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ASSESSMENT OF WORKPLACE INFORMATION LITERACY AND ITS EFFECT ON THE JOB PERFORMANCE OF PARAMEDICAL STAFF IN MTI HOSPITALS OF PESHAWAR

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ABSTRACT

This study examines the workplace information literacy levels of paramedical staff in selected Medical Teaching Institute hospitals in Peshawar, Lady Reading Hospital, Khyber Teaching Hospital, and Hayatabad Medical Complex, and their impact on job performance. A quantitative descriptive survey design was employed using a structured questionnaire comprising demographic data, a 28-item WIL scale, and an 18-item JP scale measured on a five-point Likert scale. From a population of 1,719 staff, a sample of 315 respondents was selected through stratified proportionate random sampling, with 186 returned, of which 170 were valid for analysis. Results indicated a moderate level of WIL (M = 3.53, SD = 0.88) and relatively high job performance (M = 3.88, SD = 0.78). Independent t-tests showed no significant gender differences in both WIL and JP. One-way ANOVA revealed significant differences in WIL based on years of experience but no significant differences in JP. Pearson correlation analysis demonstrated a strong, positive relationship between WIL and JP ($r = .79$, $p < .001$). The findings highlight the importance of enhancing information literacy skills to improve workplace performance. It is recommended that healthcare institutions implement regular, hands-on training programs focusing on digital and traditional information management skills.

Keywords: *Workplace Information Literacy, Job Performance, Paramedical Staff, Healthcare Institutions*

BACKGROUND OF THE STUDY

The concept of Workplace Information Literacy (WIL) has already been identified and discussed in many earlier library and information science studies (Asif et al., 2024). Information literacy skills at the workplace are core, especially in the healthcare systems, since information determines the fate of the patient. Technicians, therapists, and the support staff of laboratories and diagnostic centers, operating rooms, and other paramedical and technical departments need accurate and updated medical information to execute their functions efficiently (Shaheen & Mir, 2022). The reliability and accuracy of processing information can immediately impact its feasibility for job performance (Atif et al., 2015). It is evident in how they work, the time they take to perform a task, and, most importantly, the nature of outcomes they produce when dealing with patients. With the growth of cubic information and the fact that the organization has to address it, the importance of the information-literate workforce for achieving competitive advantage sustainability is also being addressed (Naveed et al., 2022). It is essential to establish how the workplace information literacy abilities of paramedical staff influence their working proficiency to provide proper training features for the development of training tools and approaches that meet the staff requirements (Hussain et al., 2022). With advancements in health care, there will always be a need to enhance their preparedness on the practical information literacy skills needed for appropriate practice in the new and fast-growing fields throughout the need clinical health care setting.

Paramedical staff plays a vital role in the rapidly changing environment of healthcare, patient care delivery proceedings important medical procedures, and supportive services. With the increasing volume and detail of medical information on an almost exponential scale, paraprofessionals must be able to search, interpret, and apply this information effectively. This set of skills is known as workplace information literacy. It includes all the abilities required for effectively searching, assessing, and using appropriate information in the working environment (Virkus et al., 2016). Hence, workplace information literacy is a subset of information literacy. Workplace information literacy entails both knowledge, learning, and the capability to deal with information, or the developed capacity to identify what kind and when such work-related information is required, and the skills of how to acquire, assess, use, and apply such information professionally and appropriately in undertaking tasks at work (Ahmad et al., 2020). The role of libraries in medical institutions is of great importance. Library services support workplace information literacy among paramedical staff in MTI hospitals by providing access to updated medical literature, research databases, and evidence-based resources. Effective information literacy enables paramedics to retrieve, evaluate, and apply relevant health information in clinical decision-making, ensuring improved patient care. Libraries also offer training programs, digital resources, and professional guidance, enhancing the staff's ability to navigate medical information efficiently. By fostering information literacy, library services contribute to better clinical practices, continuous professional development, and adherence to healthcare standards, ultimately improving hospital efficiency and patient outcomes.

The present study measures the job satisfaction of paramedical staff as it is of significant importance for several reasons. The satisfied paramedical staff is most certain to be motivated, conscientious, and caring, which in turn enhances the quality and effectiveness of the services offered and directly impacts the patients' care results (Caykoylu et al., 2011). Here, high job satisfaction will result in a few cases of staff turnover, so that employees going through training will not cost the company much. Healthcare facilities, in general, perform better, and customers, in this case, employees, are more productive and effective in their duties when satisfied. Job satisfaction reduces the stress and burnout prevalent in healthcare facilities because of high workloads and organizational stressors (Li & Hung, 2010). This, in turn, helps reduce cases of mental or physical illnesses among the staff. When paramedical staff are satisfied with their jobs, it means they are more committed to their organization and, correspondingly, more devoted to their duties. Positive employee attitudes predict positive attitudes among patients and, consequently, positive attitudes towards healthcare systems.

This research, therefore, seeks to fill that gap by focusing on the effect of workplace information literacy on the performance of paramedical staff. The previous studies indicated that there was a correlation between self and job performance for enhanced work-related learning in teachers, researchers, and knowledge workers due to the interaction with IL about work performance (Naveed et al., 2022). With the focus on this relationship, the researcher aims to find out some of the areas of WI in which training can be facilitated to improve the skills of the paramedical staff, hence improving job performance and, therefore, patient care outcomes.

Statement of the Problem

In any current setting, paramedics have a major function in delivering quality patient care in the healthcare sector. Nevertheless, the escalating sophistication of medical information and advances in healthcare technologies require formal education and training of OAC paramedic personnel to have comprehensive clinical skills and place-based information literacy. This encompasses the ability to identify, assess, and use information: when doing a task or making a decision at the workplace. Ironically, a rather glaring gap is identified in the extent to which workplace information literacy contributes to the paramedical staff employee's job performance. Workplace information literacy skills refer to an individual's ability to effectively find, analyze, and use information when performing his or her job function safely and efficiently. Consequently, low workplace information literacy skills can result in inefficient work performance which can endanger the welfare of patients as well as the general well-being of health systems. This study seeks to establish the correlation between workplace information literacy and job performance among paramedical staff; and further to designate areas where staff's information literacy needs to be improved to optimize their performance and hence improve the health quality of patients. The recommendations of this study will be useful in formulating training interventions and measures aimed at enhancing the information competency level of the paramedical personnel to enhance their job performance and thus health care delivery.

Research Question

1. What is the current workplace information literacy level among the paramedical staff?
2. What is the effect of demographic factors (gender and experience) on the workplace information literacy of paramedical staff?
3. What is the current status of the job performance of paramedical staff?
4. Is there any relationship between workplace information literacy and the job performance of paramedical staff?

LITERATURE REVIEW

Concept Of Workplace Information Literacy

Lloyd et al. (2007) studied support a new definition of information literacy that recognizes information literacy as a way of knowing, that is, as more than just the acquisition of skills and attributes. Becoming information literate in the workplace requires experience with social and physical modalities as well as with textual information. From recent doctoral research into information literacy and workplace learning, an understanding of information literacy as a complex constellation of experiences and relationships with a range of information modalities is emerging. It is constituted through the connections among people, artifacts, texts, and bodily experiences that draw a person into context and enable him or her to know the landscape. A three-year qualitative study of firefighters in regional New South Wales, Australia, is described. It was framed by constructionist thinking about the nature and role of information literacy in learning about practice and profession and about the relationship between power and knowledge.

Ahmad et al. (2021) explained the information literacy (IL) from a methodological perspective, addressing quantitative IL measures, suitable for evaluating the role of IL in supporting work activities. IL in workplace contexts has so far mostly been studied using qualitative methods, designed for studying situational and context-dependent practices. Therefore, it is important to explore how quantitative measures could be used to bring forward the relation between IL and organizational outcomes, that is the assessment of the impact of IL in workplace contexts. Quantitative research into IL is not unknown, but has been mainly developed in

higher education, in order to measure students' abilities to make use of information. The common approach is that survey instruments were used to measure IL and its impact in these organizational contexts. The methodological implementations and insights are presented and combined, and methodological strengths and challenges are discussed, with the aims of (1) building knowledge about IL measures in workplace settings that is currently lacking, (2) finding additional measures for the complex IL construct, and (3) considering the scope of the practices that can be measured.

Shrestha et al. (2018) information literacy is a standardized concept to determine the ability of an individual to identify his information needs and have the abilities to locate, access, evaluate and use information efficiently. With the explosion of information through digital environments and increased use of technology tools for management of information, the concept of information literacy is increasingly linked with the concept of digital literacy. The present study adopted qualitative research method, and a collective case study design was implemented for carrying out an empirical study. The interview was chosen as a data collection method, and semi-structured interviews were conducted using an interview guide that covered questions related to the themes of digital competence areas in the workplace context. In total, six interviews were conducted from personnel representing four different organizations, whose work role varied significantly. The content analysis of the empirical data revealed several interesting findings regarding the digital skills required by the employees at their workplaces. The findings from the present study revealed that technical knowledge is an important part of being digitally literate, as employees need to have the knowledge and skills to operate different technological tools for various operational activities at the workplace. While technical knowledge is essential, the most crucial skills are evaluation of information, logical and critical thinking skills, which helps to solve problems at work with the support of technology. Thus, it can be comprehended that digital literacy is a subset of information literacy because digital literacy skills are in fact information skills required in the digital information environments. Moreover, the study advocates that it is essential to have a contextual awareness when analyzing digital literacy skills, as the skills requirements depend on the context of digital uses, which can vary depending on the profession and the organizational culture, where employee operate.

Wu et al. (2019) information literacy, defined as the ability to effectively identify information needs, access needed information, and evaluate and use information, is a crucial skill set for both individuals and organizations. Therefore, understanding the relationships between information literacy, creativity, and work performance could not only help enterprises recognize the importance of information literacy and its influence on the workplace, but also provide educators with guidance for planning related training programs. The empirical study explores the relationships between self-efficacy in information literacy, creativity and work performance. The findings show that (1). Self-efficacy in defining information needs, self-efficacy in evaluating information, and self-efficacy in using information can significantly positively affect creativity; (2). creativity can significantly positively affect work performance; and (3). creativity mediates the association between self-efficacy in information literacy and work performance. Implications based on the findings are also discussed.

Hazrati et al. (2013) recognized to what extent the medical and paramedical postgraduate students and faculty members are able to use the variety of information resources. The study was done in Tabriz University of Medical Sciences (Iran) from October to December 2012. This study used the descriptive analytical method. The participants of this study were 80 faculty members and 80 postgraduate medical and paramedical students who referred to the central library of a university within the first two weeks of October (beginning of the school year) for information seeking. All of the participants in the study were selected. Dates were gathered through the distribution of a standard questionnaire on information literacy. Data were analyzed through SPSS/16, and one-way ANOVA an Independent t-test were applied. Information Literacy Competency was classified in three levels: Low, Moderate, and High. According to the results, the majority of faculty members had a moderate Information Literacy Level (51%), and a minority of them had a high Information Literacy Level

(11.8%). And Information Literacy Level of the majority of students was in moderate 57%. The result indicated that students have higher information literacy than faculty members. (T=0.015).

Role of WIL in Enhancing Paramedical Staff Job Performance

Workplace information literacy refers to the ability of employees to effectively identify, access, evaluate, and use information within the context of their professional roles. In healthcare, and particularly among paramedical staff, strong information literacy is crucial for accurate decision-making, efficient service delivery, and overall job performance. Al-Azri et al. (2025) studied literature on information literacy in the workplace and its relevant issues. The purpose of this study is to examine two elements: how the predominantly academic information literacy is experienced in the workplace; and review how academically based information literacy frameworks can be used to increase performance in the workplace. The study revealed the perceived positive role of information literacy in raising work performance. The research concludes that the benefit for information literate employees and employers is apparent, but those differences in academic information literacy and workplace information literacy are significant. Information literacy frameworks for the workplace, when used, are still heavily reliant on the educational sector and need to be further researched in order for them to adequately address specific workplace contexts and their socially collaborative information literacy activities.

Challenges in Developing Information Literacy in Clinical Environments

Kavanaugh et al. (2021) ongoing education in mental health literacy offered by academic, clinical, and hospital librarians paired with health science professionals presents ideal opportunities for continued improvement of practical, lifelong skill sets in research and mental health literacy. This review synthesizes where academic and hospital librarians have been integral in providing information literacy instruction for health science students and medical professionals; information literacy has transformed theoretical research into practical and life-long opportunities for practicing mental health literacy; and medical professionals transfer primer information literacy and evidence-based practice training to mental health literacy as workplace practices in hospital and health care settings.

Assessment Methods for Workplace Information Literacy

Assessment of workplace information literacy is a growing research area aimed at understanding how employees acquire, evaluate, and use information in professional contexts. The literature reveals a variety of approaches and challenges in measuring this complex construct. Performance-based assessment (PBA) is increasingly recognized as a robust method for evaluating paramedical competence, including information literacy. PBAs can include objective structured clinical examinations (OSCEs), simulation-based assessments, and workplace-based assessments (WBAs), which require staff to demonstrate their ability to find, evaluate, and use information in real clinical scenarios. These assessments are valued for their ability to reflect real-world job performance and integrate both conceptual and psychometric principles. A narrative review of paramedic competence assessment highlighted the importance of integrating multiple frameworks and psychometric requirements to ensure assessments are accurate, trustworthy, and defensible. This also emphasized the need for ongoing research and the use of best practices in designing and evaluating assessment programs for paramedic staff (Tavares et. al., 2016).

Guo et al. (2022) The calculation and assessment of information literacy of safety professionals is an effective way to understand their information literacy level. To evaluate the information literacy level of safety management personnel, to improve their ability to comprehend safety language/technology/information. Based on the theory of safety information systems and the characteristics of safety professionals, this study develops an index system to assess the information literacy level of safety professionals. The index system consists of five indexes: safety information demand consciousness, safety information acquisition ability, safety information evaluation

ability, safety information utilization ability, and information ethics. According to the analytic hierarchy process method, the weight of the index can be determined. This developed method was implemented to evaluate the safety information literacy level of 40 safety professionals from four different corporations. The quantitative results of the fuzzy evaluation are in good agreement with the qualitative analysis results, indicating that the index system has excellent applicability and can be applied to the evaluation of the information literacy level of safety professionals. Besides, recommendations are put forward to improve the information literacy of safety professionals.

METHODOLOGY

This study adopted a descriptive survey research design, which is appropriate for measuring characteristics, identifying trends, and examining relationships between variables through quantitative analysis. A structured methodology was applied to collect numerical data on workplace information literacy and its impact on the job performance of paramedical staff working in Medical Teaching Institute (MTI) hospitals in Peshawar, namely Lady Reading Hospital (LRH-MTI), Khyber Teaching Hospital (KTH-MTI), and Hayatabad Medical Complex (HMC-MTI). The target population comprised approximately 1,719 paramedical staff members across these institutions. The sample size was determined using the Raosoft sample size calculator, resulting in a final sample of 315 respondents. To ensure fair and representative inclusion from each hospital, a stratified proportionate random sampling technique was employed. The sample was distributed proportionally based on the population size of each hospital using the formula nx = n × Nx / N, where nx represents the sample size for each stratum, n is the total sample size, Nx is the population of each stratum, and N is the overall population. Detailed distribution of the proportionate stratified random sample is presented below:

LRH: 315×621÷1719=114
KTH: 315×418÷1719=77
HMC: 315×680÷1719=124

A total of 315 questionnaires were distributed, with 186 returned, of which 170 were valid for analysis after excluding incomplete responses. Data were collected in hospital departments after obtaining participants' consent. The responses were coded and analyzed using IBM SPSS. Descriptive statistics such as frequency, percentage, mean, and standard deviation were applied. Cronbach's alpha was used to assess reliability. Independent t-test and one-way ANOVA were conducted to examine differences based on gender and work experience.

Reliability Analysis

The internal consistency of the Workplace Information Literacy Scale was assessed using Cronbach's alpha. The scale demonstrated excellent reliability, with a Cronbach's alpha coefficient of .964 across 28 items, indicating a high level of internal consistency among the items (α = .964, N = 28). The internal consistency of the Job Performance Scale for paramedical staff was evaluated using Cronbach's alpha. The scale demonstrated excellent reliability, with a Cronbach's alpha coefficient of .937 across 18 items, indicating strong internal consistency among the items (α = .937, N = 18).

Table 1: ***Reliability Statistics***

Scale	No of Items	Alpha Value
Workplace IL	**28**	**.964**
JP	**18**	**.937**

Demographics Profile

The demographic profile of the respondents (N = 170) indicates that a slight majority were male (n = 93, 54.7%), while females comprised 45.3% (n = 77). In terms of age distribution, most participants were between 21–30 years (n = 103, 60.6%), followed by 31–40 years (n = 54, 31.8%), and a smaller proportion aged 51–60 years (n = 13, 7.6%).

Regarding professional experience, the majority had 1–5 years of experience (n = 99, 58.2%), followed by 6–10 years (n = 48, 28.2%), while fewer respondents reported 16–20 years (n = 10, 5.9%) and 11–15 years (n = 5, 2.9%). In terms of educational qualifications, most participants held a Bachelor of Science degree (n = 76, 44.7%), followed by diploma holders (n = 65, 38.2%), and those with MS/M.Phil degrees (n = 29, 17.1%).

Table 2: *Demographic Information of the Respondents*

Variable	Scale	Frequency	Percent
Gender	Male	93	54.7
	Female	77	45.3
Age	21-30	103	60.6
	31-40	54	31.8
	51-60	13	7.6
Experience	1-5 Years	99	58.2
	6-10 Years	48	28.2
	11-15 Years	5	2.9
	16-20 Years	10	5.9
Qualification	Diploma Holder	65	38.2
	Bachelor in Science	76	44.7
	MS/M.Phil	29	17.1
Total		**170**	**100.0**

Library Use Frequency of the Respondents

Participants were asked how frequently they used their institutional library. Among the 170 respondents, the majority reported using the library quarterly (n = 94, 55.3%), followed by monthly use (n = 40, 23.5%). A smaller proportion reported using the library weekly (n = 30, 17.6%) or daily (n = 6, 3.5%). These results indicate that while most students access the library at least occasionally, frequent (daily or weekly) usage is relatively uncommon.

Table 3: *Library Use Frequency of the Respondents(N=170)*

Library Use	Frequency	Percent
Daily	6	3.5
Weekly	30	17.6
Monthly	40	23.5
Quarterly	94	55.3
Total	**170**	**100.0**

Key Findings

Current Level of Workplace Information Literacy (WIL) among the Paramedical Staff

Table 4 showed that the responses from 170 participants, the overall WIL score ranged from 1 to 5, with a mean of 3.53 (SD = 0.88), indicating that respondents generally agreed they possess adequate information literacy skills for their workplace. Item-level analysis showed that participants felt most confident in defining their information needs for effective performance (M = 4.06, SD = 0.96), followed by using a variety of information resources (M = 3.91, SD = 1.27) and integrating newly acquired information with existing knowledge (M = 3.85, SD = 1.09). However, relatively lower mean scores were observed for more technical competencies, such as creating bibliographic records (M = 3.16, SD = 1.19), navigating online library catalogs (M = 3.21, SD = 1.34), and applying

keyword search strategies with Boolean logic (M = 3.22, SD = 1.35).

Table 4: ***Current Level of Workplace Information Literacy***

Statements	Mean	Std. Dev.
I can define the information I need for effective performance.	4.06	.959
I use various resources for my research.	3.91	1.268
I can synthesize newly gathered information with previous information.	3.85	1.088
I can identify a variety of potential sources of information.	3.82	1.170
I use electronic information sources related to my profession.	3.81	1.528
I learned from my information problem-solving experience and improved my IL skills.	3.79	1.157
I can determine the content and form the parts (introduction, conclusion) of a presentation (written, oral).	3.79	1.251
I can interpret visual information (i.e., graphs, tables, and diagrams).	3.74	1.404
I can use different kinds of print sources (books, periodicals, handbooks, encyclopedias, etc) relevant to my field.	3.71	1.322
I can criticize the quality of my information-seeking process and its products.	3.64	1.154
I can identify points of agreement and disagreement among [information] sources.	3.62	1.201
I can identify gaps in my knowledge and information needs.	3.60	1.330
I can choose a format (i.e., written, oral, visual) suitable for my audience.	3.52	1.368
I can use different kinds /types of libraries, such as digital and conventional.	3.50	1.193
I can write a research paper.	3.49	1.178
I know how to make citations and use quotations within the text.	3.49	1.279
I can create bibliographic records according in a specific citation style.	3.46	1.241
I can limit search strategies by subject, language, and date.	3.45	1.110
I can navigate through various sections of the library, such as the reference section, periodicals and archives.	3.41	1.123
I can use internet search tools (such as search engines, directories, etc).	3.35	1.693
I can decide effective research strategies to find the information I need.	3.31	1.226
How frequently do you use your institutional library?	3.31	.884
I can determine the credibility and accuracy of information sources.	3.26	1.428
I can select information most appropriate for my needs.	3.26	1.604
I can evaluate www sources.	3.25	1.531
I can locate information resources in the library using its catalog.	3.24	1.285
I can initiate search strategies by using keywords and Boolean logic [AND, OR, NOT]	3.22	1.349
I can efficiently navigate the library's online catalog system.	3.21	1.336
I can create bibliographic records for various materials (e.g., books, articles, and web pages).	3.16	1.188
Overall Status of WIL	**3.53**	**.879**

Gender–Based Differences (WIL)

An independent samples t-test was conducted to compare overall WIL scores between the two groups. Levene's test indicated that the assumption of equal variances was not violated, $F(1, 168) = 2.79$, $p = .097$. The results showed no significant

difference between the groups, t (168) = 0.03, p = .974, with a mean difference of 0.004 (95% CI [–0.26, 0.27]).

Experience-Based Differences (WIL)

A one-way ANOVA was conducted to examine the effect of years of experience on overall WIL scores. There was a statistically significant difference in scores among the experience groups, F (4, 165) = 3.89, p = .005. Post hoc comparisons using the Tukey HSD test indicated that participants with 1–5 years of experience (M = 3.68) reported significantly higher overall WIL scores than those with 6–10 years of experience (M = 3.14), p = .004. In addition, participants with 16–20 years of experience (M = 3.96) also reported significantly higher scores than those with 6–10 years of experience, p = .047. No other group differences were statistically significant (p > .05).

Current Status of the Job Performance of Paramedical Staff

Table 5 presented the overall JP score ranged from 1 to 5, with a mean of 3.88 (SD = 0.78, N = 170), indicating that respondents generally reported a relatively high level of job performance with moderate variability. Item-level analysis revealed that participants demonstrated strong positive work behaviors, particularly in time management (M = 4.30, SD = 0.996), initiating new tasks (M = 4.24, SD = 1.035), and active participation in meetings (M = 4.09, SD = 1.082). Similarly, planning work effectively, improving job-related knowledge, and maintaining professional relationships also showed high mean scores, reflecting proactive and productive work attitudes. In contrast, lower mean scores were observed for negative behaviors such as exaggerating workplace problems (M = 3.25, SD = 1.295) and focusing on negative aspects of work situations (M = 3.25, SD = 1.422), suggesting that such behaviors were less frequently reported, although responses varied.

Table 5: ***Current Status of the Job Performance***

Statement	Mean	Std. Deviation
I planned my work effectively to meet the deadline.	4.06	1.081
I kept in mind the work result I needed to achieve.	3.86	1.188
I was able to set priorities.	3.88	1.215
I was able to carry out my work efficiently.	4.04	1.221
I managed my time well.	4.30	.996
On my own initiative, I started a new task when my old tasks were completed.	4.24	1.035
I took on challenging tasks when they were available.	3.74	1.198
To keep myself up-to-date, I worked on improving my job-related knowledge.	4.04	1.062
I developed a plan to achieve my long term career goals.	4.12	1.061
I came up with creative solutions for new problems.	3.91	1.127
I took on extra responsibilities	3.56	1.196
I volunteered for tasks that required me to learn new skills.	3.96	1.031
I actively participated in meetings and/or consultations	4.09	1.082
I complained about minor work-related issues at work	3.57	1.318
I made problems at work bigger than they were	3.25	1.295
I focused on the negative aspects of the situation at work instead of the positive aspects	3.25	1.422
I provided constructive feedback to colleagues in order to help them improve.	4.02	1.171
I maintained a professional network of contacts outside the organization.	4.01	1.259
Overall status of JB	**3.88**	**.780**

Gender–Based Differences in Job Performance

An independent samples t-test was conducted to compare overall job performance scores between the two groups. Levene's test indicated a violation of the assumption of equal variances, F (1, 168) = 4.05, p = .046; therefore, the degrees of freedom were adjusted accordingly. The results showed that there was no significant difference in overall job performance between the groups, t (157.92) = -1.09, p = .276, d = 0.17. The 95% confidence interval for the mean difference ranged from -0.35 to 0.10.

Experience-Based Differences in Job Performance

A one-way ANOVA was conducted to examine the effect of years of experience on overall job performance. The analysis revealed that the differences were not statistically significant, F (4, 165), F= (2.494), P= (0.045). Post-hoc comparisons using the Tukey HSD test showed that none of the pairwise differences between experience groups reached statistical significance at the .05 level. Although the comparison between the 6–10 years and 16–20 years' groups approached significance (M difference = -0.685, p = .081), the result was not significant and should be interpreted with caution. Descriptive statistics indicated a trend in which job performance scores tended to increase with years of experience. Participants with 6–10 years of experience had the lowest mean overall job performance score (M = 3.62), while those with 16–20 years had the highest (M = 4.31). Despite this apparent upward trend, a Tukey HSD test indicated no statistically significant differences among the groups (p = .228). The groups were statistically homogeneous, as all fell into a single subset for alpha = 0.05.

Relationship between workplace information literacy and job performance

A Pearson product–moment correlation coefficient was computed to assess the relationship between overall WIL and overall JP. There was a strong, positive correlation between the two variables, r (168) = .79, p < .001, suggesting that higher scores on overall WIL were associated with higher scores on overall JP. This correlation was statistically significant at the 0.01 level (2-tailed).

Discussion

The study examined the levels of workplace information literacy (WIL) and job performance (JP) among paramedical staff in MTI hospitals in Peshawar, while also exploring the influence of demographic factors and the relationship between these variables. The findings indicate that respondents generally possess moderately high levels of WIL (M = 3.53, SD = 0.88), suggesting confidence in handling information required for their professional roles. Participants demonstrated particular strength in identifying their information needs, while comparatively lower scores were observed in more technical competencies such as bibliographic record creation and the use of Boolean search strategies. These findings are consistent with earlier research (e.g., Naveed & Rafique, 2018), which also highlighted strong basic information skills alongside gaps in advanced information handling and evaluation. The relatively young and early-career profile of respondents may explain this pattern, as they are likely more familiar with basic digital tools but may lack formal training in specialized information practices.

Job performance results revealed a relatively high overall level (M = 3.88, SD = 0.78), indicating that paramedical staff generally perceive themselves as effective and productive in their roles. High scores on items related to time management, task initiation, and active participation in workplace activities reflect strong positive and proactive work behaviors. Conversely, lower scores on negative behaviors, such as focusing on problems or exaggerating workplace issues, suggest that counterproductive tendencies are less common, although some variability exists among individuals. These findings align with established frameworks such as the Individual Work Performance Questionnaire (Villagrasa et al., 2019), which conceptualizes job performance as a combination of task performance, contextual performance, and counterproductive behaviors. The results are also consistent with Khan et al. (2021), who reported high levels of job performance among professionals in academic and institutional settings.

The study found a strong and statistically significant positive relationship between WIL and JP (r (168) = .79, p < .001), indicating that higher levels of information literacy are associated with better job performance. This supports earlier theoretical and empirical work (e.g., Bruce, 1999; Cheuk, 2002), which emphasizes the critical role of information

literacy in enhancing workplace effectiveness. These findings suggest that improving specific areas of WIL, particularly technical skills such as advanced search strategies, catalogs navigation, and citation management, could lead to meaningful improvements in job performance. Additionally, encouraging more frequent and purposeful use of library resources may further strengthen both WIL and JP. Future research could build on these findings by employing longitudinal or experimental designs to better understand causal relationships and by extending the investigation to other professional and healthcare contexts in Pakistan.

Conclusion

This study explored the levels of workplace information literacy (WIL) and job performance (JP) among paramedical staff in MTI hospitals in Peshawar and examined the relationship between these two important variables. The findings reveal that respondents generally possess moderate to high levels of information literacy, particularly in basic skills such as identifying information needs, using diverse sources, and integrating information for decision-making. At the same time, gaps were observed in more technical areas, including the use of Boolean search strategies, bibliographic management, and navigation of online library systems. In terms of job performance, participants reported relatively high levels, especially in positive and proactive behaviors such as time management, planning, and task initiation, while negative workplace behaviors were less common. The demographic profile, largely consisting of young and early-career professionals, highlights both the adaptability of the workforce and the need for structured training to further strengthen their competencies.

A key contribution of this study is the identification of a strong positive relationship between workplace information literacy and job performance, indicating that employees who are more skilled in accessing and using information tend to perform better in their roles. This finding underscores the importance of investing in targeted information literacy development programs, such as hands-on training, improved access to digital resources, and continuous professional support. Enhancing these skills can lead not only to improved individual performance but also to better organizational outcomes and healthcare service quality. Overall, the study emphasizes that strengthening workplace information literacy is essential for sustaining high performance and meeting the growing demands of a knowledge-driven healthcare environment.

Recommendations

1. Information Literacy Training Programs be implemented. To address the observed gaps in technical aspects of information literacy, such as the use of Boolean logic, bibliographic record creation, and online catalog navigation, healthcare institutions should design and deliver regular, hands-on training sessions. These should be tailored to paramedical staff needs and focused on digital and conventional information systems.
2. Information Literacy be integrated into Continuing Professional Development(CPD) Institutions should embed workplace information literacy as a core component of ongoing professional development initiatives. Certification-based workshops or short courses can help reinforce the importance of WIL and provide formal recognition of skill development.
3. Provide Access to Information Resources and Digital Tools Improved access to updated library resources, online databases, and user-friendly digital platforms is essential. Ensuring that staff have the tools and infrastructure necessary to locate, evaluate, and apply information effectively will directly enhance both WIL and job performance.
4. To Promote Awareness of Library Services. Given the relatively infrequent use of institutional libraries, there is a need for awareness campaigns and user engagement initiatives to highlight the relevance and utility of library resources. Orientation programs, newsletters, and visible librarian support can encourage greater and more meaningful use.
5. Develop Mentorship and Peer-Learning Opportunities Senior or more experienced paramedical staff with strong WIL competencies should be encouraged to act as mentors or peer trainers. Such programs can support junior staff and foster a culture of collaborative learning and continuous improvement.
6. Tailor Interventions Based on Career Stage. As WIL levels vary across different experience brackets, interventions should be customized to

career stages. For instance, newly recruited staff may benefit more from foundational WIL training, while mid-career professionals might require refreshers or advanced modules.

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