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Original Article

**Effect of Head Nurses' Cultural Intelligence Educational Program on Nurses' Work
Agility and Career Aspiration**

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ABSTRACT

Background: The cultural intelligence of head nurses plays a crucial role in the quality of their job performance, encompassing clinical decision-making, critical thinking, evidence-based practice, and knowledge application. Hence, the proficient nurse must possess the capacity to comprehend the perspectives and requirements of a diverse range of individuals in order to be driven, assisted, and content. **The aim of the research:** was to examine the effect of a head nurse's cultural intelligence training program on staff nurses' agility at work and career aspiration. **Research design:** quasi-experimental research design was utilized in this study. **Setting:** the study was conducted at the liver disease Hospital in Minia governorate. **Subjects:** a convenience sample of head nurses and staff nurses was included in the study. **Data collection:** the study utilized four instruments: the cultural intelligence knowledge questionnaire, the cultural intelligence self-assessment questionnaire, the agility scale, and the career aspiration scale. **Results:** prior to the program implementation, the head nurses had a low level of cultural Intelligence and its subscales. However, after the program implementation, their level significantly increased to a high level. Furthermore, the work agility and career aspirations of the staff nurse experienced a boost following the implementation of a cultural intelligence educational program specifically designed for head nurses. **Conclusion:** an improvement in the knowledge level has been observed after the program was implemented. **Recommendation:** periodical workshops and programs for head nurses to develop their cultural intelligence competencies to be more flexible, agile, and career aspirations.

Keywords: Cultural intelligence, education program, head nurses, nurses, agility, career aspiration.

Introduction

In the present day, organizations possess a heterogeneous workforce in which individuals from various cultures, ethnicities, values, languages, and norms collaborate to accomplish organizational objectives. The role of cultural Intelligence in enhancing innovative work behaviors may be of interest in order to promote continuous innovation in multinational work settings (Afsar et al., 2020).

Organizational leaders and employees who aspire to thrive in multicultural contexts face persistent obstacles brought about by the rising tide of globalization and workforce diversity in the modern corporate world. To prepare employees to work in global and/or culturally diverse contexts, it is not enough to know about cultural value systems. Diversity in the workplace is closely related to the emerging field of cultural Intelligence. Adapting one's behavior to different cultural contexts is the hallmark of cultural Intelligence (Nosratabadi et al., 2020).

In addition, cultural Intelligence is defined by Peterson (2004) as the capacity to utilize one's skills and abilities in various contexts. Cultural Intelligence (CQ) is defined by Livermore et al. (2022) as the capacity to interact and collaborate successfully in intricate, culturally diverse contexts. In order to attain professional goals and work in a more accommodating setting, new leadership styles have emphasized cultural Intelligence (Brook et al., 2019; Yari et al., 2020).

According to Morris et al. (2021), agility is characterized as the capacity of a unified group to rapidly and effectively adapt to changes in their environment in order to achieve a specific objective. Organizations can benefit from fostering agility by cultivating managerial principles, such as cooperative management, to improve work conditions. Must deploy a flexible work environment, coordinate activities effectively, encourage employee development, and retain skilled, empowered, and inspired nurses to achieve high-performance standards (Pereira et al., 2018; Mohammed, 2020; Al Humdan et al., 2020).

Career aspiration is a complex process that involves employees carefully considering their career goals and devising plans for their advancement and successful execution. Aspiration is an essential component of a nursing profession that involves providing care based on proven research, enhancing patient care, improving working conditions, and retaining highly skilled nurses (Chen, 2019).

Career aspirations encompass pursuing leadership roles, training and managing others, and continuing education. These aspirations are driven by personal motivations, which enable individuals to dedicate themselves to activities that contribute to a career successfully. By doing so, they acquire valuable transferable skills and gain recognition or expertise in a specific field, enhancing organizational agility (Datta & Agarwal, 2017; Hartman & Barber, 2020).

Significance of the Study

The work environment is experiencing a growing cultural diversity, necessitating the involvement of managers, employees, and individuals in intercultural negotiations. Negotiators must cultivate the skill of identifying cultural disparities (Caputo et al., 2019).

Evseeva et al. (2019) argue that a distinct collection of shared organizational norms and routines forms a culturally intelligent nursing organization. Nurses should not sacrifice their personal and cultural values in order to integrate into a culturally astute institution. Nevertheless, all individuals must exhibit adaptability in their conduct in order to collaborate effectively and establish a cohesive third culture that yields tangible outcomes (Ang et al., 2021).

Head nurses with a high level of cultural Intelligence (CQ) possess comprehensive knowledge, skills, and abilities that allow them to accurately perceive, understand, analyze, and properly respond to cultural cues. Cultivating cultural awareness enables us to dismantle cultural obstacles, construct connections, and acquire the capacity to embrace and value individuals who differ from us. Enhancing our self-awareness enables us to establish stronger connections with individuals who possess diverse cultural backgrounds (Greene-Moton & Minkler, 2020).

Agility fosters strategies like effective communication, formal and informal inter-organizational relationships, self-organizing principles, decentralized decision-making, and confidence in staff skilled in independence, flexibility, and creativity. It also positively affects organizational performance, as agility may help an organization adapt purposefully to environmental change and career aspirations (Hussein et al., 2022).

Aim of the Study

The study aimed to investigate the effect of a cultural intelligence educational program for head nurses on nurses' work agility and career aspirations.

Research Hypotheses

- H1: The head nurse's knowledge level about cultural Intelligence (CI) will increase after implementing an educational program than before implementation.
- H2: Staff nurse work agility and career aspiration levels will be increased after implementing a cultural intelligence educational program for head nurses.

Subjects and Methods:

Research design

The aim of this study was achieved by employing a quasi-experimental research design, which is appropriate for non-randomized experiments and is employed when it is not possible or ethical to assign participants to groups for comparison randomly.

Setting

The study was done at Liver University Hospital in Minia, Egypt, and randomly chosen. This hospital consists of one building and has five floors; the first floor includes an Emergency department, an Endoscopy unit, and a pharmacy; the second floor includes radiology, a surgical department, and labs; the third floor includes a tropical department and director office; the fourth floor includes intensive care units and a medical department; the fifth floor includes operation surgical department. The total hospital capacity is 412 beds, with 120 nurses and 20 head nurses during data collection.

Subjects

Participants in the study included a convenience sample consisting of all of the available head nurses (a total of twenty head nurses) and staff nurses (a total of one hundred and twenty nurses).

Data collection tools

For this study, data collection was accomplished using four different tools: the cultural intelligence knowledge questionnaire, the cultural intelligence self-assessment questionnaire, the Agility scale, and the career aspiration scale.

Tool (I): Cultural intelligence knowledge questionnaire: ; this tool consisted of two parts, which are as follows:

The initial component incorporated socio-demographic characteristics data for the head

nurses. In addition to questions concerning age, gender, marital status, years of experience, educational qualification, and department, it also included questions concerning other topics.

Part two comprised a cultural intelligence knowledge questionnaire that the researchers developed after reviewing relevant literature and drawing on the research of (**Bücker et al., 2015, Jyoti et al., 2019 Majda et al., 2021**) to gauge nurses' level of cultural Intelligence. The questions had two formats: true/false and multiple choice. The test included twenty questions covering topics such as cultural Intelligence, cultural definitions, cultural importance, cultural aspects, etc. Each question had a point value of one for the right response and zero for the wrong.

The Scoring system

According to the scoring system, there are three levels of cultural Intelligence: low (<60%), moderate (60%) and high (>=75%).

Tool (II): Cultural Intelligence Scale (CQS.)

Ang et al. (2007) developed a self-administered questionnaire adapted by **Barzykowski et al. (2019)**. It was adopted to assess head nurses' perception regarding cultural Intelligence. It is composed of 20 items classified into four dimensions, namely, cognitive (6 items), metacognitive (4 items), behavioral (5 items), and motivational (5 items). The responses were measured on a 5-point Likert scale ranging from (1) strongly disagree

and (5) strongly agree, with a minimum score of 20 and maximum 100).

The Scoring system

It divided into low cultural Intelligence perception less than 60% and high cultural Intelligence perception more than 60%.

Tool (II): Work Agility Scale.

This tool was developed by **Sherehiy (2008)** and was adapted by **(Salmen and Festing, 2021)** to assess staff nurses perceptions about workforce agility. It consists of 15 items and covers three dimensions: proactivity, adaptivity, and resilience. A 5-point Likert scale ranges from 1 (strongly disagree) to 5 (strongly agree).

The Scoring system

The scoring system of the tool ranged from (15-75). It was categorized into three levels: Low workforce agility from 15-35, moderate level (36-55), and high level from (56-75).

Tool (V): Career Aspiration Scale

Career Aspiration Scale – Revised by **Gregor & O'Brien (2015)** to assess nurses levels of career aspiration and it consisted of 24 items divided under three subscales with eight items each as achievement Aspiration = "8 items ", leadership Aspiration = "8 items ", education Aspiration = "8 items " measured by five-point Likert Scale ranging from "0" (not at all true of me) to "4" (very true of me).

The Scoring system

The scoring system ranges from (24 to 72) and is classified into three levels as follows:

Low career aspiration from 24-to 39, moderate level (40-to 56), and high level from (57-to 72).

Validity of the tool

A group of five nursing administration specialists from Minia University reviewed the tools and found them to be valid. The panel's assessment of the content's suitability and the item sequence's accuracy informed the modifications made to the tools.

Reliability of the tool:

The items of the tools (tool I part two, II, III, and V) were tested for conceptual agreement and correlation using Cronbach's alpha. In each case, the corresponding values for internal consistency were 0.78, 0.91, 0.89, and 0.75.

Pilot study

Prior to commencing the actual data collection, a pilot study was conducted on a sample of 10% of the study participants, consisting of 2 head nurses and 12 nurses. This pilot study aimed to ensure clarity, applicability, and feasibility of the research tools and procedures. Additionally, it was necessary to calculate the duration required to complete the data collection tools. The pilot study data were incorporated into the main study sample during the data collection.

Data collection procedure:

The study was carried out in three stages: assessment and planning, implementation, and evaluation.

1- The assessment and planning stage

- Prior to commencing the study, we obtained official confirmation from the authoritative personnel to conduct the study.
- An oral agreement was obtained from the head nurses and nurses regarding their participation.
- Before the educational program's commencement of evaluating the cultural Intelligence of head nurses, a knowledge questionnaire was administered, which took approximately 20-25 minutes to complete. Additionally, the time required to respond to the self-assessment sheet on cultural Intelligence was approximately 30 minutes. This data was collected over one month, from the start of May to the end of May 2023.
- Evaluate the nurse's opinion and career aspirations prior to commencing the educational program for head nurses.
- The researchers administered the nurse's agility and career aspiration scale to the nurses. The duration needed to complete this questionnaire ranged from 35 to 40 minutes. The data was collected over one month, specifically from the start of June to the end of June 2023.
- The researchers formulated the timetable for the educational program.
- The researcher arranged this study's learning environment and essential resources, including seminar rooms and data projection equipment.
- Based on the assessment and planning stage findings, the educational program was developed using a literature review, teaching sessions, and carefully planned time schedules. The program explored the definition of cultural Intelligence, its components, and its significance for nursing staff. It also delved into the effective qualities of culturally intelligent leaders and the skills and theories related to cultural Intelligence.
- The head nurses were split into two subgroups, each consisting of seven head nurses, and the researchers conducted the educational program for each subgroup individually.
- Sessions were conducted based on the participants' work schedules, and they took place in the teaching rooms of the hospitals.
- The researchers explained the educational program's goals, schedule, and curriculum to the head nurses.
- At the start of each session, the learning objectives were communicated, and feedback was solicited regarding the previous session. Additionally, a review of the current session was conducted after each session.
- An educational program was conducted for the head nurses at Liver University Hospital. The teaching methods employed included lectures, discussion, brainstorming, assignments, case study, and small group work activities.

2. Implementation stage

- The instructional resources employed included a PowerPoint presentation and a video.
- The educational program was completed within two months, from July 2023 to the conclusion of August 2023.

3. Evaluation stage

- This study used four tools—a cultural intelligence knowledge questionnaire, an agility scale for nurses, a cultural intelligence self-assessment, and a career aspiration scale—to evaluate the immediate impact of an education program for head nurses on nurses' cultural Intelligence and career aspirations.
- After three months of the program's implementation, researchers followed up with head nurses to see how the cultural intelligence education program had affected their agility and career aspirations. They used four measures: a knowledge questionnaire on cultural Intelligence, a scale for assessing cultural Intelligence, a scale for measuring nurses' agility, and a scale for measuring nurses' career aspirations. From December 2024's start to its last day, it was finished.

Ethical Consideration

This study was approved by the ethical committee of Minia University's Faculty of Nursing. Head nurses and nurses who participated in the study were informed of its purpose by the researchers. All participants gave verbal consent after being informed about

the study's purpose and benefits. Subjects were informed that their participation was voluntary and that they could drop out of the study at any time. Subjects have emphasized the importance of data confidentiality, privacy, identity protection, and the right to refuse to participate in the study.

Statistical analysis

Application of SPSS and Excel for data analysis (IBM 24). When describing quantitative data, the format is mean \pm standard deviation. When describing qualitative data, the format is frequency & proportion. The data was analyzed in order to determine if there was a statistically significant difference between the groups. A significance level of (P) is considered "0.05" at a 95% confidence interval. We utilized the chi-square test for qualitative data.

Results

Table (1) According to Table (1), the majority of head nurses were female, held a bachelor's degree, were employed in general units, and slightly over half of them were married. Less than half are in their thirties or forties, and half have worked for 5–10 years without attending a cultural intelligence course. More than half of the staff nurses in this table are between the ages of 30 and 40, and they all hail from the same general area and have a technical institute degree. The majority of these nurses are female. Not only that, but half of them are married and have worked for 5-10 years.

Table (2) shows that 6.7 % versus 20.0% of the nurses who worked in general and critical unit had high knowledge preprogram respectively, increased to 80% versus 60.0% immediately posttest and slightly decrease to 73.3% versus 60% with highly statistically significance differences.

Figure (1) shows that 10% of head nurse managers scored very well on the pretest. At the same time, 75% demonstrated a high level of knowledge on the immediate post-test. Seventy percent of head managers had a high level of knowledge after three months of program implementation, indicating a change in their knowledge level. Distinct variations were observed between the pretest and various testing times, with a p-value of 0.001.

There were statistically significant differences ($p = 0.001$) between the pretest and different testing times, as shown in **Figure (2)**, which summarizes the data showing that 5% of head nurses had high cultural Intelligence before the program was implemented, compared to 80% immediately after the program was implemented, and 70% three months later (**Figure, 2**).

Table (3) presents that shows that 5.0 % versus 12.3% of the nurses who worked in general and critical unit had high preprogram respectively, increased to 81.0% versus 92.6% immediately posttest and slightly decrease to 75.9% versus 73.1% with highly statistically significance differences

Table (4) illustrates that 13.9% versus 12.3% of the nurses who worked in general and critical unit had high career aspiration preprogram respectively, increased to 81% versus 78.0% immediately posttest and slightly decrease to 72.1% versus 70.7% with highly statistically significance differences.

Figure (3) showing that 7.5% of the staff nurses scored very highly on the nurses' work agility test. In contrast, 85 percent of nurses reported high levels of work agility on the immediate post-test. At the end of the third month, 75% of the nurses had demonstrated high levels of work agility, with significant differences ($p=0.001$) observed between the pretest and various testing times. The results showed that 13.33 percent of the staff nurses had high career aspirations on the pretest (figure 3). At the same time, eighty percent had very high career aspirations on the immediate post-test. Please check. There were statistically significant differences ($p=0.001$) between the pretest and various testing times after three months, and 71.66 % had a high career aspiration.

Table (5) shows a positive correlation between the total head nurses' cultural Intelligence (knowledge, self-assessment), nurses' agility, and career aspirations.

Table 1 Demographic characteristics of the study subjects (head nurses and staff nurses)

Demographic characteristics	Head nurses (20)		Staff Nurses (120)	
	No	%	No	%
1. Age				
• > 30	8	40.0	39	32.5
• 30-40	9	45.0	67	55.8
• < 40	3	15.0	14	11.66
Mean ± SD	32.6 ± 6.5		33.8 ± 6.1	
2. Gender				
• Male	6	30.0	45	37.5
• Female	14	70.0	75	62.5
3. Marital status				
• Single	7	35.0	42	35.0
• Married	11	55.0	61	50.8
• Divorce	2	10.0	11	10.8
• Widowed	0	00.0	6	5.0
4. Qualifications				
• Diploma	0	0.0	30	25.0
• Institute	0	0.0	51	42.5
• Baccalaureate	13	65.0	36	30.0
• Master degree	7	35.0	3	2.5
5. Years of experience				
• <5	6	30.0	45	37.5
• 5 - 10	10	50.0	60	50.0
• 10 – 15	4	20.0	15	12.5
Mean ± SD	6.0 ± 3.3		6.7 ± 3.2	
6. Area				
• General	15	75.0	79	65.8
• Critical	5	25.0	41	34.1
7. previous training program				
• Yes	0	0.0	0	0.0
• No	100	100.0	100	100.0

Table 2 Total knowledge levels of head nurses about cultural Intelligence during different times of testing in general and critical units (No =20).

Total Knowledge score	General (n=15)		Critical (n=5)		P- value
	N	%	N	%	
Pretest					
Low	12	80.0	3	60.0	0.001*
Moderate	2	13.3	1	20.0	
High	1	6.7	1	20.0	
Immediate Post-test					
Low	0	0.0	0	0.0	0.001*
Moderate	3	20.0	2	40.0	
High	12	80.0	3	60.0	
Follow up after three months.					
Low	1	6.66	1	20.0	0.001*
Moderate	3	20.0	1	20.0	
High	11	73.33	3	60.0	

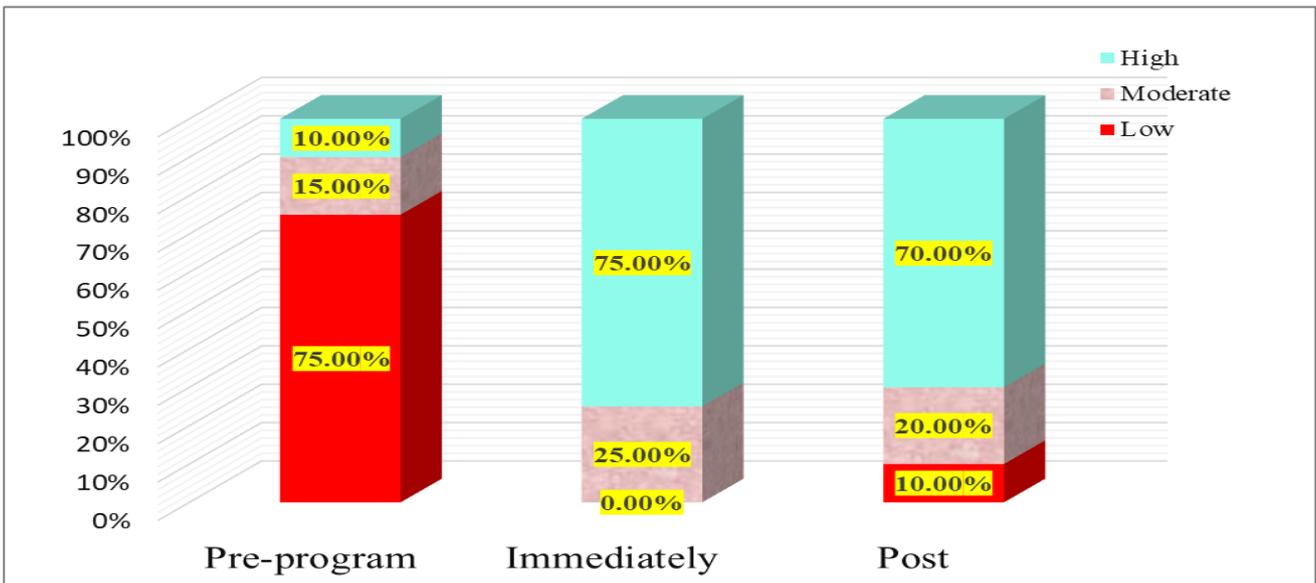


Figure 1 Differences in total knowledge levels of head nurses about cultural Intelligence among the studied head nurses pre, immediate and post educational program (n = 20).

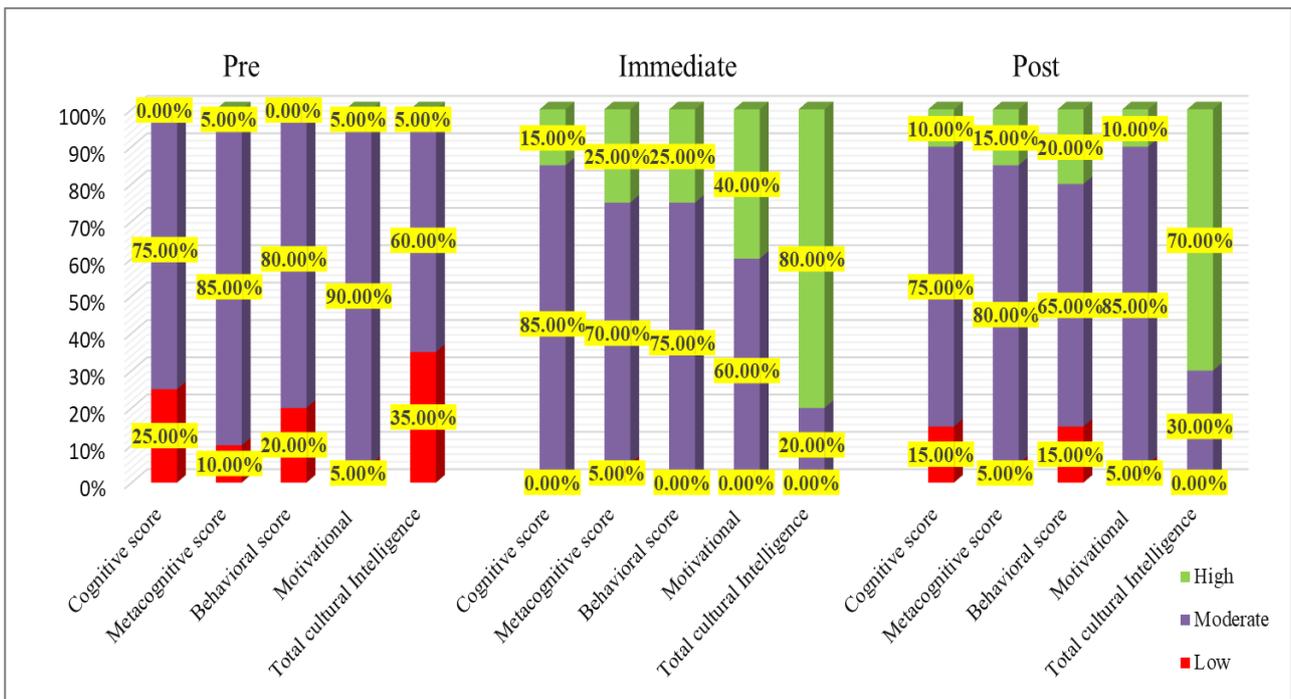


Figure 2 Differences in total cultural intelligence and its subdomain among the studied head nurses pre, immediate and post educational program (n = 20).

Table 3 Distribution of studied staff nurses' work agility levels during different times of testing in general and critical units (No =120).

Work agility levels	General (n=79)		Critical (n=41)		P- value (X ² or Fisher)
	N	%	N	%	
Pretest					
Low	65	82.2	27	65.8	0.001*
Moderate	10	12.6	9	21.9	
High	4	5	5	12.3	
Immediate Post-test					
Low	0	0.0	0	0.0	0.001*
Moderate	15	18.9	3	7.4	
High	64	81.0	38	92.6	
Follow up after three months.					
Low	7	8.8	3	7.3	0.001*
Moderate	12	15.1	8	19.5	
High	60	75.9	30	73.1	

Table 4 Distribution of studied staff nurses ' career aspiration levels during different times of testing in general and critical units (No =120).

Career aspiration score	General (n=79)		Critical (n=41)		P- value (X ² or Fisher)
	N	%	N	%	
Pretest					
Low	57	72.2	21	51.2	0.001*
Moderate	11	13.9	15	36.5	
High	11	13.9	5	12.3	
Immediate Post-test					
Low	0	0	0	0	0.001*
Moderate	15	18.9	9	21.9	
High	64	81.0	32	78.0	
Follow up after three months.					
Low	8	10.1	2	4.8	0.001*
Moderate	14	17.7	10	24.3	
High	57	72.1	29	70.7	

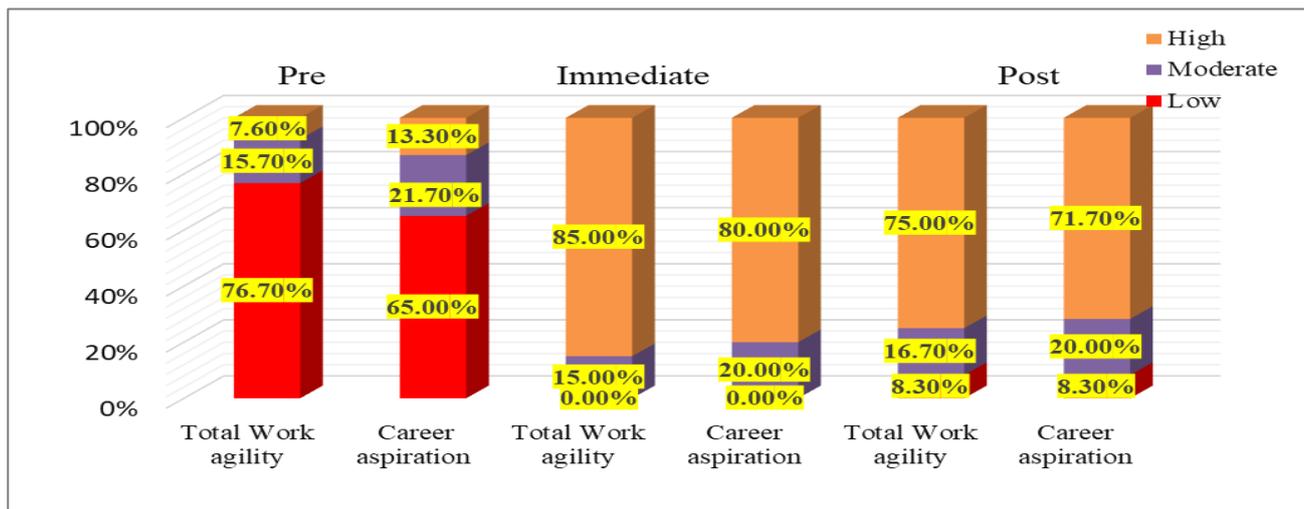


Figure 3 Differences in total work agility and career aspiration among the studied nurses pre, immediate and post educational program (n = 120).

Table 5 Correlation matrix between head nurses' total knowledge, total cultural intelligence self-assessment, nurses' agility, and career aspiration during different times of testing.

Variables	Head nurse's total knowledge No=20		Head nurse's total cultural Intelligence (No =20)		Nurses work agility (No=(120))		Nurses' career aspiration No=(120)	
	r	P	r	P	r	P	r	P
Preprogram implementation								
Head nurses' total knowledge of cultural Intelligence								
Head nurses' total self-assessment of cultural intelligence climate '	0.241	0.000**						
Nurses' work agility	0.325	0.000**	0.189	0.000**				
Nurses career aspiration	0.213	0.000**	0.273	0.000**	0.167	0.0001**		
Immediate post-test								
Head nurses' total knowledge of cultural Intelligence								
Head nurses' total self-assessment of cultural intelligence climate '	0.123	0.000**						
Nurses' work agility	0.138	0.000**	0.11	0.000**				
Nurses career aspiration	0.215	0.000**	0.215	0.000**	0.178	0.0001****		
Follow up after three months.								
Head nurses' total knowledge of cultural Intelligence								
Head nurses' total self-assessment of cultural intelligence climate '	0.410	0.000**						
Nurses' work agility	0.115	0.000**	0.259	0.000*				
Nurses career aspiration	0.276	0.000**	.523	0.000**	0.239	0.0001**		

Correlation is significant at the 0.01 level.

Discussion

A leader's cultural Intelligence is an important quality for healthcare organization managers to prioritize since it aids in understanding individuals from diverse cultural backgrounds. In order to coordinate with individuals, it is essential to gather information. Consequently, those with a high cultural Intelligence are incredibly adaptable (**Fu & Charoensukmongkol, 2023**).

Healthcare administrators, managers, and leaders can do their part to promote cultural Intelligence by training their employees to think and act creatively in the face of diversity and ambiguity and by having flexibility in their work to achieve their career aspirations finally (**Livermore et al., 2022; Akkaya & Mert, 2022**). This study examines the significant effect of cultural intelligence educational programs on nurses' work agility and career aspirations.

According to the results of this study, head nurses were mostly female, held baccalaureate degrees, were employed in general units, and slightly over half were married. Not all of them were in the age bracket of 30–40; half were in the 5–10 year old range and had never taken a class on cultural Intelligence. More than half of the staff nurses in this table are between the ages of 30 and 40, and the majority of them are female. They all work in the general area and have a technical institute degree. Additionally, 50.8% are married and have 5-10 years experience.

According to the current study's results, head nurses' knowledge of cultural Intelligence had increased significantly at both subsequent

assessments following program implementation. Prior to the program's launch, head nurses possessed a limited amount of knowledge. Following the program's implementation and the subsequent two measurement periods (three months later), this level jumped sharply to a high level. This outcome demonstrated that the cultural intelligence curriculum was effective.

Supporting the findings of **Afsar et al. (2020)**, which examined the relationship between cultural Intelligence, innovative work behavior, work engagement, and interpersonal trust, the present study found that CI improves the quality of cross-cultural interactions while reducing differences in language culture, religion, and ethnicity. Thus, the promotion of interpersonal trust between nurses and their leaders was directly impacted by head nurses' cultural awareness, which aids them in avoiding erroneous and superficial judgments in intercultural interactions and respecting salient ethnic differences.

Also, **Petrović (2011)** found that participants in his study had a high level of cultural Intelligence, which allows them to enjoy intercultural communication, view multicultural classes as a challenge, be open to learning about other cultures, make contacts with people from different backgrounds, and find inspiration in these experiences. Also, **Ang et al. (2007)** mentioned that employees' attitudes (work engagement and trust) facilitate work agility and behaviors (innovative work behavior) to achieve their career aspirations.

In addition, **Chae et al. (2020)** were similar to our study. They reported that cultural competence educational interventions positively affected health

professional outcomes such as work agility and nursing career aspiration. Also, **Alsharo et al. (2017)** mentioned that An environment of cultural Intelligence fosters high levels of interpersonal trust, which fosters confidence, freedom, and a sense of belonging. These factors are thought to be extremely helpful in fostering an individual's innovativeness, improving the quality of their flexible social relationships, and their ability to work in a team. Interactions across cultures can be mentally taxing due to a lack of familiarity with and adaptation to other ways of life.

Moreover, this study is congruent with **Crowne (2008)**, who indicates that education and employment as certain types of cultural exposures, and the level of exposure from these experiences increases cultural Intelligence. Agree with this study's hypothesis that culturally intelligent head nurses hire, train, inspire, promote flexibility, and prepare employees for international assignments. Furthermore, it has been said that cultural Intelligence is an essential quality for executives in multinational corporations. This quality will only grow in significance as the workforce becomes more diverse.

The current study was in the same line with **Groves & Feyerherm (2011)**, who reported that The correlation between emotional Intelligence and cultural Intelligence was positive ($r = .42, p < .01$), and there was a correlation between leader performance and team performance ($r = .53, p < .01$). Also, **Gabra et al. (2018)** studied the emotional intelligence educational program at Minia University Hospital. They found that first-line nurse managers

had high levels of emotional Intelligence, which positively correlated to nurses' motivation and empowerment to achieve their career aspirations. Leaders treat many problems by using cultural and emotional Intelligence and flexibility in choosing options in order to force their nurses to be more agile and achieve their career aspirations.

Furthermore, these results were according to **Van Dyne, Ang, & Tan (2016)**, who mentioned that cultural Intelligence alleviates psychological stresses associated with working in culturally different contexts, acts as a "neutralizing the negative" perspective, and has a wide range of psychological, behavioral, and performance outcomes for individuals in intercultural settings.

Following program implementation, nurses' levels of work agility and career aspiration improved significantly, according to the current study's findings. Prior to the program's launch, nurses exhibited less initiative and ambition in their professional lives. Following the program's implementation and the subsequent two measurement periods (three months later), this level jumped sharply to a high level. This outcome demonstrated that the cultural intelligence curriculum was effective.

This result could be explained by the fact that head nurses who possess cultural Intelligence can create a positive workplace that is characterized by centricity, empowerment, and motivation; maintain a flexible environment in order to react promptly and wisely to changes that are both predictable and unpredictable; and quickly adjust to the demands of the environment. This is accomplished by modifying

work practices and processes that nurses feel and understand and forming a team network with a shared purpose and vision.

Nurses view managerial positions as rewarding possibilities, but many do not believe the benefits outweigh their concerns, so they wish to be motivated and recognized for their accomplishments.

Mohamed et al. (2022) found that most staff nurses at Specialists Pediatric Cairo University Hospital and Gynecology, Obstetrics, and Pediatric Minia University Hospital reported high organizational agility and career aspiration levels, respectively. This finding is consistent with the current study. **Hussein and Ahmed (2022)** and **Kamal (2022)** came to different conclusions about the level of organizational agility at Benha University Hospitals; the former found modest agility, according to about two-thirds of the nurses surveyed, while the latter found moderate levels.

Over half of the nurses surveyed by **Ismael et al. (2021)** rated their organization's agility as moderate. According to **Al-Taweel and Al-Hawary (2021)**, corporations exhibited moderate agility. Confirming these findings were additional studies by **Khaddam (2020)** and **Clauss et al. (2021)** that found most nurses thought organizational agility was moderate.

Both this study and the one by **Mohamed et al. (2022)** found that the nursing staff at Specialists Pediatric Cairo University Hospital had high levels of career aspiration. Another study found that leadership development opportunities positively impacted staff nurses' motivation, flexibility, and aspirations to hold executive positions in their organizations (**Seibert et al. (2017)**).

Furthermore, it has been highlighted that educational opportunities and informal mentoring at the unit level are crucial for elevating nurses' leadership aspirations (**Baghshykhi et al., 2020**). Supporting this study, **Dries et al. (2012)** discovered that job content and on-the-job learning influence head nurses' learning agility. Interestingly, they found that learning agility is a better predictor of being identified as having high potential than job performance. Additionally, they found that having a varied career path is positively associated with learning agility.

Moreover, **Arhin (2018)** revealed that the majority of participants had positive career aspirations. Also, **Al Anwer & Ghanem (2021)** reported that nurses perceived high career aspirations. This resulted in the same line with **Mohamed et al. (2022)**, who revealed that their nursing staff had a high level of career aspiration.

Similarly, this result was matched by **Al Anwer and Ghanem (2021)**, who indicated that Nursing students' career aspirations were ranked highest in terms of educational aspiration, followed by achievement aspiration.

Furthermore, these results align with those of **Abd-elmonem et al. (2023)**, who reported that more than two-thirds (71.4%) of their participants had a high level of career aspiration. Also, **Yu et al. (2022)** conveyed that nurses held a positive attitude toward continuing professional development due to career aspirations.

The current study's results presented a positive correlation between the total head nurse's cultural Intelligence (knowledge, self-assessment), nurses'

agility, and career aspiration during different testing times.

The current study finding is accorded to **Abd-elmonem et al. (2023)**, who demonstrated that a positive, highly statistically significant correlation was found among total entrepreneurial tendencies as a characteristic of a culturally intelligent manager, total perception toward professional development achieved through agility and total career aspiration among nurses. Also, this finding is similar to **Hu et al. (2017)**, as it showed that people with a high level of cultural Intelligence tend to be more successful when collaborating creatively across cultures and directly related to their flexibility in their work, individual creativity, and career aspiration. Also identifies it as an important resource in multinational contexts.

Moreover, according to **Fang et al. (2018)**, cultural Intelligence predicts individual and group performance. It also increases flexibility and work agility, and as a result, nurses gain career aspirations and are promoted and upgraded in their positions. Additionally, **Moon (2013)** proved that teams' performance is affected by the cultural diversity present and that teams with higher levels of CQ generally show faster performance improvement over time. Furthermore, CQ acts as a moderator between cultural diversity and team performance, according to the results.

A positive correlation between cultural Intelligence and knowledge transfer was discovered by **Vlajčić et al. (2019)**, and workers may become more innovative, adaptable, and ambitious if they have access to more information. However, no investigation was conducted into the correlation

between IQ, work agility, and career goals. Furthermore, **Seibert et al. (2017)** found that when head nurses were culturally intelligent, giving staff nurses opportunities for leadership development improved their desire to occupy executive roles in their organizations and raised their career aspiration to lead.

In addition to **Al Anwer & Ghanem's (2021)** study, which clarified that a high statistically significant positive correlation was found between overall entrepreneurial intention as a characteristic of culturally intelligent head nurses and their nurse's work agility and career aspiration, Also, **Zia et al. (2022)** show that there is a strong positive strong relationship between job aspirations and professional development.

Although **Lin et al. (2012)** reported positive effects of cultural Intelligence and Emotional Intelligence on cross-cultural adjustment, cultural Intelligence and EI positively moderated the relationship between CQ and cross-cultural adjustment. They also emphasized the importance and utility of CQ and EI in understanding the links relating to cross-cultural adjustment, and they provide practical implications for individuals seeking to improve their cross-cultural effectiveness.

This study finding is accorded to **Azevedo & Shane (2019)**, whose studies show that CQ positively affects employees' innovative work behavior due to flexibility, organizational agility, and career aspiration. However, **Tay et al. (2008)** reported that many CQ studies neglected to examine the effect of this resource on employees who face

cultural diversity without necessarily being relocated to another setting.

Furthermore, numerous studies investigate how cultural Intelligence impacts various employee behaviors, including innovation, creativity, job performance, job satisfaction, task performance, life satisfaction, and voice behaviors. However, there is a dearth of research regarding how cultural Intelligence impacts work agility and career motivation (Ang et al., 2007), (Bücker et al., 2014), (Barakat et al., 2015), (Bogilović et al., 2017), (Le et al., 2018), (Afsar et al., 2019), (Afsar et al., 2020).

Moreover, cultural Intelligence was identified as a mediator between multiculturalism and employees' innovative work behavior (Korzilius et al., 2017). Individual levels of cultural Intelligence were found by Bogilović et al. (2017) to moderate the relationship between knowledge hiding and creativity. Research on the relationship between innovativeness and emotional and cognitive Intelligence has been conducted (Goyal and Akhilesh, 2007; Zhang et al., 2015), but research on the impact of cultural Intelligence, which is particularly important in multicultural settings, on innovative behaviors in the workplace has been relatively understudied.

Conclusion

There were significant differences when comparing the head nurses' knowledge and cultural intelligence levels before and after taking the three tests. Implementing a cultural intelligence educational program for head nurses led to increased staff nurses' work agility and career aspiration levels.

Following the program's launch, the overall level of cultural Intelligence skyrocketed from its pre-launch low point. After three months of the program's implementation, there was a marginal but statistically significant decline in cultural Intelligence.

Recommendations

All hospitals in the health care system could benefit from more studies on the cultural Intelligence of head nurses in order to boost workplace motivation, agility, and career aspirations.

Raising the level of cultural Intelligence among nursing students so that they can become nurses who are self-directed, adaptable, and confident in their abilities

- Research on how psychological health, faculty role models, clinical staff, and educational experiences may promote professional skill development, as well as on the competency and instructional methods of nursing educators in these areas, is necessary for the future.

References

- Abd-elmonem, A. M., Elshahat, M. M., & Hasanin, G. (2023). Entrepreneurial Tendencies of New Graduate Baccalaureate Nurses and its Relation to their Professional Development and Career Aspiration. *Assiut Scientific Nursing Journal*, 11(36), 237-248.
- Afsar, B., Al-Ghazali, B. M., Cheema, S., & Javed, F. (2020). Cultural Intelligence and innovative work behavior: the role of work engagement and interpersonal trust. *European Journal of Innovation Management*, 24(4), 1082-1109.
- Afsar, B., Shahjehan, A., Shah, S.I. and Wajid, A. (2019), "The mediating role of transformational leadership in the relationship between cultural intelligence and employee Voice behavior: a case of hotel employees," *International Journal of Intercultural Relations*, 69, 66-75.
- Akkaya, B., & Mert, G. (2022). Organizational Agility, Competitive Capabilities, and the Performance of Health Care Organizations During the Covid-19

- Pandemic. *Central European Management Journal*, 30(2), 2-25.
- Al Anwer, H., & Ghanem, A. (2021):** The Relationship between entrepreneurship education, entrepreneurial intention, and career aspiration among faculty of nursing students. *Egyptian Journal of Nursing and Health Sciences*, 2 (2), 17-35.
- Al Humdan, E., Shi, Y., and Behnia, M. (2020).** Supply chain agility: a systematic review of definitions, enablers, and performance implications. *International Journal of Physical Distribution & Logistics Management*, 50(2), 287–312. <https://doi.org/10.1108/IJPDLM-06-2019-0192>.
- Alsharo, M., Gregg, D., and Ramirez, R. (2017),** "Virtual team effectiveness: The role of knowledge sharing and trust," *Information and Management*, 54 (4), 479-490.
- Altaweel, R. and Al-Hawary, S. (2021).** The mediating role of innovation capability on the relationship between strategic agility and organizational performance. *Sustainability*, 13, 7564. [https:// Doi. Org/10.3390/Su13147564](https://doi.org/10.3390/Su13147564).
- Ang, S., Rockstuhl, T., & Christopoulos, G. (2021).** "Chapter 12 Cultural intelligence and leadership judgment decision making: ethnology and capabilities". In *Judgment and Leadership*. Cheltenham, UK: Edward Elgar Publishing. Retrieved Dec 17, 2023, from <https://doi.org/10.4337/9781839104107.00019>
- Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007).** Cultural Intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation, and task performance. *Management and organization review*, 3(3), 335-371.
- Arhin, V. (2018).** Relationship between Career Aspirations and Study Behaviours among Second Year Distance Learners of the University of Cape Coast, Ghana. *African Educational Research Journal*, 6(3), 173-180.
- Azevedo, A., & Shane, M. J. (2019).** A new training program in developing cultural Intelligence can also improve innovative work behavior and resilience: A longitudinal pilot study of graduate students and professional employees. *The International Journal of Management Education*, 17(3), 100303.
- Baghshykhi, F., Rahimi, H., Azizi-Gaji, S. and Izadi-Dastgerdi, E. (2020).** Job characteristics and work adjustment among Iranian nurses: A correlational study. *Nursing and Midwifery Studies*, 9(2), 90.
- Barakat, L.L., Lorenz, M.P., Ramsey, J.R. and Cretoiu, S.L. (2015),** "Global managers: an analysis of the impact of cultural intelligence on job satisfaction and performance," *International Journal of Emerging Markets*, 10(4), 781-800.
- Barzykowski, K., Majda, A., Szkup, M., & Przyłęcki, P. (2019).** The Polish version of the Cultural Intelligence Scale: Assessment of its reliability and validity among healthcare professionals and medical faculty students. *PloS one*, 14(11), e0225240.
- Bogilović, S., Černe, M. and Škerlavaj, M. (2017),** "Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity", *European Journal of Work and Organizational Psychology*, 26(5), 710-723.
- Brook, J., Aitken, L., Webb, R., MacLaren, J., & Salmon, D. (2019).** Characteristics of successful interventions to reduce turnover and increase retention of early career nurses: A systematic review. *International journal of nursing studies*, 91, 47-59.
- Bücker Joost J.L.E. , Furrer Olivier, Lin Yanyan. 2015.** «Measuring Cultural Intelligence: A New Test of the CQ Scale.» Working Papers SES 461, Faculty of Economics and Social Sciences, University of Fribourg (Switzerland)
- Bücker, J.J., Furrer, O., Poutsma, E. and Buyens, D. (2014),** "The impact of cultural intelligence on communication effectiveness, job satisfaction and anxiety for Chinese host country managers working for foreign multinationals," *The International Journal of Human Resource Management*, 25(14), 2068-2087.
- Caputo, A., Ayoko, O. B., Amoo, N., & Menke, C. (2019).** The relationship between cultural values, cultural intelligence, and negotiation styles. *Journal of Business Research*, 99, 23-36. doi: <https://doi.org/10.1016/j.jbusres.2019.02.011>
- Chae, D., Kim, J., Kim, S., Lee, J., & Park, S. (2020).** Effectiveness of cultural competence educational interventions on health professionals and patient outcomes: A systematic review. *Japan Journal of Nursing Science*, 17(3), e12326.
- Chen, C. J. (2019).** Developing a model for supply chain agility and innovativeness to enhance firms' competitive advantage. *Management Decision*, 57(7), 1511-1534.
- Clauss, M., Abebe, C., Tangpong, A. and Hock, M. (2021).** Strategic agility, business model innovation, and firm performance: An empirical investigation, "In *Transactions on Engineering Management*, 68(3), 767-784, Doi: 10.1109/Tem.2019.2910381.
- Crowne, K. A. (2008).** What leads to cultural Intelligence?. *Business Horizons*, 51(5), 391-399.

- Datta S., Agarwal U. A. (2017). Factors effecting career advancement of Indian women managers. *South Asian J. Business Stud.* 6, 314–336. 10.1108/SAJBS-07-2016-0062
- Dries, N., Vantilborgh, T., & Pepermans, R. (2012). Learning agility and career variety are important in identifying and developing high-potential employees. *Personnel Review*, 41(3), 340-358.
- Evseeva, L.I., Shipunova, O.D., Pozdeeva, E.G., Trostinskaya, I.R., Evseev, V.V. (2020). Digital learning as a factor of professional competitive growth. In: T. Antipova and Á. Rocha (Eds.) *DSIC 2019, AISC, 1114*, 241–251, Springer, Cham. https://doi.org/10.1007/978-3-030-37737-3_22
- Fang, F., Schei, V., & Selart, M. (2018). Hype or hope? A new look at the research on cultural Intelligence. *International Journal of Intercultural Relations*, 66, 148-171.
- Fu, L., & Charoensukmongkol, P. (2023). Effect of cultural Intelligence on burnout of Chinese expatriates in Thailand: The mediating role of host country national coworker support. *Current Psychology*, 42(5), 4041-4052.
- Gabra, S. F., Yousef, H. R., & Abood, S. A. (2019). Emotional Intelligence Educational Program for First Line Managers on the Nurses' Motivation and Empowerment at Minia University Hospital. *Minia Scientific Nursing Journal*, 5(1), 32-40.
- Goyal, A. and Akhilesh, K.B. (2007), "Interplay among innovativeness, cognitive intelligence, emotional intelligence and social capital of work teams," *Team Performance Management: An International Journal*, 13 (7/8), 206-226.
- Greene-Moton, E., & Minkler, M. (2020). Cultural Competence or Cultural Humility? Moving Beyond the Debate. *Health promotion practice*, 21(1), 142–145. <https://doi.org/10.1177/1524839919884912>
- Gregor, M. A., & O'brien, K. M. (2015). Promoting career aspirations among young women: Improving instrumentation. *The Journal of Career Assessment*, 10, 20-30.
- Groves, K. S., & Feyerherm, A. E. (2011). Leader Cultural Intelligence in Context: Testing the moderating effects of team cultural diversity on leader and team performance. *Group & Organization Management*, 36(5), 535-566.
- Hartman R. L., Barber E. G. (2020). Women in the workforce. *Gender Manage.* 35, 92–118. 10.1108/GM-04-2019-0062
- Hu, S., Gu, J., Liu, H., & Huang, Q. (2017). The moderating role of social media usage in the relationship among multicultural experiences, cultural Intelligence, and individual creativity. *Information Technology & People*, 30(2), 265-281.
- Hussein Yassein Hussein, N., Morsy El-Shahate, M., & Ahmed Abd Allah Mohamed, N. (2022). Organizational Agility: The Pathway to Job Enrichment among Nurses. *Egyptian Journal of Health Care*, 13(3), 529-540.
- Ismael, Z., El-kholy, S., Ahmed, E.(2021). Knowledge Management as a Predictor of Organizational Resilience and Agility, *Egyptian Journal of Health Care*, 2021 EJHC, 12(4), 1397- 1412.
- Jyoti, J., Pereira, V., Kour, S. (2019). Examining the Impact of Cultural Intelligence on Knowledge Sharing: Role of Moderating and Mediating Variables. In: Chahal, H., Jyoti, J., Wirtz, J. (eds) *Understanding the Role of Business Analytics*. Springer, Singapore. https://doi.org/10.1007/978-981-13-1334-9_9
- Kamal, G. (2022). Organizational agility and teamwork are perceived by the main Mansoura University Hospital nursing staff. Unpublished Master Thesis, Faculty of Nursing, Mansoura University.
- Khaddam, A. (2020). Impact of personnel creativity on achieving strategic agility: The mediating role of knowledge sharing. *Manag.Sci. Lett.* 10, 2293–2300.
- Korzilius, H., Bücker, JJ and Beerlage, S. (2017), "Multiculturalism and innovative work behavior: the mediating role of cultural intelligence," *International Journal of Intercultural Relations*, 56, 13-24.
- Le, H., Jiang, Z. and Nielsen, I. (2018), "Cognitive, cultural intelligence and life satisfaction of migrant workers: the roles of career engagement and social injustice," *Social Indicators Research*, 139(1), 237-257.
- Lin, Y. C., Chen, A. S. Y., & Song, Y. C. (2012). Does your intelligence help to survive in a foreign jungle? The effects of cultural Intelligence and Emotional Intelligence on cross-cultural adjustment. *International Journal of Intercultural Relations*, 36(4), 541-552.
- Livermore, D., Van Dyne, L., & Ang, S. (2022). Organizational CQ: Cultural Intelligence for 21st-century organizations. *Business Horizons*, 65(5), 671-680. doi: <https://doi.org/10.1016/j.bushor.2021.11.001>
- Majda, A.;Zalewska-Puchala, J.; Bodys-Cupak, I.; Kurowska, A.; Barzykowski, K.(2021).Evaluating the Effectiveness of Cultural Education Training: Cultural Competence and Cultural Intelligence Development among Nursing Students. *Int. J. Environ. Res. Public Health*, 18, 4002. <https://doi.org/10.3390/ijerph18084002>
- Mohamed Nagib Ali, R., Zayed Mohammed, M., & Ahmed, A. (2022). Organizational agility: the

- pathway to career aspirations among staff nurses at selected hospitals. *Egyptian Journal of Health Care*, 13(4), 1658-1668.
- Mohammed, R. R., Abdel Wahab, E. A., & El-Sayed, R. I. (2020).** Factors Influencing Career Development among Nursing Staff at Port-Said Governmental Hospitals. *Port Said Scientific Journal of Nursing*, 7(1), 191-211.
- Moon, T. (2013).** The effects of cultural Intelligence on performance in multicultural teams. *Journal of Applied Social Psychology*, 43(12), 2414-2425.
- Morris, R.L.; Ruddock, A.; Gallacher, K.; Rolfe, C.; Giles, S.; Campbell, S. (2021).** Developing a Patient Safety Guide for Primary Care: A Co-design Approach Involving Patients, Carers and Clinicians. *Health Expect.*, 24, 42–52
- Nosratabadi, S., Bahrami, P., Palouzian, K., & Mosavi, A. (2020).** Leader cultural intelligence and organizational performance. *Cogent Business & Management*, 7(1), 1809310.
- Pereira, V., Mellahi, K., Temouri, Y., Patnaik, S. and Roohanifar, M. (2018).** Investigating dynamic capabilities, agility, and knowledge management within EMNEs- longitudinal European evidence. *Journal of Knowledge Management*, 23 (9), 1708-1728.
- Peterson (2004).** *Cultural Intelligence: A guide to working with People from Other Cultures.* International press. USA
- Petrović, D. S. (2011).** How do teachers perceive their cultural Intelligence? *Procedia-Social and Behavioral Sciences*, 11(0), 276-280.
- Salmen, K., and Festing, M. (2021).** Paving the way for progress in employee agility research: a systematic literature review and framework. *Int. J. Hum. Resour. Manag.* 1–54. doi: 10.1080/09585192.2021.1943491
- Seibert, S.E., Sargent, L.D., Kraimer, M.L. and Kiazad, K. (2017),** "Linking developmental experiences to leader effectiveness and promotability: the mediating role of leadership self-efficacy and mentor network," *Personnel Psychology*, 70(2), 357-397.
- Sherehiy, B. (2008).** Relationships between Agility Strategy, Work Organization, and Workforce Agility. Doctoral dissertation. Louisville: University of Louisville USA.
- Tay, C., Westman, M. and Chia, A. (2008),** "Antecedents and consequences of cultural intelligence among short-term business travelers", in *Handbook of Cultural Intelligence: Theory, Measurement, and Applications*, 126-144.
- Van Dyne, L., Ang, S., & Tan, M. L. (2016).** *Cultural Intelligence.*
- Vlajčić, D., Caputo, A., Marzi, G., and Dabić, M. (2019),** "Expatriates managers' cultural intelligence as promoter of knowledge transfer in multinational companies," *Journal of Business Research*, 94, 367-377.
- Yari, N., Lankut, E., Alon, I., & Richter, N. F. (2020).** Cultural Intelligence, global mindset, and cross-cultural competencies: A systematic review using bibliometric methods. *European Journal of International Management*, 14(2), 210-250.
- Yu, X., Huang, Y., & Liu, Y. (2022):** Nurses' perceptions of continuing professional development: a qualitative study. *B.M.C. nursing*, 21(1),1-8.
- Zhang, S.J., Chen, Y.Q. and Sun, H. (2015),** "Emotional intelligence, conflict management styles, and innovation performance: an empirical study of Chinese employees," *International Journal of Conflict Management*, 26(4), 450-478.
- Zia, M. Q., Decius, J., Naveed, M., & Anwar, A. (2022).** Transformational leadership promoting employees' informal learning and job involvement: the moderating role of self-efficacy. *Leadership & Organization Development Journal*, 43(3), 333-349.