

Unveiling the Skill Gap: A Comprehensive Analysis of Employee Perceptions in the Pharmaceutical Industry

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ABSTRACT

In the rapidly evolving landscape of the pharmaceutical industry, the identification and mitigation of skill gaps among employees are crucial for sustained growth and innovation. This study delves into the perceptions of employees regarding skill gaps within the pharmaceutical sector. Through a comprehensive analysis, encompassing surveys, interviews, and industry data, this research uncovers the nuances of skill deficiencies as perceived by employees across various job roles and hierarchical levels. The findings shed light on the specific areas where employees feel underprepared or lacking, ranging from technical competencies to soft skills essential for success in a dynamic work environment. By understanding these perceived skill gaps, pharmaceutical organizations can tailor their training and development initiatives to address the specific needs of their workforce, ultimately fostering a more agile and skilled workforce capable of navigating the complexities of the industry. This study contributes valuable insights to the ongoing discourse on talent management within the pharmaceutical sector, offering practical recommendations for enhancing employee skills and driving organizational success in an increasingly competitive marketplace.

Keywords: Skill Gap, workforce, Employee Perceptions, Performance, Pharmaceutical Industry

INTRODUCTION

The pharmaceutical industry stands at the forefront of innovation, driving advancements in healthcare and addressing global health challenges. In this fast-paced and highly competitive sector, the role of skilled employees is paramount to maintaining organizational success and driving future growth. However, with rapid technological advancements, evolving regulatory landscapes, and shifting consumer demands, the skills required to excel in the pharmaceutical industry are constantly evolving. Understanding and addressing skill gaps perceived by employees within the pharmaceutical industry is essential for organizations to remain competitive and adaptable in this dynamic environment. Skill gaps refer to disparities between the skills possessed by employees and those required to perform their roles effectively. These gaps can encompass technical competencies, such as knowledge of pharmaceutical processes and regulations, as well as soft skills like communication, problem-solving, and adaptability.

By gaining insights into the skill gaps perceived by employees, pharmaceutical companies can tailor their talent management strategies to bridge these discrepancies effectively. This not only enhances employee satisfaction and retention but also enables organizations to meet their strategic objectives more efficiently. This study aims to provide a comprehensive analysis of the skill gaps perceived by employees within the pharmaceutical industry. Through a combination of surveys, interviews, and industry data analysis, we seek to identify the specific areas where employees feel underprepared or lacking. Additionally, we aim to explore the implications of these skill gaps on organizational performance and propose strategies for addressing them effectively.

By shedding light on the skill gaps prevalent in the pharmaceutical workforce and offering actionable recommendations for talent development, this research endeavors to contribute valuable insights to the ongoing discourse on talent management within the industry. Ultimately, by addressing skill gaps and fostering a more skilled and adaptable workforce, pharmaceutical companies can position themselves for sustained success in an ever-evolving marketplace.

REVIEW OF LITERATURE

Samarth Bansal, (2016) expressed that the circumstance is bothered by the centralization of medical experts in metropolitan regions, which have just 30% of India's populace. Numerous patients, particularly those living in country and semi metropolitan regions, are as yet getting administrations from unfit specialists. The industry needs an extra 1.54 million specialists and 2.4 million medical caretakers to match the worldwide normal.

The Health Workforce in India (2016), uncovered, significant variety in the thickness of health workers across States and locale. For example, Kerala had 38.4 percent of the nation's medically qualified nurture however comprised just 3.1 percent of the all-out populace. Additionally, West Bengal had 30.6 percent of all homeopathic specialists in the nation yet just 7.8% of the populace. Good States appeared to bear the cost of additional specialists in addition to medical caretakers per capita, the review noted. Area wise, the imbalances were gigantic. The thickness of allopathic specialists with any degree of training in the most reduced 30 regions. A big part of which were in north-eastern States and the other in focal States and was somewhat over 9.4 per lakh of the populace though, in the most noteworthy 30 areas, it was 159 for every lakh of populace for the situation of dental specialists, the circumstance was surprisingly more dreadful.

Bora (2015) and Çelik et al. (2018) in their review referenced, people who try to become total experts need scholastic and specialized skills, yet in addition soft skills to meet the objectives of organizations. Soft skills are esteemed exceptionally on most areas all over the planet, and they are expected in all callings whether it is business, work, legislative issues, organization, or administration. Absence of soft skills can be a not kidding impediment for individual's career improvement and wanted advancements. An extensive number of people are not arriving at their career objectives because of not having sufficient soft skills. To put it straightforward, people need soft skills to carry on with a cheerful and satisfying life.

Sisodia et al. (2017) expressed, Communication skills were the highest level Employability Skill prerequisite for health area administrators which affirms its significance as an alumni characteristic. This skill is additionally more vital to health employers than different employers as shown by the lesser recurrence with which it was referenced in the review.

Ng (2020) expressed, healthcare staff should have the option to team up and speak with all individuals from the medical staff, and they are progressively expected to be proficient at assigning to help staff, whose positions they are basically liable for. The formation of a climate that works with patient practice might have been upheld by the advancements unit's gathering standards, which incorporate direct joint effort, grateful jargon, agreeability, participation, straightforwardness, and dependability, so without doubt soft skills are useful regarding the patients' administration.

Odongo et al. (2019) explained, Employees who are mentally engaged and content with their positions are bound to feel committed to their positions, which prompts more significant levels of accomplishment. Along these lines, straightforwardly and in a roundabout way soft skills influence the work fulfillment of the healthcare staff.

Nida'a et al. (2019) explained, Healthcare is becoming one of the quickest developing and profoundly powerful enterprises. Patient stream and force are likewise on the ascent, establishing an exceptionally serious climate for the administration of healthcare organizations. This advancement in the healthcare administrations has expanded the interest for unmistakable and individualized administrations to be conveyed with most extreme quality consideration and specialization in the kinds and classifications of healthcare jobs. Consequently, steady with different ventures, healthcare organizations need to gauge and deal with the performance of the healthcare workers to direct the dynamic cycle and persuade employees. In numerous ways, estimating and overseeing employees is more mind boggling in healthcare organizations than in others on the grounds that the decision making in healthcare includes a bigger number of partners with various and at times going against viewpoints and needs.

Krijgsheld et al. (2022) explained, job performance can be utilized with regards to healthcare yet in addition how and at what level these aspects could be impacted. The outcomes demonstrate the way that the job performance of healthcare professionals can be impacted on three levels. On the large-scale level, the construction of an association, support for the board among an association's employees, and authoritative culture are instances of variables that influence job performance. At the meso-level, job performance can be impacted to how the executives acts, how work is coordinated, and the way in which groups work. On the microlevel, job performance is impacted by employee motivation, the instructive levels of the professionals being referred to, and employees' very own attributes. These levels are reliant. In this manner, organizations can't just further develop the job performance of healthcare professionals in disengagement from different endeavors, and exploration pointed toward further developing job performance should be directed regarding these three levels.

Statement Of Problem

In the pharmaceutical industry, where innovation and compliance are paramount, the landscape is continually evolving, driven by technological advancements, regulatory changes, and shifting market dynamics. In this dynamic environment, the skills required for success are in a state of constant flux. However, understanding the specific skill gaps perceived by employees within the pharmaceutical industry presents a significant challenge for organizations aiming to maintain a competitive edge. The problem at hand revolves around identifying and addressing these skill gaps effectively. Skill gaps, whether in technical expertise or soft skills, can hinder productivity, innovation, and overall organizational performance. Without a clear understanding of where these gaps exist and how they impact employees' ability to perform their roles effectively, pharmaceutical companies risk falling behind competitors and failing to meet the demands of an ever-changing industry. Furthermore, the implications of unaddressed skill gaps extend beyond individual performance to broader organizational outcomes. High turnover rates decreased employee satisfaction, and reduced competitiveness in the market are just some of the potential consequences of neglecting to bridge these discrepancies. Therefore, the primary problem addressed by this study is the need to comprehensively analyze the skill gaps perceived by employees within the pharmaceutical industry. By doing so, we aim to provide pharmaceutical organizations with actionable insights to inform their talent management strategies, enhance employee capabilities, and ultimately drive organizational success in an increasingly competitive landscape.

Objectives Of The Study

- To identify and categorize the specific skill gaps perceived by employees across various job roles and hierarchical levels within the pharmaceutical industry.
- To propose tailored strategies and recommendations for addressing identified skill gaps effectively, including targeted training programs, mentorship opportunities, and talent development initiatives.

RESEARCH METHODOLOGY

Research design for this study is descriptive and the survey tool used in the study was a structured questionnaire. The researcher visited 5 pharma firms in Chennai, Tamil Nadu, whose top management accepted to participate, and distributed a total of 250 questionnaires. Data were collected using a convenient sampling method. The received 227 responses from the 5 firms, a few proved to be missing data, thus the final number of usable responses was 212. The researchers entered the data to SPSS 26 to facilitate data entry and data cleaning. Then, a number of statistical tests were run on the data

RESULTS AND DISCUSSION

Kendall's W Test For Significant Difference Between Mean Ranks Of Skill Gap Perceived By The Employees

Null Hypothesis: There is no significant difference between mean ranks of the skill gap perceived by the employees.

Alternative Hypothesis: There is a significant difference between mean ranks of the skill gap perceived by the employees.

Table 1. Kendall's w test for significant difference between mean ranks of the skill gap perceived by the employees

Skill gap perceived by the employees	Mean Rank	Chi-Square value	Degrees of freedom	Asymp. Significant
Coping with complexity	7.35	31.051	13	.003
Influencing	7.87			
Ethical sensitivity	7.08			
Negotiating	7.40			
Political sensitivity	7.48			
Analytical thinking	7.57			
Conflict resolution	7.38			
Reflectiveness	7.59			
Self-awareness	7.47			
Stress tolerance	7.85			
Self confidence	7.38			
Accountability	7.72			

Adaptability	7.48			
Decision making	7.40			

Source: Output generated from SPSS 26

From the above table, it is found out that all the variables related to the skill gap perceived by the employees had significance value less than 0.05 at 1 Per cent level of significance, thus the null hypothesis is rejected. Thus, it is concluded that there is significant difference between mean ranks towards the skill gap perceived by the employees. Out of the fourteen the skill gap perceived by the employee's variables, the "Influencing" has the highest rank (7.87). So, that the skill gap perceived by the employees is influenced by "Influencing" Variable. The outcome applying Kendall's w test determines the fact that out of all the statements considered under skill gap perceived by the employees considered for the study, the most contributing factor is "Influencing". The opinion statements of the employees towards their skill gap varies predominantly with the statement of influencing capability of the employees. Hence among all other attributes under skill gap, the above said statement is statistically significant and thus identified as the most influencing variable.

Factor Analysis For The Skill Gap Perceived By The Employees

Kmo And Bartlett's Test

The dimensionality of skill gap perceived by the employees was examined using factor analysis based on fourteen individual statements and the reliability of the subsequent factor structures was then tested for internal consistency of the grouping of the items. The fourteen factors of the skill gap perceived by the employees statements are related to the following:

1. Coping with complexity
2. Influencing
3. Ethical sensitivity
4. Negotiating
5. Political sensitivity
6. Analytical thinking
7. Conflict resolution
8. Reflectiveness
9. Self-awareness
10. Stress tolerance
11. Self confidence
12. Accountability
13. Adaptability
14. Decision making

Table 2. KMO and Bartlett's Test of the skill gap perceived by the employees

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	5225.154
	Degrees of freedom	91
	Significant value	.000

Source: Output generated from SPSS 21

High value of KMO ($0.876 > .05$) of indicates that factor analysis is useful for the present data. The significant value for Bartlett's test of Sphericity is 0.000 and is less than 0.05 which indicates that there exist significant relationships among the variables. The resultant value of KMO test and Bartlett's test indicates that the present data is useful for factor analysis.

Table 3. Total variance explained for the skill gap perceived by the employees

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.602	40.011	40.011	4.675	33.391	33.391
2	2.524	18.027	58.038	2.892	20.660	54.051
3	1.243	8.878	66.916	1.801	12.865	66.916

Extraction Method: Principal Component Analysis.

Source: Output generated from SPSS 26

All the statements of the skill gap perceived by the employees are loaded on the three factors. The total variance accounted for 66.916, by all the three factors with Eigen value greater than 1 (i.e) 66.916 percent and the remaining variance is explained by other variables. Among the three factors, the first factor accounts for around 33.391 percent of variance which is the prime criteria considered in the skill gap perceived by the employees.

Table 4. Rotated Component Matrix of the skill gap perceived by the employees

Skill gap perceived by the employees	Component		
	1	2	3
Self confidence	.870	.108	.083
Reflectiveness	.849	.184	-.023
Stress tolerance	.825	.113	.158
Conflict resolution	.791	.078	-.049
Analytical thinking	.780	.001	-.036
Self-awareness	.745	.176	.256
Accountability	.689	.128	.290
Ethical sensitivity	-.033	.813	-.003
Influencing	.029	.795	.134
Negotiating	.164	.791	.198
Political sensitivity	.213	.690	.237
Coping with complexity	.398	.547	.123
Adaptability	.117	.209	.867
Decision making	.083	.208	.857
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 4 iterations.			

Source: Output generated from SPSS 26

The statements are converted into 3 factors by using factor analysis.

The following seven aspects related to the skill gap perceived by the employees are converted into a single factor.

1. Self confidence
2. Reflectiveness
3. Stress tolerance
4. Conflict resolution
5. Analytical thinking
6. Self-awareness
7. Accountability

The following five aspects related to the skill gap perceived by the employees are converted into a single factor.

1. Ethical sensitivity
2. Influencing
3. Negotiating
4. Political sensitivity
5. Coping with complexity

The following two aspects related to the skill gap perceived by the employees are converted into a single factor.

1. Adaptability
2. Decision making

Apart from that, the dimension "skill gap perceived by the employees" comprises 14 statements. Out of fourteen statements, three statements contribute more towards the employability skills in health care sector with respect to skill gap perceived by the employees. The statements are 1. Self-confidence, 2. Ethical sensitivity and 3. Adaptability. The outcome applying factor analysis determines the fact that out of all the statements considered under skill gap perceived by the employees considered for the study, the

most contributing factor is “Self-confidence, Ethical sensitivity and Adaptability”. The opinion statements of the employees towards their skill gap varies predominantly with the statement of confidence and adaptability of the employees. Hence among all other attributes under skill gap, the above said statement is statistically significant and thus identified as the most influencing variable.

Tree Structured Analysis For Skill Gap Perceived By The Employees

Tree analysis model summary, gain node summary and Risk of the model are presented in the below table. Tree Diagram for skill gap perceived by the employees is shown in the below figure.

Table 5. Model summary of skill gap perceived by the employees.

Specifications	Growing Method	CHAID
	Dependent Variable	Actual performance of the employees
	Independent Variables	Coping with complexity, Influencing, Ethical sensitivity, Negotiating, Political sensitivity, Analytical thinking, Conflict resolution, Reflectiveness, Self-awareness, Stress tolerance, Self-confidence, Accountability, Adaptability, Decision making
	Validation	None
	Maximum Tree Depth	3
	Minimum Cases in Parent Node	100
	Minimum Cases in Child Node	50
	Results	Independent Variables Included
	Number of Nodes	11
	Number of Terminal Nodes	7
	Depth	2

Source: Output generated from SPSS 26

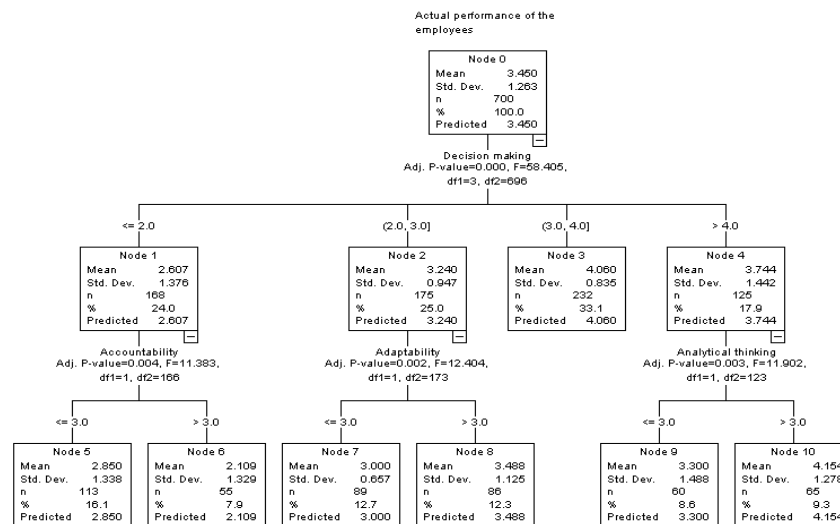


Figure 1. Tree Diagram for skill gap perceived by the employees

Table 6. Risk of the model for skill gap perceived by the employees

Estimate	Std. Error
1.196	.068
Growing Method: CHAID	
Dependent Variable: Actual performance of the employees	

Source: Output generated from SPSS 26

Table 7. Gain summary for nodes for skill gap perceived by the employees

Node	N	Percent	Mean
10	65	9.3%	4.15
3	232	33.1%	4.06
8	86	12.3%	3.49
9	60	8.6%	3.30
7	89	12.7%	3.00
5	113	16.1%	2.85
6	55	7.9%	2.11
Growing Method: CHAID			
Dependent Variable: Actual performance of the employees			

Source: Output generated from SPSS 21

From tree analysis model summary "Decision making, Accountability, Adaptability and Analytical thinking" are important independent variables. These variables are contributing more towards skill gap perceived by the employees. The outcome applying Tree structure analysis determines the fact that out of all the statements considered under skill gap perceived by the employees considered for the study, the most contributing factor is "Decision making, Accountability, Adaptability and Analytical thinking". The opinion statements of the employees towards their skill gap varies predominantly with the statement of confidence and adaptability of the employees. Hence among all other attributes under skill gap, the above said statement is statistically significant and thus identified as the most influencing variable.

SUGGESTIONS

Significant Difference in Skill Gap Perceptions: The rejection of the null hypothesis indicates that there is a significant difference in the mean ranks towards the skill gap perceived by employees. This underscores the importance of acknowledging and addressing skill gaps within the pharmaceutical industry.

Identification of Influencing Factors: The variable "Influencing" emerged with the highest rank, suggesting that it significantly influences the perception of skill gaps among employees. This highlights the importance of understanding and addressing factors that influence employees' perceptions of skill gaps, such as organizational culture, leadership, and training programs.

Key Attributes Contributing to Skill Gap: The attributes of "Self-confidence," "Ethical sensitivity," and "Adaptability" were identified as the most significant contributors to the perceived skill gap among employees. This emphasizes the importance of fostering these qualities through targeted training and development initiatives to enhance employees' effectiveness in the pharmaceutical industry.

Tree Analysis Insights: The variables "Decision making," "Accountability," "Adaptability," and "Analytical thinking" were found to be important independent variables contributing to the skill gap perceived by employees. This suggests that focusing on these aspects can help address skill gaps effectively and improve overall organizational performance.

CONCLUSION

the findings of this study underscore the significant impact of skill gaps perceived by employees within the pharmaceutical industry. The identification of influencing factors, key attributes contributing to skill gaps, and insights from tree analysis provide valuable guidance for developing targeted interventions to address these discrepancies effectively. By focusing on enhancing self-confidence, ethical sensitivity, adaptability, decision-making, accountability, and analytical thinking among employees through tailored training programs and leadership development initiatives, pharmaceutical companies can foster a more skilled and adaptable workforce. Furthermore, the establishment of a continuous feedback mechanism and collaborative learning opportunities will ensure ongoing alignment with employees' evolving needs and facilitate a culture of continuous improvement. By taking proactive measures to bridge skill gaps and enhance employee capabilities, pharmaceutical organizations can position themselves for sustained success and competitiveness in an ever-evolving industry landscape.

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