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Investigation of the Relationship Between Workload Perception and the Work-life Balance of Intensive Care Nurses Working During the COVID-19 Pandemic: A Web-based Cross-sectional Study

COVID-19 Pandemisi Sırasında Çalışan Yoğun Bakım Hemşirelerinin İş Yükü Algısı ile İş-yaşam Dengesi Arasındaki İlişkinin İncelenmesi: Web Tabanlı Kesitsel Bir Çalışma

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ABSTRACT Objective: This study was conducted to investigate the relationships between workload perception and the work-life balance of intensive care nurses working during the pandemic.

Materials and Methods: Descriptive and cross-sectional research was conducted with 325 intensive care nurses who were members of the Turkish Intensive Care Nurses Association. Data were collected via WhatsApp using Google Surveys for a Nurse Information form, the Individual Workload Perception scale, and the Work-Life Balance scale. Pearson's correlation and regression analyses were used for the data analysis in addition to descriptive statistics.

Results: The total average score of the Personal Workload Scale of the intensive care nurses was 3.26 ± 0.60 [minimum (min): 1.71; maximum (max): 4.87] and the total average score of the Work-life Balance scale was 2.79 ± 0.710 (min: 1.3; max: 4.9). The Workload scale total average score significantly increased the Work-life Balance total average score ($\beta=0.658$). Daily work time in the intensive care unit significantly decreased the work-life balance total average score ($\beta=-0.160$).

Conclusion: Intensive care nurses' workload perception and work-life balance were at a moderate level. Workload and long working hours deteriorate the work-life balance of intensive care nurses. Administrative and organizational regulations to enhance the work-life balance of the intensive care nurses by decreasing the workload can be effective in reaching the desired patient care results.

Keywords: COVID-19, work-life balance, workload, pandemic, intensive care, intensive care nursing

ÖZ Amaç: Bu araştırma, pandemi döneminde çalışan yoğun bakım hemşirelerinin iş yükü algısı ile iş-yaşam dengesi arasındaki ilişkileri araştırmak amacıyla yapıldı.

Gereç ve Yöntem: Araştırma, Türkiye Yoğun Bakım Hemşireleri Derneği üyesi toplam 325 yoğun bakım hemşiresi ile tanımlayıcı ve kesitsel tipte yapıldı. Veriler, Google Anketi ile Hemşire Bilgi formu, Bireysel İş Yükü Algısı ölçeği ve İş-Yaşam Dengesi ölçeği kullanılarak WhatsApp aracılığıyla toplandı. Verilerin analizinde tanımlayıcı istatistiklere ek olarak Pearson korelasyon ve regresyon analizleri kullanıldı.

Bulgular: Yoğun bakım hemşirelerinin Kişisel İş Yükü ölçeği toplam puan ortalaması $3,26 \pm 0,60$ [minimum (min): 1,71; maksimum (maks): 4,87], İş-Yaşam Dengesi ölçeği toplam ortalama puanı $2,79 \pm 0,710$ (min: 1,3; maks: 4,9). İş Yükü ölçeği toplam ortalama puanı, İş-Yaşam Dengesi toplam ortalama puanını önemli ölçüde artırdı ($\beta=0,658$). Yoğun bakımda günlük çalışma süresi iş-yaşam dengesi toplam ortalama puanını ($\beta=-0,160$) önemli ölçüde azalttı.

Sonuç: Yoğun bakım hemşirelerinin iş yükü algısı ve iş-yaşam dengesi orta düzeydeydi. İş yükü ve uzun çalışma saatleri yoğun bakım hemşirelerinin iş-yaşam dengesini bozmaktadır. Yoğun bakım hemşirelerinin iş yükünü azaltarak iş-yaşam dengesini geliştirmeye yönelik idari ve organizasyonel düzenlemeler, istenilen hasta bakımı sonuçlarına ulaşmada etkili olabilir.

Anahtar Kelimeler: COVID-19, iş yaşam dengesi, iş yoğunluğu, pandemi, yoğun bakım, yoğun bakım hemşireliği

Introduction

With the rapid spread of coronavirus disease (COVID) across the entire world after first emerging in Wuhan, China in December 2019, the World Health Organization declared the COVID-19 pandemic on January 30th, 2020. COVID-19 has left an unprecedented mark on world history. According to worldometer data on March 22th, 2021, there are 123,947,810 cases and 2,729,181 deaths reported worldwide (1). The United States of America, Brazil, and India (respectively) ranked highest in the table, and Turkey ranked ninth in case increases.

Therefore, the need for intensive care unit (ICU) beds and nurses have increased significantly during the COVID-19 pandemic (2-4). Units such as operating rooms and recovery rooms have been transformed into ICUs to meet the need for ICU beds. Nurses working at these units and other units (cardiology, etc.) who do not have intensive care experience have been assigned to ICUs to meet the need for intensive care nurses (5-8).

Intensive care nurses worked selflessly at the forefront of the fight against the pandemic by abiding by their altruistic principles and fulfilled their duties with outstanding performance. During the pandemic, in contrast to recommendations in international guidelines, intensive care nurses had to work long daily shifts (12 hours and more), wear personal protective equipment (PPE) for long hours (6 hours and more), stay away from their families/children/loved ones for days due to the risk of contamination, and work under difficult conditions and workloads, often without meeting their basic human needs (e.g. nutrition, sleep, rest) (2,7,8).

“Workload” is generally defined as various pressures that affect an employee’s performance and reactions. “Workload perception” represents how the work performed is perceived by the individuals besides the duration of work. With the physical conditions of the work environment, the negative relationships between the managers and co-workers are perceived as pressure by employees and this increases the workload perception negatively (9). Due to the COVID-19 pandemic, intensive care nurses had to work long hours in a complex work environment and in addition to the physical symptoms such as tiredness and sleeplessness, they experienced grief, despair, and disappointment caused by providing service to patients with critical conditions who required challenging care management. Their work-life balance could be deteriorated because of all these negative experience (10).

Work-life balance is the ability to simultaneously keep the five areas of life (work, family, friends, health, and mental state) in balance. According to another definition, it is the creation of a balance between the responsibilities at work and personal life. In this context, in a balanced life, an area of life should not negatively affect another (11).

Factors such as the increasing number of suspected or diagnosed cases of COVID-19, heavy workload of the ICU, increased patient volume, long and intense shifts, lack of PPE, being deprived of personal rights, not being able to visit loved ones because of the fear of carrying the virus, and feeling inadequately supported may cause nurses’ mental burden to increase. Work and life should be properly balanced to prevent this.

Nurses are undoubtedly among the most important members of healthcare professionals who have been under the most strain since the beginning of the pandemic and depleted the most, both physically and mentally. Therefore, what intensive care nurses have been going through during the pandemic, how they have been feeling, how they perceive their workload, and how they manage to balance work and life should be a topic of investigation.

Although some studies investigated the psychological states of nurses during the pandemic (12,13), studies investigating the relationship between workload perception and the work-life balance of intensive care nurses during the COVID-19 pandemic are absent. Therefore, it is thought that this study would benefit the nursing literature and be a guide for studies on nurses during the pandemic.

Accordingly, we aimed to investigate the relationship between intensive care nurses’ workload perception and work-life balance during the COVID-19 pandemic:

- What are the workload perception levels of intensive care nurses who worked during the COVID-19 pandemic?
- How is the work-life balance of intensive care nurses who worked during the COVID-19 pandemic?
- Is there a relationship between the workload perception levels and work-life balances of intensive care nurses who worked during the COVID-19 pandemic?

Materials and Methods

Research Type

The research is a cross-sectional, descriptive and correlational study.

Research Population and Sample

The population of the research comprised intensive care nurses who were members of the Turkish Intensive Care Nurses Association ($n=925$). This formula [$n= Nt^2pq/d^2(N-1)+t^2pq$; N: Number of individuals in the population, n: Number of individuals to be included in the sample, p: The odds of the incident happening, q: The odds of the incident not happening, t: The theoretical value found in the t table at the particular degree of freedom and determined margin of error, d: Sampling error accepted according to the odds of the incident happening] was used for calculating the sample size. According to the sampling calculation, the needed sample size with $\pm 5\%$ sampling error and in 95% confidence interval was calculated as $n=925 \times (1.96)^2 \times (0.5) \times (0.5) / (0.05)^2 \times (925-1) + (1.96)^2 \times (0.5) \times (0.5) = 272$ for the non-homogeneous population. The research was completed with a total of 325 nurses (35% of the population).

Data Collection Tools

The data of the study were collected using the "Nurse Information form," the "Individual Workload Perception scale," and the "Work-Life Balance scale."

1. Nurse Information Form: This form consists of a total of 14 questions on socio-demographic characteristics (e.g. age, sex, marital status, education status) and occupational characteristics (e.g. time working in the ICU, institution, occupation).

2. Individual Workload Perception Scale: This scale was developed by Cox (14) and validity-reliability studies were conducted by Cox (14) to measure the perceptions of healthcare professionals towards the work environment. In 2007, the Turkish validity and reliability studies of the scale were performed by Saygılı (15). The scale includes five dimensions and a total of 31 items that evaluate the work environment perceptions of the employees [Administrative support (8 items), Co-worker support (8 items), Unit support (6 items), Workload characteristics of the work environment (6 items), Intention to continue the current job (3 items)]. The 5-point Likert-type scale is scored as "Totally disagree (1), Disagree (2), Indecisive (3), Agree (4) and Totally agree (5)". The lowest and highest scores that can be obtained from the scale are 31 and 155, respectively. An increase in the score of the intention to continue the current job dimension indicates that the intention to continue the current job has decreased. An increase in the other dimensions is positively correlated. The increase in the score of the overall scale indicates a

positive individual workload perception, which means that the individuals perceive less workload. Cronbach's alpha coefficient of the scale is between 0.61-0.90. Cronbach's alpha coefficient of the scale was found as 0.940 in this study.

3. Work-life Balance Scale: This 5-point Likert-scale, developed by Apaydin to identify the work-life balance perception, is evaluated as "5=Totally agree, 4=Mostly agree, 3=Somewhat agree, 2=Slightly agree, 1=Totally disagree." It consists of four dimensions and a total of 20 items [Work-life concordance (6 items), Neglecting life (6 items), Allocating time for oneself (4 items), and Life consisting of just work (4 items)] (16). Cronbach's alpha coefficient of the scale in the original study was 0.91 and the reliability of the four dimensions was found as 0.88, 0.81, 0.77, and 0.79, respectively (16). Cronbach's alpha coefficient was found high as 0.914 for this study.

Data Collection Process

Data of the research were collected between January-March, 2021. Data collection tools were sent to nurses via WhatsApp as "Google Surveys" and the nurses were asked to complete the related forms by clicking the "Google Surveys" link in the message. The survey link of the research was sent to the Turkish Intensive Care Nurses Association and approval was obtained from the board of the Association. The survey was sent to all nurses who were members of the Association from the social media accounts of the Association and via WhatsApp to the phone numbers obtained from the member management system of the Association. It was ensured that only the nurses working in COVID-19 ICUs responded to the survey. First, a survey link was sent to all intensive care nurses by bulk message. Then, the messages were sent to the nurses twice a week during the research to remind them to complete the survey.

Ethical Considerations

The Human Rights Declaration of Helsinki was abided by throughout the study. Nurses' voluntariness and willingness to participate in the study were respected. Written approval was obtained from the Ministry of Health Scientific Research Committee for data collection. Then, by using this approval, written consent was obtained from the Local Istanbul Medipol University Non-invasive Clinical Research Ethics Committee of a university (decision no: 58, date: 21.01.2021). Consent was also obtained from the board

of the Turkish Intensive Care Nurses Association. Written consent of the nurses who volunteered to participate in the research was obtained by asking them to click the "I agree to complete the online survey form" statement in the message that was sent to their mobile phones.

Statistical Analysis

Data collected in the research were analysed using the Statistical Package for the Social Sciences (SPSS) for Windows Ver. 22.0 program. Number, percentage, average, and standard deviation were used as descriptive statistical methods to evaluate the data. The t-test was used to compare the qualitative continuous data of two independent groups and One-Way analysis of variance (ANOVA) was used to compare the qualitative continuous data of more than two groups. The Scheffe test was used as a descriptive post-hoc analysis to identify the differences following ANOVA. Pearson correlation and regression analysis was used between the continuous variables of the research. The level of significance was accepted at $p < 0.05$.

Results

Among the nurses, 73.8% ($n=240$) were age over 40 years, 79.1% ($n=257$) were female, 68.6% ($n=223$) were single, 67.7% ($n=220$) had a Bachelor's degree. About half (49.2%) ($n=160$) of the nurses were working at training and research hospitals, 47.1% ($n=153$) were working in ICUs for less than one year, and 32.9% ($n=107$) were working as a nurse for less than a year. The number of beds was 13 and more in the ICUs where 63.1% ($n=205$) of the nurses were working and 78.8% ($n=256$) of the nurses were working in tertiary level ICUs. The majority (84.3%, $n=274$) of the nurses were working as bedside nurses and 56.9% ($n=185$) were working in ICUs for over 12 hours.

Regarding the Workload scale, the average total score of the manager support dimension was 3.426 ± 0.912 [minimum (min): 1; maximum (max): 5], the average total score of the co-worker support dimension was 3.459 ± 0.680 (min: 1.62; max: 5), the average score of the unit support dimension was 2.840 ± 0.793 (min: 1; max: 4.67), the average score of the work environment dimension was 3.341 ± 0.651 (min: 1.71; max: 5), the average score of the intention to continue the current job was 2.939 ± 1.089 (min: 1; max: 5), and the average total score of the overall scale was 3.262 ± 0.604 (min: 1.71; max: 4.87).

For the Work-life Balance scale, the average score of the work-life concordance dimension was 2.885 ± 0.793 (min: 1; max: 5), the average score of the neglecting life dimension was 3.417 ± 0.846 (min: 1; max: 5), the average score of the allocating time for oneself dimension was 3.112 ± 0.850 (min: 1; max: 5), the average score of the life consisting of just work dimension was 3.253 ± 0.896 (min: 1; max: 5), and the average total score of the overall scale was 2.792 ± 0.710 (min: 1.3; max: 4.9).

The relationships between the characteristics of nurses and the Workload scale and Work-Life Balance scale are examined in Table 1.

The results of the regression analysis performed to identify the cause-effect relationship between the Workload scale average total score and age, sex, marital status, number of children, educational status, time of working in the ICU, time of working as a nurse, number of beds in the ICU, level of ICU, shift length in the ICU, duties in the ICU, and Work-life balance average total score was found significant ($F=17.203$; $p=0.000$; $p < 0.05$).

The total change in the general level of the work-life balance was 37.5% in workload, age, sex, marital status, number of children, educational status, working time in intensive care, working time in nursing, number of beds in intensive care, level of intensive care unit, and shift length in the ICU was explained by the duty of nurses in the ICU ($R^2=0.375$). The average total score of the Workload scale increased the average total score of Work-life Balance ($\beta=0.658$). A shift length in the ICU decreased the average total score of work-life balance ($\beta=-0.160$).

Discussion

The concept of workload perception is the perception of an individual that the work assigned is more than it should be. If not mathematically calculated, it is stated that it is an abstract, perception-based concept. However, it is emphasized that how work is perceived by employees should be investigated as much as the time of work (17). It is known that intensive care nurses, who were at the forefront of the fight against the COVID-19 pandemic, had numerous stressful experiences in a difficult and complex environment (7,18,19). This study was conducted with the thought that the workload perception and work-life balance of intensive care nurses during the pandemic was an important topic of investigation.

Table 1. The correlational analysis between the nurses' characteristics and their workload and work-life balance

	Age	Sex	Marital status	Number of children	Educational status	Time of working at intensive care unit	Time of working as a nurse	Number of beds in intensive care unit	Level of intensive care unit	Daily time of work at intensive care unit	Duty in intensive care unit	Total workload	Total work-life balance
Age	r	1.000											
	p	<0.001											
Sex	r	1.000											
	p	<0.001											
Marital status	r	0.481**	1.000										
	p	<0.001	<0.001										
Number of children	r	0.735**	0.607**	1.000									
	p	<0.001	<0.001	<0.001									
Educational status	r	0.217**	0.165**	0.159**	1.000								
	p	<0.001	0.015	0.004	<0.001								
Time of working at intensive care unit	r	0.708**	0.474**	0.580**	0.142*	1.000							
	p	<0.001	<0.001	<0.001	0.010	<0.001							
Time of working as a nurse	r	0.759**	0.530**	0.607**	0.088	0.823**	1.000						
	p	<0.001	<0.001	<0.001	0.113	<0.001	<0.001						
Number of beds in the intensive care unit	r	-0.095	-0.106	-0.049	0.055	-0.060	-0.181**	1.000					
	p	0.088	0.057	0.378	0.320	0.283	0.001	<0.001					
Level of intensive care unit	r	-0.022	-0.100	-0.041	0.220**	0.047	-0.089	0.337**	1.000				
	p	0.687	0.072	0.464	<0.001	0.396	0.111	<0.001	<0.001				
Daily time of work at intensive care unit	r	-0.174**	-0.057	-0.143**	0.115*	-0.141*	-0.115*	0.111*	0.194**	1.000			
	p	0.002	0.309	0.010	0.038	0.011	0.039	0.045	<0.001	<0.001			
Duty in intensive care unit	r	-0.439**	0.014	-0.335**	-0.136*	-0.455**	-0.392**	0.122*	0.066	0.257**	1.000		
	p	0.000	0.802	<0.001	0.014	<0.001	<0.001	0.028	0.237	<0.001	<0.001		
Total workload	r	0.082	0.059	0.078	-0.038	-0.018	-0.044	-0.034	-0.006	-0.264**	-0.119*	1.000	
	p	0.140	0.292	0.159	0.493	0.750	0.426	0.538	0.919	<0.001	0.031	<0.001	
Total work-life balance	r	0.194**	0.056	0.148**	-0.045	0.088	0.114*	-0.075	-0.070	-0.289**	-0.157**	0.597**	1.000
	p	<0.001	0.314	0.007	0.419	0.114	0.040	0.179	0.210	<0.001	0.005	<0.001	<0.001

*<0.05, **<0.01

In our study, it was found that nurses' manager and co-worker support perceptions were high (positive), and unit support, work environment and intention to continue in the current job perceptions were moderate. The overall workload perception of the nurses was also moderate. Similar to our study, another study found that the individual workload perception of nurses was positive at the highest level for the co-worker support dimension and the lowest level for the manager support dimension (17). In another study investigating the workload perception and workload of the surgical intensive care nurses, the median nursing activity score, which indirectly indicates the workload perception and workload of the nurses was found high (20). In a study conducted by Ozyer (21) to measure workload perception, work-related stress, and medical error attitudes of nurses working in surgical clinics, it was found that the manager support dimension was the most positively perceived dimension related to the work environment (21). In another study conducted by Karacabay et al. (22) with surgical nurses, it was found that nurses' workload perceptions were low; nurses perceived co-worker support positively; nurses perceived a high level of individual workload for manager support, intention to continue work, and unit support dimensions. Hoogendoorn et al. (23) stated that no significant relationship was present between the observed workload per nurse and perceived nursing workload. Unfortunately, no observation or mathematical calculations were made to calculate the workload of the intensive care nurses due to the pandemic conditions. It is suggested to use objective nursing workload measurement tools such as the Nursing Activities score in studies conducted to identify the workload of intensive care nurses. Moreover, it is stated that perceived nursing workload has a significant relationship with the disease severity score of patients in the ICU and the experience of nurses (23).

On the other hand, it is stated that the workload perception of intensive care nurses is related to the number of patients per nurse due to the complexity and intensity of patient care, and the increase in the workload increases the risk of burnout for nurses (24). In a study that investigated the experience of nurses during the COVID-19 pandemic with a mixed method, statements such as "The bond we made as front-line heroes will never be broken . . . unless you were in it, you will never understand fully" and "I am proud to be a nurse" of nurses proves that the nurses became aware of their power and strengths during the fight against

the pandemic (25). The positive perception of the co-worker support dimension of workload perception in our research may be associated with this evidence.

In our study, nurses' neglecting life dimension was high; work-life concordance, allocating time for oneself, life consisting of just work dimensions, and overall work-life balance was at a moderate level. Work-life balance is defined as an individual living their life as "being at work when they are at work and home when they are home" (26).

In a study, it is stated that the participants allocate 80% of their time to their work and only 20% of their time to their social lives. It was found that those who received social support (manager, co-worker, spouse) were able to balance the time allocated to work and personal lives (27). In our study, it is an expected result that the nurses neglected their lives due to the COVID-19 pandemic and managed a moderate level of work-life balance because, especially at the beginning of the pandemic, intensive care nurses in our country preferred to stay apart from their families and loved ones, staying at dormitories or hotels due to the risk of infecting their families. Moreover, they had difficulties in meeting their basic needs (e.g. drinking water, eating, resting) and had to work extensively with PPE (7).

In our study, the overall level of the work-life balance increased as the overall workload decreased. Employees with excessive workload experience emotional burnout when they cannot get any support to balance their roles in work and life. Flexible work regulations may enhance the work-life balance, which is a satisfying participation level or "concordance" between the multiple roles an individual has in life. The philosophy of the work-life balance is based on the principle that work life and personal life support each other in achieving both (28). On the other hand, an imbalance between work and life emerges when one of these roles has too much pressure and makes it difficult to meet the demands and needs of the role (10). In our country, flexible work hours were introduced during the pandemic in clinics where no patients with COVID-19 received care. However, intensive care nurses were not included in this regulation. Instead, the working hours were regulated as 12 hours of block shifts following each other or 24 hours of shifts twice per week. The Turkish Intensive Care Nurses Association presented three different reports to the Ministry of Health to provide humanistic work conditions for intensive care nurses during the pandemic. Unfortunately, the necessary regulations were not fully made. Therefore,

it was an expected result that our study found an increase in the work-life balance with the decrease in the workload. In our study, long daily work hours in ICUs decreased the overall level of work-life balance. In a study by Oyama and Fukahori (29), a significant relationship was found between nurses' long working hours and their physical and mental health. For long working hours to not deteriorate the work-life balance and maintain a healthy workforce, it is suggested that the work environment should be organized and after-work activities such as fitness, aerobics, dance, and yoga should be organized. Moreover, it is suggested that activities such as aerobics, dance, yoga, mindfulness interventions, and outside should be organized after work or during breaks for nurses who spend more than 50% of their time at work; these activities would be very beneficial in increasing the quality of patient care (27). In another study conducted in Japan, it was detected that the work-life balance levels of nurses were extremely low, nurses spent most of their time working, and annual leave had a positive effect on the work-life balance (30). In a study by Nurumal et al. (31), it was found that working fixed shifts had a significant relationship with work-life balance, and the work-life balance levels of nurses working fixed shifts were higher. The intensive care nurses could not spend their free time doing fun activities because they had difficulties in even meeting basic activities of life. Moreover, holding tight to their altruistic values by neglecting their own lives was enough to disrupt their work-life balance.

Intensive care nurses stated that constantly donning and doffing PPE or working with the same equipment all day was a reason for physical exhaustion per. Moreover, nurses provided emotional and mental support for the patients in addition to the complex care and treatment because the patients could not see their relatives due to the visiting restrictions in ICUs (25).

Workload perception is associated with overall job satisfaction. Workload is an indicator of the pressure and urgency of the work environment. Too much expectation and/or insufficient resources may cause work pressure to increase. Nursing capacity should be planned according to the Nursing Activities score, disease severity, and the education status of nurses to balance the workload of nurses (23).

With the transition to the normalization period, while the number of COVID-19 cases with the mutated virus increases

rapidly, the pressure of work on nurses has been substantially increasing all over the world. Therefore, all employees who are at the forefront during the pandemic, particularly intensive care nurses, need to balance their work and life. Nurses and institutions should work together to maintain a positive work-life balance and combat the pandemic (32).

The limitations of the research include collecting data only from nurses working in COVID-19 ICUs, not being able to perform workload calculations specific to the units in which the nurses worked due to the pandemic, and the unwillingness of the nurses to participate in the research due to their busy work schedule caused by the pandemic.

Conclusion

In our study, workload perception and the work-life balance of the intensive care nurses were at a moderate level. It was identified that excessive workload and long work hours in the ICU deteriorated the work-life balance of nurses. Measurement tools including objective mathematical calculations to identify the workload of intensive care nurses can be used to evaluate workload perception. Moreover, it can be suggested to approach work-life balance with different variables such as physical and mental health.

Ethics

Ethics Committee Approval: This study written consent was obtained from the İstanbul Medipol University Non-Invasive Clinical Research Ethics Committee (decision no: 58, date: 21.01.2021).

Informed Consent: Then, the data were collected after the permission of the hospital authorities, the satisfaction of the nurses, and an explanation of the nature and objectives of the research.

Peer-review: Externally peer-reviewed.

Authorship Contributions:

Concept: F.A., B.T., Design: F.A., B.T., Data Collection and Process: B.T., F.A., Analysis or Interpretation: F.A., B.T., Literature Search: F.A., B.T., Writing: F.A., B.T.

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