PRIMARY RESEARCH

Development and Validation of A New Islamic Work Ethics Scale for Healthcare Providers in Emergency Departments (EDIWES)

Audai Naji Al-Samdi [1]*, **Safiya Amaran** [2], **Mohammad Ariff Tengku** [3], **Bandar Ersan Alown** [4]

[1, 2, 3, 4] Universiti Sultan Zainal Abidin, Kuala Terengganu, Malaysia

Abstract.

Purpose: Research on work ethics has acquired considerable scholars' attention. Research on employees' religion-oriented ethics, particularly Islamic Work Ethics (IWE), has remained relatively narrow in healthcare settings. This study aims to develop and validate a scale to measure Healthcare Providers (HCPs) IWE in Emergency Departments (EDs).

Design/methodology/approach: This study was conducted on HCPs who work at EDs in Jordan. The scale goes through a series of validation processes, including content validity, face validity, and construct validity. This study employed exploratory factor analysis for construct validity and Cronbach's alpha for reliability analysis.

Findings: Exploratory factor analysis yielded 17 strong explanatory items on a three-dimension scale, namely obligation of HCP to their patients, obligation of supervisors to their subordinates and obligation of HCP to their colleagues.

Conclusion: The findings of this study provide a valid and reliable scale that had a satisfactory psychometric property for measuring Healthcare Providers' IWE in EDs.

KAUJIE Classification: P0
JEL Classification: M10

INTRODUCTION

Work ethics is critical in the day-to-day operations of any organization, especially a service institution such as a hospital. The organization requires an ethical framework, not merely rules and regulations, to function successfully and securely (Sarwar & Abugre, 2013). Furthermore, establishing spirituality in the workplace can make certain employees more intellectually, socially, and physically attached to their company (Moayedi, 2009). Islamic Work Ethics (IWE) has long been a source of interest for academics researching staff practices and attitudes in Muslim societies (Usman et al., 2015); The Qur'ān (The Holy Book) and *Sunnah*

---

*Corresponding author: Audai Naji Al-Samdi

†Email: Audaismadi100@yahoo.com; ORCID: https://orcid.org/0000-0002-5695-4482

are the sources of this ethics (the sayings and practice of Prophet Mohammed (PBUH)). IWE is described as "a collection of principles or a system of beliefs about work and hard work extracted from the Qur'ān and *Sunnah*" (Amilin et al., 2018). The studies conducted by different scholars have indicated a positive relationship between IWE and organizational citizenship behavior, intrinsic motivation, employee work engagement, innovation capability, job satisfaction, organizational commitment, knowledge sharing behavior, and organizational loyalty (Ali & Al-Kazemi, 2007; Amilin et al., 2018; Fakharzaman et al., 2012; Farid et al., 2017; Haroon & Zaman, 2012; Heyrani & Hamehkhani, 2017; Mansori, 2015; Moayed, 2009; Muhammad & Mohabat et al., 2014; Murtaza et al., 2016; Yousef, 2001).

IWE and emergency care services intersect at various stages, one of which is life-saving; the main goals of emergency services are to reduce early death and complications. Besides that, Islam, the primary source of IWE, encourages and emphasizes life-saving, and considers that if someone saves a life, it is as if he saves the life of the whole world. Consequently, most healthcare administration aims to offer high-quality healthcare services in the emergency department (ED) and other departments; unequivocally, the idea of delivering a high-quality good or service can be shown by Islamic teachings, as inferred by the Prophet Mohammed (PBUH) sayings "Do the best as if you see Allah; if not, Allah see you" (WHO, 2005). Nevertheless, there is a dearth of evidence investigating IWE in the medical field using an appropriate tool. As a result, this research was carried out to build and validate an instrument that can be used to measure HCPs' IWE in Jordan hospitals' ED and can be generalized to other Islamic cultures.

LITERATURE REVIEW

Researchers have developed and implemented several models and scales for assessing IWE in the growing corpus of extant literature. These scales have been used to estimate IWE in a variety of applications (Aldulaimi, 2020). Ali (1988) is regarded as the first to write on the scale and measurement of IWE. Ali (1988) used a 46-item scale to measure the IWE without indicating any dimensions or subscales. Following extensive testing and analysis of the IWE scale, a shortened version with 17 items was created (Usman et al., 2015).

Chanzanagh and Akbarnejad (2011) defined IWE in seven dimensions (work intentions, trusteeship, work type, work results for the Islamic *ummah*, cooperation and collaboration, justice and fairness, work as the only source of ownership), and they developed a measurement scale comprised of 21 items (three items to each dimension). Khadijah et al. (2015) created their own scale to assess IWE for Malaysian bank staff, which included 23 items and four dimensions: responsibility, effort, honesty and cooperation.

Likewise, Ibrahim (2015) established his instrument to examine the IWE owing to the delayed innovation in the IWE scale and to gain a deeper understanding of the nation of IWE and its application. The instrument consisted of 8 dimensions and a 44 items. Furthermore, Yaseen et al. (2015) illustrated four important constructs that are represented in Islamic work ethics: worship, effort, cooperation and moral responsibility. Further, 17 items were utilized from previous studies to cover the four demotions.

Aldulaimi, (2020) has proposed a multidimensional scale with 18 dimensions and 90 items to assist scholars in evaluating and measuring work ethics in Islamic civilizations. The dimensions were *iḥsān*, efficiency, fulfillment, self-control, obedience, cooperation, discipline and punctuality, dignity, justice, safety, rights, responsibility, humanity, and consultation (*shūrâ*). Additionally, Wahab et al. (2016) endeavored to experimentally quantify and validate Islamic work values conceptions. They employed sequential exploratory mixed methodologies to evaluate the psychometric aspects of the Islamic work values instrument, which included a quantitative research strategy following qualitative methods. They qualitatively confirmed 25 of the 56 Islamic work values that were first discovered, and they quantitatively validated 13 of them.

TABLE 1
Summary of IWE's Scales

Authors	Num of Items	Dimensions
Ali (1988)	46	No dimensions.
Chanzanagh & Akbarnejad (2011)	21	Work intentions, trusteeship, work type, work results for the Islamic Ummah, cooperation and collaboration, justice and fairness, work as the only source of ownership.
Khadijah et al. (2015)	23	Accountability, effort, honesty and teamwork.
Yaseen et al. (2015)	17	Worship, effort, cooperation and moral responsibility
Ibrahim (2015)	44	Religiousness, effort, competition, work obligation, quality, collectivity, equality and benefit.
Aldulaimi (2020)	90	*Iḥsān*, efficiency, fulfillment, self-control, obedience, cooperation, discipline punctuality, dignity, justice, safety, rights, responsibility, humanity, and consultation (*shūrâ*).

These values are gratitude (*shukūr*), hardworking and optimal effort (*mujāhadah*), benevolence (*iḥsān*), keeping promises, competitiveness, forgiveness (*'afw*), self-discipline, honesty, sincerity (*amīn*), truthfulness, perfectionism (Itqan), continuous self-criticism (*muhasabah an-nafs*), cleanliness (*toharah/tazkiyyah*), consultation (*shūrâ*), cooperation (*ta'āwun*), responsibility (*mas'uliyyah*), trustworthiness (*amānah*), punctuality/timeliness, justice (*adalah*), competence, transparency, integrity, patience (*sabr*), good intention (*niyyah*) and piety

(*taqwâ*). However, Ali's (1988) 17 items scale is the most popular and widely used tool for research on IWE. Table 1 shows a list of tools used to scale employees' IWE in different studies.

Yousef (2000) investigated IWE and employee attitudes towards organizational change and commitment in the United Arab Emirates. He discovered that employees' IWEs influenced their attitudes toward organizational change and commitment in a direct and positive way. Yousef (2001) examined the roles of IWE as a moderate between organizational commitment and work satisfaction in several UAE companies. He discovered that IWE had a direct impact on organizational commitment as well as work satisfaction. Farid et al. (2018) evaluated the impact of IWE on employee work engagement and organizational citizenship behavior (OCB) among Pakistani public healthcare workers. They discovered that IWE is positively related to employee work engagement and has a strong and positive relationship with OCB.

In a similar line, Murtaza et al. (2014) investigated the impact of IWE on OCB and Knowledge Sharing Behaviors (KSBs) among Pakistani university employees. They discovered that IWE has a positive influence on OCB as well as KSBs. Furthermore, Mohabati et al. (2014) investigated the possible link between the Islamic ethics of business and the OCB among Zabol University of Medical Science's health professionals. They discovered that Islamic ethics of business are a significant predictor of OCB, and that there is a significant correlation between the Islamic ethics of business and various dimensions of OCB, such as social customs, altruism, job awareness, individual mutual coordination, organizational resource protection, chivalry, and courtesy.

Alhyasat (2012) also explored the influence of IWE on the development of OCB in Jordanian journalistic organizations. There were seven daily publications engaged. He discovered that personnel at Jordanian news groups were really committed to IWE. Furthermore, there was a statistically significant effect of obedience by IWE (kindness and forgiveness in dealing with employees and clients, obedience to the people in power, and respecting job ethics in organizational citizenship behavior among employees in these organizations). However, there was no statistically significant effect of abidance by the IWE (proficiency, giving advice to Muslims, sense of responsibility, justice and fairness, integrity and teamwork) in OCB. Yaseen et al. (2015) investigated the IWE and organizational commitment for managers and heads of departments in Jordanian Islamic banks. They found that IWE has a significant positive impact on organizational commitment. Also, the study indicated that Jordanians had been influenced by Islamic teachings and ethics, irrespective of their religions. They also, indicated that the connection between IWE and organizational commitment characteristics is moderated by age rather than gender.

Dimensions of Islamic Work Ethics

This study develops a theoretical construct based on IWE literature and Islamic instructions and principles, including seven dimensions that are expected to impact the ED workplace significantly. These dimensions are derived from Sharī'ah, the Qur'ān, and the *sunnah* (Aldulaimi, 2016). The constructs; doing well (*iḥsān*), cooperation (*ta'āwun*), *ḥalāl* work earning, dignity (*karamah*), justice ('*adl*), responsibility fulfillment, and consultation (*shūrâ*).

Following is a brief of each construct.

Doing Well (*Iḥsān*)

Iḥsān is an Arabic word that means performing tasks precisely, correctly, and accurately (Aldulaimi, 2016). Also, it means doing well (WHO, 2005). *Iḥsān* has several denotations. First, it denotes "quality"; high quality is desired in everything, every single thing such as work, worship, and living. The Prophet (PBUH) said, "God has ordained the doing well of everything." Second, *iḥsān* denotes charity and thus infers to the gentle, compassionate touch when providing care. It implies a person wishes for his brother what he wishes for himself and gives priority to others over himself, even when he suffers a dire need. Third, *iḥsān* denotes a living conscience and mindfulness of God, as implied by the sayings of the Prophet PBUH: "Do the best as if you see Allah, if not, Allah sees you" (Wahab, 2012; WHO, 2005). *Iḥsān* also includes perfection, which means good actions, defectless actions, beautification, and smartness (Aldulaimi, 2016).

Cooperation (*Ta'āwun*)

Cooperation in Arabic means (*ta'āwun*) and it refers to a situation in which people work together for a common purpose or benefit (Ibrahim, 2015). Good cooperation is crucial for Muslims and can determine the success or failure of the Muslim community. Allah says in Qur'ān, "And cooperate in righteousness and piety, but do not cooperate in sin and aggression" (5:2). This emphasizes that Muslims need to cooperate and collaborate in all activities and avoid harmful conflicts to ensure prosperity for the Islamic community.

For organizations, good cooperation leads to running jobs smoothly, improving teamwork, improving job quality, instills harmony and the rights of every individual within an organization, and improving communication (Aldulaimi, 2016; Ibrahim, 2015; Morley & Cashell, 2017;). Moreover, with cooperation and teamwork, hospitals can use resources appropriately and increase productivity; the ED staff constantly acquires significant experience in patient care and consequently increase the group performance and the department's efficiency (Morley & Cashell, 2017). HCPs should have a strong belief that the collective ability of the group members leads to an increase in their success in doing patient treatment (Majidi et al., 2016). A high level of cooperation leads to a good relationship among HCPs in the hospital, ensuring high production and reproduction (Aldulaimi, 2016; Ibrahim, 2015).

Ḥalāl Work Earning

Ḥalāl is an Arabic word, and it means permissible in Islam. *Ḥalāl* work earning means that your work does not contradict Islamic teachings and your source of earning is permissible in Islam (Wahab, 2012). Islam asks Muslims to work and not work only but do hard work and not burden the community. Prophet Mohamed (PBUH) has said, "Never has anyone eaten a better thing than when he eats of his own hands" (Aldulaimi, 2016). Moreover, the primary purpose of working in Islam is not to merely meet daily needs but to obtain the blessings of Allah (Aldulaimi, 2016). Prophet Mohamed (PBUH) preached that "Seeking of a *ḥalāl* earning is the (next) *farḍ* (duty) after the *farḍ* (*ṣalāh*)." (*Baihaqi*) (Muslim Stu-

dents Association, 1996). Further, blessings of Allah can be obtained by avoiding unclean and corrupt means of making money, such as embezzlement, dishonest trading, gambling, monopoly, speculation, and bribery. The Qur'ān says, "And do not consume one another's wealth unjustly or send it [in bribery] to the rulers in order that [they might aid] you [to] consume a portion of the wealth of the people in sin, while you know [it is unlawful]" (2:188). Prophet Mohamed (PBUH) warned Muslims from deception and said, "He who deceives is not one of us" (Aldulaimi, 2016).

Dignity (*Karamah*)

Dignity means honor, being worthy, nobility, distinction, virtue, and respect for all human kinds. (Aldulaimi, 2016; Ibrahim, 2015) The Qur'ān states, "Indeed we have honored the children of Adam" (17:70). According to this verse, dignity is a natural and unqualified right that inheres for all human persons as of the moment of birth. Muslim men and women are entrusted to treating each other with dignity and honor and not treating each other as slaves or disrespect (Aldulaimi, 2016). Prophet Mohammed (PBUH) said, "No one of you becomes a true believer until he likes for his brother what he likes for himself." Muslims are required to have dignity by rejecting immoral deeds such as lying, testify untruth, arrogance, self-conceit, or false pride (Ibrahim, 2015).

Justice (*'Adl*)

Justice means in Arabic (*'adl*) it refers to fairness, equilibrium, impartiality in doing things, and avoiding extremes (Wahab, 2012). Islam stresses human beings to maintain justice in all actions as decreed by Allah: "Allah commands justice and the doing of good" (16:90). In Islam, justice is prevailed in encouraging positive virtues like honesty, moderation, and kindness, as well as prohibiting evils like rejecting bribery, corruption, lying (Yusof et al., 2017).

Justice implies Muslims should exercise fair and equal treatment to all humans irrespective of gender, race, color, or religious or political affiliation. Islam disallows favoritism as it will lead to injustice when dealing with people (Wahab, 2012). Prophet Muhammad (PBUH) said, "Whoever delegates a position to someone, whereas he sees someone else more competent (for that position), verily he has cheated God and His Apostle and all the Muslim" (Wahab, 2012). Workers should be given fair and just wages as Prophet (PBUH) stated, "The wages of labor must be paid to him before the sweat dries upon his body" (Aldulaimi, 2016). Practicing justice in the workplace will grant the opportunity for employees to gain confidence, which would ultimately result in a stable and trusting environment in which creative and co-creative geniuses will be encouraged (Wahab, 2012).

Responsibility Fulfillment

Prophet Mohamed (PBUH) ordered us to act responsibly in holding any position or performing our jobs and duties (Aldulaimi, 2016). In his saying, "All of you are providers of care and everybody is responsible for doing it right for his subordinates and dependents." The Prophet (PBUH) clarifies that we all have responsibilities, whether in the family, workplace, or society

(Aldulaimi, 2016). These responsibilities towards ourselves and others mean that we should be honest, transparent, truthful and just (Aldulaimi, 2016). This responsibility is a trust, and Islamic perspective is about how Muslims enact their responsibility fulfillment. Once a Muslim accepts the responsibility, he has to be aware that he has accepted a religious obligation. Hence, any worker must perform his job honestly, sincerely, truthfully and gratefully. The individual must fulfill his responsibility by performing his job equitably to the pay he receives and avoiding committing any indecent behavior. This follows the Prophet's saying, "The best people are those who are of most benefit to fellow human beings." Therefore, the principle of ethics in Islam encourages its followers to fulfill their responsibilities diligently, carefully and truthfully (Aldulaimi, 2016).

Consultation (*Shūrâ*)

Consultation in Arabic means (*shūrâ*); it refers to participative decision-making procedure by consultation, deliberation among those who have the relevant matter on which a decision is to be taken, or others who can help them reach such a decision in the workplace (Khan, 2006). Several verses entrusted Muslims to do a consultation; Allah says: "And their matters are attained by consultation between them" (42: 88). Furthermore, Allah says:" And ask forgiveness for them and consult them in the matter. And when you have decided, then rely upon Allah..." (3:159). Consultation has several benefits in the workplace for employees and organizations. It makes the employees feel valuable and important, increasing their self-esteem, improving commitment, and showing more citizenship behavior. Further, the consultation can alleviate mistakes, increase efficiency, and improve outputs (Ibrahim, 2014; Wahab, 2012), boost creativity, innovation, passion, strength, and intensify the relationship among employees in the team (Khadijah et al., 2015).

METHODOLOGY

Questionnaire Development

The questionnaire development and factor analysis were carried out in two stages: the first was the questionnaire development, and the second was the validation process, which included psychometric assessment using exploratory factor analysis (EFA).

First Stage: Items and Constructs Development

In the first step, an exhaustive literature review was undertaken to classify available IWE tools and related items and scales in current IWE questionnaires. However, in light of the body of literature on IWE, a model created by (Aldulaimi, 2016) was found to be convenient and appropriate for use in developing our measurement method, along with other related studies. Doing well (*iḥsān*), cooperation (*ta'āwun*), *ḥalāl* work earning, dignity (*karamah*), justice (*'adl*), responsibility fulfillment, and consultation (*shūrâ*) were the seven structures established with 22 initial items. The instrument constructions and items can be found in the appendix (1). A jury of ten Muslim experts assessed the original instrument's material validity using Lawshe methods for Content Validity Ratio (CVR) (Taherdoost, 2016). The

specialists came from a variety of backgrounds, including health policy, public health, nursing, hospital administration, and statistics. To fit the Jordanian condition, the initial draft of the instrument was developed in English and then translated to Arabic using forward and backward translation. Face validity was tested on ten (10) HCPs using an open-ended dialog to assess understandability, clearness of directions, and item wording (against vagueness or misunderstandings). Based on the face validation findings, a revised version of the instrument was developed. Age, gender, occupation, year of experience, social status, hospital form, monthly salary, and educational level were all socio-demographic factors.

Second Stage: Validation

The data was provided between April 15, 2020, and May 6, 2020. Throughout all, 200 ED HCPs were approached using social media platforms, mostly 'Facebook' and 'WhatsApp.' Physicians, nurses, paramedics, radiologists, laboratory technicians, and administrative employees were among the HCPs. The study's participants volunteered to take part. A Google link questionnaire was sent, which included the study's intent, consent form, scale items, and demographic questions. This method of data collection was selected due to the COVID-19 pandemic situation, which resulted in travel restrictions, quarantine, and the curfew declared in Jordan at the beginning of March 2020. In all, 112 HCPs completed and returned the type. Eight responses were deleted due to the large number of missing outcomes. There were 104 survey forms that were totally filled out. This sample size is consistent with the general rule established by Hair et al. (2014), which stated that the number of respondents should be at least five times the number of variables to be evaluated. Respondents express their views on a Likert scale of 1 to 10, with 1 strongly disagree and 10 strongly agree. Anonymity was maintained by not requesting any personal information.

Construct Validation: Exploratory Factor Analysis (EFA)

To assess the construct validity of IWE, the EFA was performed using the Statistical Package for Social Science (SPSS) Version 25 and the Principal Components (PC) technique with Varimax Rotation. To increase clarification and balance significant factor loadings depending on sample size, the communality values were set at 0.50, and objects with factor loadings less than 0.55 were excluded (Hair et al., 2014). In the study, factors with eigenvalues greater than one were used as a cutoff score (Hair et al., 2014). To assess sampling adequacy, Bartlett's sphericity test and Kaiser-Meyer-Olkin (KMO) were used. The sample is deemed adequate if the KMO value is greater than 0.5 and a meaningful value of Bartlett's test ($p = 0.005$) shows that there are appropriate relationships between the variables to continue with EFA (Hair et al., 2014).

Reliability Analysis

Cronbach's alpha was used in this analysis to assess the instrument's internal accuracy. If the Cronbach's alpha value was greater than 0.70, the instrument's internal consistency was considered to be good (Taherdoost, 2016).

Compliance with Ethical Standards

This study has no conflicts of interest of any kind, and it did not include any special populations or vulnerable communities. Both participants signed informed consent forms. On June 7, 2020, the Jordanian Ministry of Health Research Ethical Committee reviewed and approved this study.

RESULTS

Questionnaire Development and Content and Face Validity

Taking into account the body of literature in IWE, 22 items and seven constructs were created, but the final items decided upon by the panel included 21 items and seven constructs. One object was removed because it did not meet the CVR requirements. The questionnaire was then pre-tested by 10 HCPs to assess

TABLE 2
Participants' Demographic Information

Demographic characteristics	Category	Mean (SD*)	Frequency (%)
Age		32.31 (7.61)	
Experience		8.16 (7.10)	
Gender	Male		7 1(68.3)
	Female		33 (31.7)
Social Status	Married		45 (43.3)
	Single		56 (53.8)
	Divorced		3 (2.9)
Education level	Diploma		15 (14.4)
	Bachelor's degree		74 (71.2)
	Post Graduate		15 (14.5)
Profession	Nurse		59 (56.9)
	Paramedic		28 (27.0)
	Doctor		7 (6.9)
	Radiologist		3 (2.9)
	Pharmacist		4 (3.0)
	Laboratory		3 (2.9)
Monthly Income	(250-499) JD per Month		50 (48.1)
	(500-749) JD per Month		44 (42.3)
	(750-999) JD per Month		7 (6.7)
	Above 1000 JD per Month		3 (2.9)
Hospital type	Public		87 (83.6)
	Private		17 (16.4)

* Standard Deviation

its face validity. Most of the wordings and phrases, in their view, were direct, descriptive,

and easy to understand, but a few ambiguous words and pronouns were modified for better understanding. The final draft of the questionnaire included 7 structures of 21 items each and 8 socio-demographic items.

Descriptive Statistics of the Participants

The detailed statistics showed that the majority of respondents were male, with 71 (68.3 percent), and females were less dominant, with 33. (31.7%).The study also discovered that the respondents' average age was 32.31 (*SD*= 7.61). About half of the participants were single (53.8 percent). According to the career analysis, nurses (56.9%) of respondents, paramedics (27%), and physicians (6.9%). Moreover, the majority of respondents had a Bachelor's degree (71.2 percent). Furthermore, the results showed that the average experience of respondents was 8.16 (*SD*= 7.10) years. Eventually, the findings revealed that the majority of respondents (83.6%) worked in public hospitals; more details about responders' characteristics can be found in Table 2.

Exploratory Factor Analysis

The EFA was based on seven constructs and twenty-one products. The findings of several rounds of EFA showed three primary constructs with eigenvalues greater than one. These three constructs account for 70.78% of the overall variance. The constructs are as follows: (1) HCP obligation to their patients, (2) supervisory obligation to their subordinates, and (3) HCP obligation to their colleagues.

The eigenvalues for the three constructs are 9.18, 1.74, and 1.11, respectively; these values satisfy the cutoff condition. Furthermore, the KMO test result value was 0.86, indicating that the data are "factorable." "The outcome of Bartlett's sphericity test was important ($p < 0.001$), indicating that adequate associations occur among the variables to continue with EFA" (Hair et al., 2014). Table 3 displays the effects of total variance clarified, KMO, and Bartlett's sphericity measure.

TABLE 3
Total Variance Explained, KMO and Bartlett's Test of Sphericity

Total Variance Explained	70.78 %
KMO	0.86
Bartlett's test of sphericity	< 0.001

Ultimately, four items (DW1, HW1, D3, RF3) were dropped from the EFA due to negligible factor loading below (0.55) or failing to reach the required degree of item communality (Hair et al. 2014). Table 4 presents the factor loading, commonality, and Cronbach's Alpha values for HCPs IWEs items.

TABLE 4
Items' Factor Loading, Communality and Constructs' Cronbach's Alpha

Items	Factor Loading	Communality	Cronbach's Alpha
	Construct 1: Obligation of HCP to their patients		0.9
1	The health care providers in this emergency department have devoted and had done their best to save patients' life. (DW3)	0.82	0.68
2	The health care providers cooperate well with all patients in this emergency department. (C3)	0.87	0.76
3	The health care providers in this emergency department fulfill their responsibilities toward patients well. (RF2)	0.85	0.72
4	The health care providers in this emergency department treat patients fairly. (J3)	0.86	0.75
5	The health care providers always discuss with the patients of issues related to their treatment. (CU3)	0.73	0.53
6	The health care providers are always aware that we must not mislead or misguide patients. (HW2)	0.79	0.63
7	The health care providers in this emergency department do their best to master their skills and performance. (DW2)	0.75	0.56
	Construct 2: Obligation of supervisors to their subordinates		0.88
1	The supervisors in this emergency department consult their subordinates in the relevant work issues. (CU1)	0.74	0.55
2	The supervisors in this emergency department treat their subordinates fairly. (J1)	0.87	0.75
3	The supervisors in this emergency department fulfill their responsibilities to their subordinates well. (RF1)	0.84	0.71
4	The supervisors cooperate well with their subordinates in this emergency department. (C1)	0.83	0.69
5	The supervisors in this emergency department honor and respect their subordinates well. (D1)	0.83	0.7
	Construct 3: Obligation of HCP to their colleagues		0.88

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

TABLE 4 continue

Items	Factor Loading	Communality	Cronbach's Alpha
1	The colleagues cooperate well with each other in this emergency department. (C2)	0.87	0.76
2	The colleagues in this emergency department honor and respect each other well. (D2)	0.89	0.8
3	The colleagues in this emergency department treat each other fairly. (J2)	0.88	0.78
4	The health care providers have always avoided any corruption. (HW3)	0.72	0.52
5	The colleagues in this emergency department consult each other in issues related to their work. (CU2)	0.7	0.5

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Reliability

The instrument constructs' Cronbach's Alpha values were 0.91, 0.88, and 0.88 for IWE obligation of HCP to their patients, the requirement of superiors to their subordinates, and the obligation of HCP to their colleagues. The build Cronbach's Alpha value was shown in Table (4).

Discussion of Findings

According to our assessment, this is the first report that depicts the creation and validation of an instrument with logical substance, face validity, and reliability, while analyzing the IWE of HCPs at Jordanian EDs. The current study represented the design and development of an instrument for measuring the IWE of Jordanian HCPs with satisfactory psychometric properties.

One item was deleted based on the content validity assessment of the instrument because it did not reach the minimum consensus of experts according to CVR guidelines. The findings of EFA showed a strong framework for this new instrument. Both factor loadings were greater than 0.55, meaning that factors and items were closely related. The instrument constructs' reliability analysis revealed a high Cronbach's alpha value, indicating internal consistency. In addition, the study produced a good-fitting three-factor model with high reliability and internal accuracy (> 0.80).

The three-factor model derived in EFA clarified 70.78% of the overall variance, which was greater than the 50% requirement. Furthermore, the successful factors define the HCPs' responsibilities that should be shown during human contact in the ED. Factor one represents the responsibilities that HCPs should have towards their patients. Factor two represents the responsibilities that managers should have for their subordinates. Factor three represents the responsibilities that coworkers may have towards one another at work.

This freshly formed scale differs from prior IWE scales. It was intended and developed

to assess IWE for HCPs in the ED, with the prospect of being generalized to other contexts. Further, this scale is considered short and comprehensive, with 17 items and three dimensions, which increases the ability of the researcher to combine this scale with other employees attitudes and behaviors scales and participants can answer the scale without feeling question-naire fatigue like (Ibrahim,2015 and Aldulaimi, 2020) that need a long time to be answered. Further, the new scale consisted of 17 items, and this number of items matching the number of the short version of Ali's (1988) IWE scale. However, the difference between this scale and Ali's scale is that this scale was purely developed based on Sharī'ah, the Qur'ān, and the *Sunnah* (Aldulaimi, 2016), unlike Ali's IWE scale that was designed and developed under the influence of Protestant Work Ethics (Aldulaimi, 2020). These findings are consistent with Islamic standards for guiding human relationships and protecting human rights. Islam obligates Muslims to uphold proper ethics for all; these ethics including but not limited to doing well (*iḥsān*), cooperation (*ta'āwun*), *ḥalāl* work earning, dignity (Karamah), justice (*'adl*), responsibility fulfillment, and consultation (*shūrâ*). All Muslim HCPs, regardless of rank, have a common duty to demonstrate IWE against one another and patients in the workplace.

Limitations of the Study
The study's limitations included using a limited number of respondents (104 people) to test the validity and reliability. This was considered a minimum sample size for such a study (Kyriazos, 2018). Moreover, this study did not use any probability sampling method and depended only on the HCPs who have the time, willingness and access to the internet. To further validate the IWE instrument, prospective researchers can use a broad sample size and a step-further procedure, confirmatory factor analysis. Finally, a potential report may provide samples from hospitals in other Muslim countries in order to generalize the results of this study around the Muslim world.

CONCLUSIONS

IWE are an essential aspect of the Islamic teachings, it designated by the Holy Qur'ān and the sayings of the Prophet Muhammad (PBUH). To accomplish growth in Islamic countries, it is crucial to strengthen ethics; and work ethics in particular (Aldulaimi, 2020). The current study provides a multi-dimensional scale to measure IWE. The scale developed and tested in this study supports the IWE literature by identifying and measuring the dimensions of IWE and thus enables academic researchers and managers to measure HCPs' IWE in Jordanian EDs. The final instrument was made up of three constructs and seventeen items (7 items on obligation of HCP to their patients, 5 items on obligation of supervisors to their subordinates and 5 items on obligation of HCP to their colleagues). The new scale produced is proven to be both valid and reliable to measure the IWE of HCPs in the hospital ED context, and as such, is recommended to be administered as a baseline instrument to assess IWE of the HCPs in hospitals' ED in Jordan and perhaps applicable to other countries hospitals' ED.

REFERENCES

Aldulaimi, S. H. (2016). Fundamental Islamic perspective of work ethics. *Journal of Islamic Accounting and Business Research, 7*(1), 59-76.
doi: https://doi.org/10.1108/JIABR-02-2014-0006

Aldulaimi, S. H. (2020). Islamic work ethics: multidimensional constructs and scale validation. *International Journal of Applied Management Science, 12*(3), 186-206.
doi: https://doi.org/10.1504/IJAMS.2020.108073

Alhyasat, K. M. (2012). The role of Islamic work ethics in developing organizational citizenship behavior at the Jordanian Press Foundations. *Journal of Islamic Marketing, 3*(2), 139-154. doi: https://doi.org/10.1108/17590831211232555

Ali, A. J., & Al-Kazemi, A. A. (2007). Islamic work ethic in Kuwait. cross cultural management. *An international Journal, 14*(2), 93-104.
doi: https://doi.org/10.1108/13527600710745714

Amilin, A., Ismail, T., Astuti, S., & Mulazid, A.S. (2018). Islamic work ethics and organizational justice implementation in reaching accountants' job satisfaction. *Academy of Accounting and Financial Studies Journal, 22*(1), 1-11.

Chanzanagh, H. E., & Akbarnejad, M. (2011). The meaning and dimensions of Islamic work ethic: initial validation of a multidimensional IWE in Iranian society. *Procedia-Social and Behavioral Sciences, 30,* 916-924. doi: https://doi.org/10.1016/j.sbspro.2011.10.178

Fakhar Zaman, H., Marri, M., Sadozai, A., & Ramay, M. (2012). Islamic work ethics in contemporary era and its relationship with organizational citizenship behavior (a study based on public sector hospitals and banks in Pakistan). *Interdisciplinary Journal Of Contemporary Research In Business, 4*(6), 772-779.

Farid, T., Iqbal, S., Jianhong, M., Mushtaq, T., & Memmood, Q. (2017). Effect of Islamic work ethics on employees work engagement and organizational citizenship behavior. *Psychologia, 60,* 111-120. doi: https://doi.org/10.2117/psysoc.2018-001

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis.* Pearson Education Limited.

Haroon, M., Zaman, H. F., & Rehman, W. (2012). The relationship between Islamic work ethics and job satisfaction in healthcare sector of Pakistan. *International Journal of Contemporary Business Studies, 3*(5), 6-12.

Heyrani M., & HamehKhani S. (2017). To investigate the moderating role of intrinsic motivation related to Islamic working ethics and staff's job satisfaction. *International Journal of Scientific Study, 5*(5), 296-303.

Ibrahim, A. (2015). *The influence of Islamic work ethics on organizational performance at the Islamic banking institutions in Aceh* (PhD dissertation). Universiti Malaya, Kuala Lumpur, Malaysia.

Khan, M. A. (2006). *Islamic democratic discourse: Theory, debates, and philosophical perspectives.* Lexington Books.

Kyriazos, T. A. (2018). Applied psychometrics: sample size and sample power considerations in factor analysis (EFA, CFA) and SEM in general. *Psychology, 9*(08), 2207.
doi: https://doi.org/10.4236/psych.2018.98126

Majidi, S. A., Nasiripour, A. A., Tabibi, S. J., & Masoudi, I. (2016). Evaluation of emergency department performance improvement-a systematic review on influence factors. *International Journal of Medical Research & Health Sciences, 5*(5), 85-100.

Moayedi, N. N. (2009). *Islamic work ethic and Muslim religious beliefs impact on organizational commitment in the workplace* (PhD dissertation). University of Phoenix, Tempe, Arizona.

Mohabati, F., Pouria Hedayati, S., Bagheri, S., & Mohabati, M. (2014). Relationship between organizational citizenship behavior and Islamic ethics of business and in health staff. *International Journal of Hospital Research, 3*(4), 173-176.

Mohabati, F., Pouria Hedayati, S., Bagheri, S., & Mohabati, M. (2014). Relationship between organizational citizenship behavior and Islamic ethics of business and in health staff. *International Journal of Hospital Research, 3*(4), 173-176.

Morley, L., & Cashell, A. (2017). Collaboration in health care. *Journal of Medical Imaging and Radiation Sciences, 48*(2), 207-216. doi: https://doi.org/10.1016/j.jmir.2017.02.071

Muhammad, F., Butt, S. and Mansori, S. (2015). Innovation capability: the role of Islamic work ethics. *Journal of Asian Business Strategy, 5*(7), 125-131.
doi: https://doi.org/10.18488/journal.1006/2015.5.7/1006.7.125.131

Murtaza, G., Abbas, M., Raja, U., Roques, O., Khalid, A. and Mushtaq, R. (2016). Impact of Islamic work ethics on organizational citizenship behaviors and knowledge-sharing behaviors. *Journal of Business Ethics, 133*(2), 325-333.
doi: https://doi.org/10.1007/s10551-014-2396-0

Sarwar, S., & Abugre, J. B. (2013). An assessment of Islamic work ethics of employees in organizations: insights from the United Arab Emirates. *Problems of Management in the 21st Century, 6*(1), 60-72. doi: https://doi.org/10.33225/pmc/13.06.60

Taherdoost, H. (2016).Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. *International Journal of Academic Research in Management (IJARM), 5*(3), 28-36. doi: https://doi.org/10.2139/ssrn.3205040

Usman, M., Shahzad, K. and Khan, K. (2015). Islamic work ethics (IWE): a review of literature and directions for future research. *Journal of Islamic Business and Management, 219*(3327), 1-28.

Wahab, M. A. (2012). *The impact of Islamic work values on employees' job performance in Malaysia* (Ph.D dissertation). The University of Canberra, Canberra, Australia.

Wahab, M. A., Quazi, A., & Blackman, D. (2016). Measuring and validating Islamic work value constructs: An empirical exploration using Malaysian samples. *Journal of Business Research, 69*(10), 4194-4204. doi: https://doi.org/10.1016/j.jbusres.2016.03.005

World Health Organization. (2005). *Islamic code of medical and health ethics* (No. EM/RC52/7). Regional Committee for the Eastern Mediterranean, Cairo, Egypt.

Yaseen, S. G., Dajani, D., & Al-Taee, S. M. (2015). Islamic work ethics and organizational commitment: a case of Jordanian Islamic banks. In *Handbook of research on Islamic business ethics.* Edward Elgar Publishing.
doi: https://doi.org/10.1108/02683940010330966

Yousef, D. A. (2000). The Islamic work ethic as a mediator of the relationship between locus of control, role conflict and role ambiguity-a study in an Islamic country setting. *Journal of Managerial Psychology, 15*(4), 283-298. doi: https://doi.org/10.1108/02683940010330966

Yousef, D. A. (2001). Islamic work ethic-A moderator between organizational commitment and job satisfaction in a cross-cultural context. *Personnel. Personnel Review, 30*(2), 152-169. doi: https://doi.org/10.1108/00483480110380325

✳✳✳✳✳✳✳✳✳✳✳✳✳✳