaps. This study examines the current state of skilling, upskilling, and reskilling efforts in the healthcare industry, focusing on hospitals. The study aims to quantify the proportion of hospitals that have made consistent striving for betterment for the future of work through skilling, upskilling, and reskilling initiatives. Additionally, the study seeks to understand how training gaps are identified and how they are filled and readressed to fill the performance gaps. To achieve its objectives, a review and data collection were deployed. The surveys will be administered to a representative sample of hospitals across different regions in Delhi NCR to collect quantitative data on the state of skilling, upskilling, and reskilling efforts. In addition, the interviews will be conducted with key stakeholders, including hospital administrators, human resource managers, and healthcare professionals, to collect qualitative data on the challenges and opportunities associated with skilling, upskilling, and reskilling in hospitals. The findings of this study will have significant implications for the healthcare industry in India. By understanding the extent to which hospitals are making deliberate efforts to prepare their employees for the future of work, healthcare organizations can design and implement effective upskilling initiatives that enhance the quality of care, improve patient outcomes, and increase the resilience of the healthcare system. Additionally, the study will shed light on the challenges and opportunities associated with skilling, upskilling, and reskilling in hospitals, providing insights into the best practices and solutions that can be adopted to overcome these challenges and leverage the opportunities. In conclusion, this study will contribute to the existing knowledge on skilling, upskilling, and reskilling in the healthcare industry, particularly in hospitals. The mixed-methods approach used in this study will enable a comprehensive analysis of the current state of hospital skilling, upskilling, and reskilling efforts, providing insights into the challenges and opportunities associated with these initiatives. The study's findings will inform healthcare organizations in designing and implementing effective upskilling initiatives that enhance the quality of care, improve patient outcomes, and increase the resilience of the healthcare system, making a significant contribution to the future of the healthcare industry in India. The study emphasized some important approaches like identification of skill updating, approach, process, and expected outcome from same; it is an important and equal responsibility of all to ensure that L&D is not limited to a day-to-day function alone but should be integrated with vision and expertise of the organization to benefit for all stakeholders largely. Moreover, it is applicable at all levels, from country to organization-specific applications, as the sample targeted nurses as one segment of the great workforce of the healthcare sector, which is the country's base or support system.

Keywords: Upskilling, Skill Development, Nursing, Nurse Skilling, Health Policies, Health Administration

***Corresponding Author**

Dr. Vijit Chaturvedi , Professor-HR, OB & Psychology, Amity Business School, Amity University, Noida Uttar Pradesh, India

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I. INTRODUCTION

Modern medicine and healthcare practices evolve as services improve with evidence-based medicine and cutting-edge technology. The healthcare sector is not in a bubble and faces socioeconomic and political stress like any other. Add to this the unprecedented onslaught of a pandemic, and medical and care services must be incredibly agile, responsive, and adaptable to all the contingencies we can foresee. The healthcare sector has been under heavy strain over the past two years, and ahead of the unexpected and tragic events of 2019 and beyond, the workforce is already straining regarding the number of vacancies and the actual skill mix. was in crisis. It can be attributed to many social and economic factors and may take more work. Creating a workforce of people who are valuable, capable, confident, and capable of developing and leveraging their knowledge and skills to face adversity and seize opportunities is the key to effectively delivering and sustaining services. Help. Employees who receive regular training and the opportunity to expand their roles feel valued and typically welcome opportunities to learn and improve their practices. It is of value in medicine, where healthcare professionals have specific requirements, often specified in professional registration mandates, and must update their practices continually. Employers can build on existing skills to meet the changing demands of existing workloads and take advantage of existing and new opportunities to upskill or reskill their workforce to improve current and future can provide the best possible service. Creating new pathways for individuals to enter the allied health profession benefits us all in terms of quality of care, patient outcomes, and the vibrancy and resiliency of our healthcare system. Choi, Shin,2022¹.

I.1 Theoretical Perspectives on Nurse Turnover

Nurses upskilling, which aims at determining the application of the learned skillsets, focuses on to what extent are the workforce happy with the existing methods, policies, and environment at the organization. In this, the role of turnover intentions matters a lot as the learning application depends on how much they will remember and apply at the workplace. Thus, working for the retention and then application of the learned skill set is important. It helps in determining and even giving a message of organizational justice. It has been found that essential professional characteristic, which is an essential part of skill or upskilling, directly affects nurses' organizational support and competency development. Different types and stress levels are involved in an occupation like nursing, ranging from workload, handling families, dependents, turnover intentions, etc. These variables affect the turnover intention and, to a good extent, how creative or participative an organization is regarding skill application. Lee, Kim,2020² When the focus is on improvising the skill set of nurses with the developed mindset, it is important that it has to come along with all other benefits to motivate both monetarily and non-monetarily then only a sustained effort to push performance comes with the kind of workload they have it is difficult to expect the absorption and application of the learned skill along with the task which is over absorbing an, Heo, Hwang, Lee, 2022³

I.2 Management Style

After the severe crisis of COVID-19, almost every organization looks forward to training and upskilling their staff, especially the nursing, because they run as front runners when it comes to handling crises that too at a large level. To prepare for future readiness, we should have high-quality collaborative research, evidence-based gap analysis, high ethical adherence, data sharing, and deployment utilization. Gharaibeh, Saba, Frasco, Marali,2020⁴ Leadership styles profoundly affect nurses' satisfaction, autocratic or controlling management styles can lead to dissatisfaction and demotivation among nurses. In contrast, supportive and empowering management styles can improve nurse satisfaction and reduce turnover. In addition, it is a management style that effectively reduces nurse turnover, as it emphasizes empowerment, mentorship, and support. Specchia, Cozzolino, Carina, Pilla, Ricciardi, Damiani,2021⁵ . Leadership vision and style play a pivotal role in an organization's success. Based on a well-defined training mindset that focuses on organizational success after training people on intensive care skills, it was found that nurses demonstrated a high level of confidence in the critical areas which earlier looked difficult to understand. In addition, nurses preferred an education learning style that focussed more on peer learning which was easier, faster, and more engaging than other styles. Hampton, Outten, Miranda, Koirala, Davidson, Hager,2022⁶

I.3 Role Perception

Irrespective of all initiatives and strategies framed, the biggest challenge that affects performance towards upskilling and visible improvement in their work behavior is perceived as a spiritual feeling, the role of work environment factors., a cooperative attitude towards staff, and level of motivation. In addition, how much an organization spends on professional development also matters a lot; a lack of work autonomy will automatically affect people's performance and a push toward learning new. (Atifi, Abdullah,2014⁷. Nurses representing one of the largest workforces in the world are bound to get affected by several factors; when it comes to changed perceptions towards skill upliftment and development, it has been seen that a sense of satisfaction towards the career ladder, financial benefits associated, and a sense of autonomy associated affected the motivation towards a committed and attached emotion towards the workplace. Alijeedani,2017⁸ Leadership practices affect the outcome and work behavior of employees; when talked in relevance to professionals like nursing, it makes strong sense as it has been found that leadership practices, organization commitment, and job satisfaction are strong factors that affect retention, happiness, and well-being. The commitment towards the organization was the strongest factor that affected job satisfaction. These findings make sense to administrators, recruiters, and reporting heads regarding satisfaction. Moneke, Umeh,2013⁹

I.4 Empowerment

All strategies that aim to build decision-making facilitation, autonomous working, and mutuality of goals and interests help ensure that empowerment and togetherness are part of the organization's success. Leadership is a driving force behind

ensuring that empowerment through learning is effective. Thus hospital administrators and decision-makers are expected to take care of practical implications, and a sense of autonomy needs to be provided so that whatever is learned can also be implemented, thus ensuring an outcome that is more health-promoting and helps achieve health outcomes. It also will help in improving nurse productivity and better Laila Ahmad 2016¹⁰ Apart from looking at the organization's interest in better patient outcomes, empowerment should also be driven toward caring for different structure-related, psychological, occupational, mental, and health-related factors. When focused, these factors help preserve employees' mental health. When analyzed based on these three different factors, it was found that nurses scored low on psychological empowerment and a moderate level of structural and occupational mental health. Thus, three factors act as significant factors behind nurses' well-being. Saleh, Eshah, Rayan,2022¹¹ Amongst all other factors affecting performance is empowerment which in turn is affected by job stress levels and, to some extent, by demographic factors which decides an individual role and outcome. Out of the different factors selected by the researchers, it was found that empowerment affected job stress scores largely, and experience, marital status, and reward experienced by the employees decided their enthusiasm and morale behind the organization's success. It will help improve nursing task performance Kim, Young-Mi, & Yi, Yeo-Jin. 2012.¹² When nurses feel empowered, they are more likely to be engaged and committed to their jobs. Empowerment can be facilitated through access to resources, opportunities for professional development, and involvement in decision-making processes.

1.5 Individual Factors

Irrespective of all factors that affect the inclination towards preparedness of the future workforce, the requirement of training or upskilling depends on the individual's mindset and realization of organizational goals. Therefore, regarding individuals' role in ensuring a collaborative approach toward employee-employer understanding, it is important to focus on what affects upskilling for the healthcare sector. Training or upskilling is not solely dependent on how of skilling but also largely dependent on factors of training like ensuring the right training transfer, training content development, training infrastructure, interaction method, work environment, and role of facilitators along with possible difficulties in the process of training, if any. Thus it is the role of healthcare employees to ensure that maximizing training benefits is ensured to see active learning happening, which will also help in patient satisfaction.¹³ Management needs to take care that training leads to competency development as well. Certain factors play important roles, like experience in work, how much professionalism one follows, critical thinking approach, educational qualification, and personal factors of an individual. The measurement of the role of different factors that affect the competency development of individuals is important, and it needs to be continuously mapped by mentoring coaching, case studies, and leadership development programs. Alkorashy and Alanazi 2023¹⁴ There is the role of job-related factors and personal factors that affect satisfaction and commitment towards the workplace. Based on a study conducted found that important factors like vigor, dedication, and absorption of the

nursing staff are important to manage employee engagement. Senior by age participants were found to be more engaged than those with low experience. Similarly, certain issues like the creation of the right environment, various economic issues, and practical environments play a role in ensuring effective retention; these are certain individual factors that affect the attachment or commitment towards work and, as a result, also affect organizational performance. Shelley Anne Pringle 2017¹⁵

1.6 The Challenges for Upskilling and Works conducted.

Understanding the role community care plays in National health transformation, it is obvious that the nursing skilled workforce's role is unparalleled and important. But irrespective, the thoughts and policies that aim at upskilling include fear of isolation, delegation, a high level of responsibility, and ensuring enthusiasm and safe practices. Gulani, Paas,Chundler 2014¹⁶ 2. More work must be done to develop an appropriate training design, identify trainees' capability to absorb newly added knowledge and determine how the instructional design aligns with the required competencies. There is a need for clarity on the mental frame and mental load that the trainees can absorb. Thus, the role of developing an appropriate instructional framework is important(<https://pubmed.ncbi.nlm.nih.gov/25087524/>).¹⁷ 3. In context to India, there is a 1.7 trained nurse workforce, and there is a need to add more than 4 million new nurses. Moreover, with the rise of requirements for digital and a rising global competent workforce, there is a dire need to develop the right knowledge set and skills to develop the right competence, irrespective of all effort's challenges. The primary challenges include ensuring the technological competence of all, which is a big task in understanding differences in knowledge and skill level. There is a high need to develop efficiency and improve the right set of safety methods so that the same can go to patient outcomes. Another challenge is acquiring the right clinical experience. It is important to follow up and guide with both subjective and objective evaluation but developing the right framework for the same takes work. Another important challenge is developing the right attitudes among nurses, the first people with whom customers interact. Finally, there is a complete set of important skills, ranging from social to communication to thought and critical skills. Thus, upskilling, reskilling, and skilling are equally important, for which a tight set of frameworks is still sought. The availability of correct infrastructure is also significant to learn and adapt to a new environment; the role of creating such an ecosystem is thus highly relevant. Building nursing education as a certified program is equally significant, ranging from simulator-based to preparing industry-ready professionals; thus, the challenge is how to create a pool of candidates as healthcare professionals by which a motivated, competent, and capable workforce can be created. Chhugani M, James MM. <https://www.nationalskillnetwork.in/top-5-challenges-faced-by-nurses-and-how-to-address-them/>¹⁸ The area which needs a quick watch and exposure is to understand how demographics, including education level, matter when it comes to an effective outcome, the challenge being differences in educational levels, challenges during the internship program, and the proper evaluation of the same. Thus, one area can be planning the internship correctly to develop the future workforce. Judd et al. 2018.¹⁹ It is also important to see how a lack of workforce

and quality care is important to ensure the quality of healthcare services. The other challenges include changes in demographic structure, education, and service gaps, the role of technology in different facets, cooperation from healthcare providers, and lack of motivation. There is, at times, even some kind of mental agitation in a violent form due to overpressure. The workload plays an important factor when it comes to patient handling. When pressure is less, the handling can be effective, and when the load is high, it again will not support the situation. Again, several health hazards associated with hospitals while working pose a big threat; the level of occupational safety and hazards play a strong role in leadership development to which the exposure is higher. The timing of the shift is again appointed of botheration for nurses along with a high deficiency of oneness or collaborative effort when it comes to the indirect effect of different incidents happening at the hospital, and the care of this workforce, which is most exposed, is also lacking. They must also recognize their efforts as they play an important role in inspection or auditing during such assessments. However, it alone does not end here. There are other roles apart from their main nursing roles that they display, like recording documents, billing and diet management, and other related work of office, patient, and administrative work. Mosadeghrad et al. 2019²⁰ Job satisfaction, work-life balance, and personal values can contribute to nurse turnover. Nurses dissatisfied with their jobs or feel that their work needs to be aligned with their values are more likely to leave their positions. Additionally, nurses who have difficulty balancing their work and personal lives may be more likely to experience burnout and turnover. Strategies for Reducing Nurse Turnover: Healthcare organizations can implement several strategies addressing the abovementioned theoretical aspects to reduce nurse turnover. These strategies include:

- Implementing transformational leadership practices that emphasize empowerment, mentorship, and support.
- Ensuring that nurses understand their roles and have clear expectations of their responsibilities.
- Providing access to resources, opportunities for professional development, and involvement in decision-making processes
- Improving work-life balance through flexible scheduling and other policies
- Creating a positive and supportive work environment that values nurses and their contributions

1.7 Objectives

- To understand how upskilling is progressed and implemented at selected hospitals,
- To assess the outcome or benefits of upskilling the workforce.
- To understand different strategies for ensuring effective upskilling

1.8 Statement of the Problem

Even if it is one of the important elements for organizational success, upskilling still needs to be worked on for internal and external reasons.

1.9 Rationale Behind the Study

Upskilling is the key to the flourishing of all industries in an increasingly competitive world. The healthcare industry in the US today faces many challenges, such as a shortage of nurses/doctors, difficulty finding competent healthcare workers, and more. Upskilling the workforce has become a trend in the healthcare industry and can solve several of the industry's challenges. A lack of upskilling can hinder the progress of healthcare professionals and the industry. The numerous consequences include risks to patient safety, legal issues, high turnover, reduced employee productivity, low employee morale, and other irreversible problems.

1.10 Literature Review

Skilling, reskilling, and upskilling are global currencies for organizations seeking a competitive advantage. Therefore, a modern organization must continually invest money and time to improve its workforce so that workers can easily adapt and adjust to the new work order, especially given changing labor market dynamics and uncertain futures or upskilling at some point (learning current tasks more deeply). It was also found that upskilling nurses in evidence-based practice can improve patient outcomes and reduce healthcare costs. The study emphasized the need for healthcare organizations to provide opportunities for nurses to develop their research skills and integrate evidence-based practice into their clinical decision-making. It was found that upskilling nurses in interprofessional collaboration can improve patient safety and satisfaction. In addition, the study highlighted the importance of healthcare organizations promoting interprofessional collaboration through training and development programs, which can ultimately lead to better communication and coordination among healthcare teams. Another study conducted by McAndrew et al. 2020²¹ emphasized the importance of upskilling nurses in palliative care. The study found that palliative care training programs can improve nurses' knowledge, skills, and confidence in caring for patients with life-limiting illnesses. The study also highlighted the need for healthcare organizations to provide ongoing support and education to ensure nurses are equipped to provide compassionate and effective end-of-life care. Finally, a study by Michaelis et al. 2019²² found that upskilling nurses in mental health can improve their ability to identify and manage mental health disorders among patients. The study emphasized the importance of healthcare organizations providing ongoing training and support to nurses in this area, given the high prevalence of mental health disorders in the general population. Several studies have examined the importance of upskilling in the healthcare sector, focusing on nurses. For example, a study conducted by Jones et al. 2019²³ found that upskilling can improve patient outcomes and reduce healthcare costs. The study further highlighted the importance of developing a continuous learning and development culture among healthcare workers to ensure they remain competent in their roles. Another study conducted by Mullen and Murray 2020²⁴ found that upskilling can positively impact job satisfaction and retention rates among nurses. The study emphasized the need for healthcare organizations to provide opportunities for nurses to develop new skills and knowledge through training and development programs. A systematic review conducted by Kohtz et al. 2021²⁵ found that upskilling

programs can improve nurses' clinical skills, confidence, and job satisfaction. The study further highlighted the importance of incorporating technology-based training methods, such as simulation and e-learning, to enhance the effectiveness of upskilling programs. A study by Duffield et al. 2020²⁶ emphasized the importance of upskilling nurses in leadership and management. The study found that leadership development programs can improve nurses' confidence, communication, and decision-making skills, ultimately improving patient outcomes. Chakma and Chaijinda 2020²⁷ discovered in their research on The Importance of Reskilling and Upskilling the Workforce that investing in these employee development activities has lower cost implications than recruiting and training new workers, and it fine-tunes the workforce to meet the organization's labor needs. Many healthcare systems have prioritized reskilling existing workers as a strategy. Employee retention increases when employees are retrained from non-clinical roles to

clinical ones. However, as nurses have become overburdened, clinical educators' ability to run these programs in hospitals has come under strain. Forward-thinking institutions are seeking external partners to help with various aspects of delivering these programs on a large scale and consistently. Sheila McElroy, 2022.²⁸ Healthcare continuously advances and changes, and practitioners must keep pace with training and new information to serve patients best. As noted in the Future of Nursing 2020-2030 report, it's important that organizations create pathways for nurses to learn new skills/concepts and expand their knowledge of current skills/concepts as health care and nursing care advance. Indeed, research shows that providing nurses with professional development opportunities increases satisfaction and retention. Furthermore, in today's competitive market, nurses carefully consider opportunities for advancement when deciding where to apply. Kristin Oliver 2022²⁹.

Table 1-Process of systematic review

Stage 1	Identify the right research questions to decide the right search
Stage 2	Identify the most relevant searches based on factors
Stage 3	Identify the right inclusion and exclusion criteria
Stage 4	Identify theme-based searches to make a holistic understanding based on previous research.
Stage 5	Collating the final data and presenting results
Stage 6	Based on an expert's opinion deciding the outcome

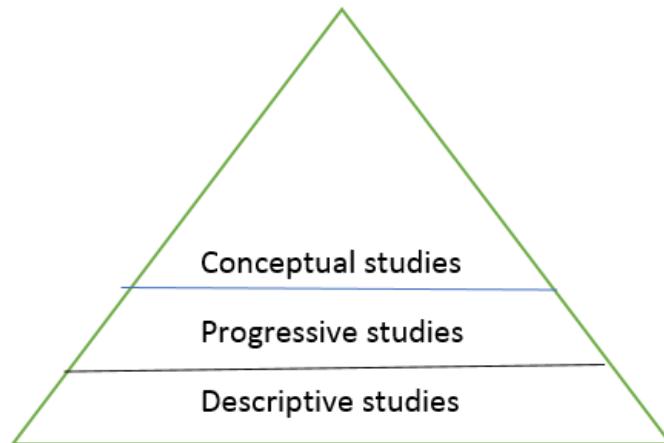


Fig 1- Conceptual Representation

The studies around upskilling the nurses and healthcare employees included conceptual studies which focussed on different theories supporting the factors affecting upskilling, which were either organizational factors or individual factors that impacted organizational outcomes. In addition, progressive

studies in either white papers or perspectives or reviews of systematic studies were included. Finally, descriptive studies focused more on different identified variables and how they impacted others constructed based on the study's objectives.

Table 2 summary of review of literature

Author and Date	Objectives	Outcome
Suri, 2021	Role of Upskilling Competencies	<ul style="list-style-type: none"> Important to assess uncertainties of future Changed market dynamics Consistent skill upgradation
Judd et al. (2018)	Evidence based practices for patient outcome	<ul style="list-style-type: none"> Role of research skills Developing analytical and reasoning skills
Mosadeghrad et al. (2019)	Competencies and skill set for Nurses	<ul style="list-style-type: none"> Role of interpersonal collaboration Safety at workplace and overall work satisfaction Role of communication and coordination at workplace
McAndrew et al. (2020)	Identifying specific area for Nurses upskilling	<ul style="list-style-type: none"> Role of ongoing support and coaching on part of leadership Role of speciality-based training
Gillespie et al. (2018)	Focussing on mental health and behavioural skills	<ul style="list-style-type: none"> Trained behavioural aspect customer satisfaction and brand satisfaction with rapport building of patients improves
Jones et al. (2019),	Innovative culture and outcome of upskilling at work	<ul style="list-style-type: none"> Patients high satisfaction Reduced cost due to skill development Role of innovative work culture
Mullen and Murray (2020)	Training gap analysis of Nursing staff and benefits of upskilling	<ul style="list-style-type: none"> Retention rates are improvised High job satisfaction rate
Kohtz et al. (2021)	Upskilling program based on needs and career requirements	Better Clinical skills, Confidence and Job Satisfaction
Duffield et al. (2020)	Leadership development	<ul style="list-style-type: none"> Effective and improved patients' outcome Upliftment of communication, confidence and decision making
Chakma and Chaijinda (2020)	Benefits of upskilling and reskilling	<ul style="list-style-type: none"> Improved efficiency Lower costs Better job rotation Talent multiplication
Shelia McElroy,2022	Partnership in training and upskilling	<ul style="list-style-type: none"> Need of forward-thinking approach for development Healthcare advances for organization development
Kristin Oliver (2022)	Gap analysis between high demand and organization upskilling program preparation and its effectiveness	<ul style="list-style-type: none"> Improved patient outcome and effective healthcare service delivery
Kim,Cho,2022	Factors affecting upskilling challenges and job satisfaction dimensions	Improved organization behaviour and high growth opportunities with better emotional attachment.
Devendranath, Setiyadi,2021	Role of organization factors in upskilling	Important factors like work setting, intrinsic work setting, growth opportunities and career advancement
Hijuan,Yongpin,Bibo,2006	Role of psychological determinants in learning	Equality in opportunities and vision of management for workforce development
Jasinski,2022	Role of Social support at workplace	<ul style="list-style-type: none"> Improved employer employee relationship Team performance and Collaborative work approach
Emmanuel, James,2020	Upskilling and employee retention	<ul style="list-style-type: none"> Better work opportunities Work enrichment Socio cultural realities awareness for equity and fairness
Chien, Lee, Chang, Lee, Chow,2022	Upskilling outcomes	Consistency in learning and development

Johnson, Shaiju,2002	Leadership effectiveness and role of leaders in upskilling	<ul style="list-style-type: none"> • Equal development in personal and professional development. • Importance of building leadership effectiveness
Azar,2021	Removing challenges of social inequalities	Focus on socially marginalized and health inclusion at workplace
Wolf,Perhats,Delao,Burchillm, Callihan, Edwards, Frisch,Moon,2022	Role of speciality in promoting upskilling	<ul style="list-style-type: none"> • High acceptability of staff for learning new skills • High directional development
Sodeify,Vanaki, Mohammadi,2013	Psychological factors in skilling	Importance of work commitment and self esteem along with role of psychological empowerment.
Mlambo,Silen,Mac Grath,2021	Macro organizational factors affecting upskilling	<ul style="list-style-type: none"> • Improved decision making • Effective data sharing • Resource sharing Lifelong learning
Gharibeb,saba, Frasco, Marali,2020	Evidence based practices in learning	Importance of ethical integrity in inclusive development
Philip,Babu, Vas,2018	Challenges of talent drain or stability	<ul style="list-style-type: none"> • Improved upskilling leads to high self esteem • Right spirit of work through effective organization policies.

2. MATERIAL AND METHODS

A self-structured questionnaire was designed based on the important constructs derived after the literature review. This questionnaire aims to broadly identify training needs among nurses, the gaps, and the effectiveness of upskilling and reskilling in reducing the gaps. It was a self-administered questionnaire in which nurses could assess each competence within a Likert-type scale from 1 to 10,

2.1 Data Selection

A descriptive research design was used in this study using an inductive reasoning approach because the researcher's sole interest was to observe, measure, and describe the skilling/upskilling/reskilling phenomenon in Delhi/NCR without any intention of controlling or changing any variable. A survey was distributed via a Google Form to around 120 people who served as the primary data collection tool. Purposive sampling targeted those influencing recruitment and employee development, such as managers, supervisors, human resource officers, owners, directors, chief executives, and organizational trainers of different hospitals across Delhi/ NCR. The questionnaire consisted of both closed and open-ended questions. Purposive sampling is appropriate when the researcher intends to yield "information-rich" data by identifying and selecting potential respondents who are knowledgeable and experienced about the subject matter, which, in this case, is skilling, reskilling, and upskilling a workforce.

3. RESULTS

The study aimed at understanding how upskilling is progressed and implemented at hospitals and the respective outcome of upskilling the workforce, followed by understanding different strategies for ensuring effective upskilling as needed. Based on

the literature review and analysis, the following were the findings-

1. From the demographics, it was clear that the maximum number of participants was 35-44 years old, and the least representation was from 18-24 years.
2. From the gender composition, it was found that most respondents were female as nursing staff requires an empathetic and sympathetic attitude and technical knowledge, with females 88.3% and 10.6% males.
3. Further, the maximum education was a bachelor's degree. And minimum qualification was Doctorate which means very rarely is the qualification with a higher degree.
4. Concerning the current job title, Registered nurses were 61.7%, and the remaining nurses were licensed practical nurses, certified nursing assistants, and nurse practitioners.
5. Concerning upskilling and reskilling, 69% of the respondents (nurses) received formal education, and 30.9% had not received formal training.
6. Type of education, with this parameter, 55.3% of the respondents had received continuing education courses and 23.4% had attended in-person workshops and training sessions, 46.8% had attended online courses and webinars, and 24.5% had received online training.
7. When asked if they are happy with the adequacy of training, 52.1% of respondents agreed, and 47.9% did not agree, which was more or less similar and indicated the need for formal education largely.
8. When asked reason for inadequate training, the respondents shared that either it was because of time constraints (24.4%) or it was because of lack of financial support (17.8%), or lack of support from the employer (12.2%), lack of information about available opportunities (15.6%). It indicates that reason of inadequate training or gaps of upskilling some of which were also found in literature gap were true.

9. To understand if the nurses wish to change their profession, it was found that 41.5% of nurses said yes, they look for such opportunities, and 58.5% said no, they would not like to change but rather will look for opportunities to upskill themselves further.
10. To understand different areas in which they can be upskilled and when asked which all specialization they belonged it was found that critical care represented 30.8%, paediatrics (20.5%), oncology (15.4%, Mental health (10.3% and others 23.1% thus the majority of the respondents were from critical care.
11. When asked which factors affected their decision to pursue a new specialty, respondents agreed that interest in the specialty (92.3%), the opportunity for career advancement (61.5%), the potential salary increase (51.3%), availability of jobs in a particular specialty (43.6%).
12. When asked if they understood upskilling is important, 91% agreed that they needed it, and 9% said they didn't. Thus, it is a positive indication that a maximum of nurses agreed to the role of upskilling.
13. The most popular upskilling programs participants have participated in are clinical skills training (38.3%) and leadership training (36.2%).
14. Most participants (55.3%) feel that the skills they learned in upskilling programs most apply to their daily work as a nurse.
15. The top ways that upskilling has helped participants in their role as a nurse are improved patient outcomes (68.1%) and increased job satisfaction (57.4%).
16. When asked how they feel upskilling helps improve organization culture, it was found that morale and motivation (34.1%) and increased collaboration and teamwork (31.9% were major factors where they felt upskilling brought change.

4. DISCUSSION

The present paper aimed at understanding the factors that affected upskilling of nurses and the challenges they faced when it comes to upskilling themselves; it makes sense as upskilling facilitates many important dimensions like Jobs satisfaction and a good attachment to the profession; it is also found to improve the organization behavior Kim, Cho,2022³⁰. An organization needs to understand factors that promote development, like work setting, growth opportunities, and career advancement, which motivate employees to believe in upskilling Devendranath, Setiyadi,2021³¹. The focus must be equally on the organizational work setting, intrinsic job characteristics, and psychological determinants that affect satisfaction through upskilling Hijuan, Yongpin, Bibo,2006.³² Once the factors supporting an environment of growth and development are prepared, it is also important to focus on the role of social support at the workplace, which helps in improving positive relationships, empathy towards peers, and better creative ways of work performance Jasinski,2022.³³ Thus, the role of the work environment is important when it comes to satisfaction which benefits stakeholders both inside and outside; salary is amongst the most fundamental aspect that affects an interest in upskilling. To retain and avoid attrition issues, healthcare effectiveness is important, and whether it is an international or domestic workplace, socio-cultural realities are important. Emmanuel, James,2020³⁴ Another important

dimension that ensures maintaining the vigor towards upskilling is developing a sense of achievement motivation; training needs identification, developing a willingness to participate in same along with a strong empathetic attitude towards professional and personal learning are factors that affect the choice and consistency in learning and upskilling Johnson, Shaiju,2002.³⁵ There is a defined and positive role of age with increased job satisfaction and interest towards nurses' skill development, competencies which matter largely to shape future and workplace learning were found to be increasing with increased age and experience and effectiveness of the leadership program been organized for nurses was understood to be an important factor for organization development. The upskilling and availability of talent in nursing are important from the country's perspective as well to ensure social inequities don't exist and any socially marginalized part of society is not affected both in terms of quality and quantity; we have a skilled workforce available, the role of policymakers, administrators in such situation play a very vital role, this slowly and gradually helps in building health equity. Azar,2021.³⁶ The role of specialty also makes a difference for interest involved in upskilling; researchers have indicated that divergent clarity on the role expected, awareness about the situation's criticality, and the staff's acceptability are important whenever it is about the right directional development. Wolfet. al³⁷. Understanding the positive role of psychology and work experience at the workplace, it was important that certain factors that defeated the vigor and dedication needs to be addressed, like low recognition, working conditions, lack of giving credit, and a lot of other documentation work; this all affects self-esteem and even blocks the time available to learn new things Modeify, Vanaki, Mohammadi (2013)³⁸ The role upskilling and development play cannot be undermined and, similarly, cannot be overworked by some factors. It is a combination of macro factors like the culture of the organization, work conditions, perception of barriers, and core values involved, along with how, as a decision-maker or administrator, a sense of professionalism and a culture of lifelong learning can be created. (Mlambo,2021,³⁹ Another important point is in the race and speed of redressal of issues with patients, the health of the nurses themselves with risk exposure is always at stake. It is thus important for the management of hospitals to take care of how this chaos of managing time, patients, and services with less time for training can be assessed along with a feeling of inadequacy and sometimes insufficient strategies. Whether it is at the country level or the organizational level, factors that shape the effectiveness and outcome or impact of any program is inclusive of evidence-based practices, data sharing, resource sharing, a well-defined ethical integrity Gharibeb, Saba, Frasco, Marali,2020.⁴⁰ Global and national boundaries, wherever the focus of study, the role of work climate, supervisory support, the role of community perception and acceptance, and level of satisfaction were among the primary factors that affected upskilling effectiveness largely Jayasuraiya, Whittaker, Halim, Matineau,2012⁴¹. Right planning of numbers and required competency development for upskilling were among the important factors affecting organization effectiveness; the role of specialization, night shifts, level of education, and working environment was among the top factors that geographically affected performance and interest in upskilling. Lai, W., Jin, R., He, R. et al.,(2021)⁴² All factors understood and well researched on the work setting, the role of leadership, or any

other aspect, but another important challenge is maintaining control of the drain of this talent in the form of migration thus at a country level right from recognition to salary level, social acceptance, self-esteem, and work-life balance are amongst the factors that play a vital role in learning and its demonstration with the right spirit. Philip, Babu, Vas, 2018⁴³

5. CONCLUSION

With the increased advent of technology-based working and health equity being a priority for all sectors, it is important to upskill the workforce to meet customers' rising expectations. In the medical and healthcare industry also, telemedicine, the application of virtual reality and augmented reality, and electronic gazettes available at affordable prices, along with ensuring feedback from customers for improving services to the retention of customers, it is important to upskill the workforce. Health care as an industry is amongst the most promising employer deploying a huge workforce and equally in demand large workforce every year, whether of doctors, 600000 per year, or nursing staff and support services, in such a sector which is promising for building the economy and growing at a CAGR of 22% and supporting related businesses, whether medical tourism or rebuilding Primary health centers or the insurance itself, all need a prepared and competent workforce. The healthcare system has numerous challenges concerning increased technological developments, a growing population, an aging population with increased healthcare needs, and limited staffing and financial resources. To meet these challenges, there is a need to ensure that health professionals, allied teams, and managers have the knowledge and skills to improve and develop healthcare services with a greater emphasis on patient-centered care, holistic practice, and value for money. However, these initiatives success relies on acquiring and application new skills by health professionals and managers. Moreover, healthcare organizations may need more support in implementing education and training initiatives. For instance, staff may express an interest in attending courses, but if they are provided free of charge and without certification, enthusiasm may wane, and people may fail to attend, particularly when competing pressures exist. To address these issues, policymakers and healthcare organizations must prioritize education and training initiatives to ensure that health professionals and managers have the necessary skills and knowledge to improve healthcare quality. In addition, there is a need for ongoing professional development programs that are tailored to the needs of individual healthcare professionals and managers. Furthermore, healthcare organizations need to consider innovative approaches to education and training, such as simulation-based training, e-learning, and coaching. Online

courses and other distance learning approaches may be useful and popular, especially when 'blended learning' approaches that include face-to-face tuition are used. - Mentorship, supervision, and audit and feedback cycles may be beneficial as training components, but they are unlikely to result in long-term changes when used alone. Thus it is important to identify the need, process, approach and expected returns from the training while focusing on the skill gaps and how they can be circumvented so that employees' satisfaction, well-being, enthusiasm, and attachment to the workplace are in line for mutual benefit.

5.1 Additional thoughts for future research

Based on the research mentioned above, it was understood how upskilling plays a pivotal role in an organization's success and well-being regarding skill development and effectiveness. However, several related topics and areas can be explored further to understand the rapid technological growth and advancement happening in and around the respective vertical. The role of technology with increased consumerism style and approaches and rising aspirations have made health care amongst the most promising and deliverable centric where the stakeholder is not limited to doctors or nurses but the support system right from logistics to instruments to ambulance services, blood banks, disposal of equipment post no use a conserving environment. The role of advancement of technology, whether it is the use of google lens wearables virtual reality, to real-time training advancement in the medical field, has led to a new direction in multiple aspects of research related to advancement, and gaps/challenges can also be studied accordingly. The behavioral and attitudinal restructuring required to ensure behavioral, physical, mental, psychological, and spiritual well-being can also be areas where research can be done. Further, the Government takes various initiatives, and impact analysis of these on stakeholders and social improvement can also be one of the outcome-driven areas of development through research.

6. AUTHORS CONTRIBUTION

For the paper, Dr. Vijit Chaturvedi built the frame and worked for discussion; Ms. Simran conceptualized, collected data, and analyzed the findings. Finally, Pushpa Kataria reviewed the findings, Literature review, and overall paper assessment.

7. CONFLICT OF INTEREST

Conflict of interest declared none.

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