



(RESEARCH ARTICLE)



Information of university nurses in physiology and anatomy

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Abstract

Anatomy and physiology, these two sciences form a pair of related disciplines, and are often studied together. Important of the study is evaluation and identification of weaknesses in the anatomy and physiology information of the functional systems of university nurses, but problem of study is what the level of the university nurses about their information in anatomy & physiology of functional systems ?

The aim of study is to record level the university nurses in anatomy & physiology according to the test. Sample of the study include (22) university nurses. (17) Female and (5) male.

The instrument of the study questionnaire format determined by (11) parts (systems), each part contain 10 question (5 true and false, 5 multiple choice questions).

The most important results of the study are the nurses' information level in physiology and anatomy is acceptable , where the nurses success (54.54 %) while the nurses fails (45.45 %) as well as there is a shortage of nurses' information in the Integumentary (skin) system with a percentage of (22.72 %) and Immune lymph system (40.90 %).

Keywords: Anatomy; Human anatomy; Physiology

1 Introduction

Anatomy and physiology, these two sciences form a pair of related disciplines, and are often studied together. Anatomy is one of the basic sciences that are studied and applied in the field of medical sciences (1).

Physiology, like anatomy, is concerned with the major body systems, such as the musculoskeletal system and the nervous system. It is the study of how the body and its parts or function work. However, when studying physiology, you will look at the functions of cells, tissues, and organs within their biological systems, rather than their structures and components. Anatomy and physiology are studied together to give students a greater understanding and clarity of the structure and functions of human organs.

Human anatomy and physiology courses present exciting and tremendous challenges to both students and teachers. The acquisition of basic anatomical and physiological facts is essential to the study of anatomy and physiology. Selecting the most important information to provide a solid understanding of anatomy and physiology and to prepare students to solve problems effectively are major challenges for teachers and for authors (2), (3).

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Teachers are the main caregivers and the first line of protection for school children. Their role complements that of parents. During school hours, school teachers are actually the first-respondent in cases of disasters or emergencies. They must be able to deal properly with health emergencies both in normal children, and those children with special health care needs [8].

Important of the study

Evaluation and identification of weaknesses in the anatomy and physiology information of the functional systems of university nurses.

Problem of study

We could form the problem of study as question and as following, what is the level of the university nurses about their information in anatomy & physiology of functional systems?

Objectives of study

- To record level the university nurses in anatomy & physiology according to the test.
- To identify the integration of their information in functional systems.
- To identify the weak of their information in functional systems.

2 Methodology

Sample of university nurses in Basra College of nursing were taken from different ages, sexes, to test the information of anatomy and physiology. Data were collected from nurses, number of sample (22), male (5), and female (17).

2.1 Design of the study

Descriptive study was carried out to determine and rarify test of nurses about anatomy and physiology.

2.2 Setting of the study

Was carried out on the nursing teams to determine and evaluate nurses' information about physiology and anatomy in Basra hospitals(Basrah General hospital, Al-Qurna General hospital, Aducation Al-sader hospital, Al-Zaber General hospital) , this study started from June 2020 to September 2020.

2.3 Sample of the study

The sample of the study consists (22) university nurses. (17) Female and (5) male.

2.4 Study instrument

The instrument of the study questionnaire format determined by (11) parts (systems), each part contain 10 question 5 true and false, 5 multiple choice questions.

2.5 Questionnaire

- This is contain information of simple sex, age, level of education, place of work
- Contain 11 parts (systems)
 - Human cell
 - The integumentary system
 - Skeletal system
 - Nervous system
 - Endocrine system
 - Cardiovascular system
 - Respiratory system
 - Digestive system
 - Urinary system
 - Immune and lymphatic system
 - Male and female system

Each system contains 10 questions 5 true and false and 5. Multiple choice questions every system have 10 score3-Total marks (110 score), where 55 score this mean successful degree.

2.6 Statistical data analysis ⁽⁴⁾

- Present
- mean
- range
- Stander deviation
- Stander error
- depende t-test

3 Results

3.1 The result of the total test of the sample in anatomy and physiology

Table 1 Range, min, max, mean, stander deviation and assessment for test of sample

Descriptive Statistics								
Statistics	N	Range	Min score	Max score	Mean	Sd	Result	Ass.
Information	22	45	43	88	55.23	9.43	success	A

A = Acceptable

Table (1) the finding of this table shows number of test (22) university nurses range of the test (max-min) (45), the max score (88), min score (43), the mean equal (55.23), stander deviation (9.436), Test result is pass and the evaluation of sample is Acceptable

Table 2 Statistics of present for number of Success and fail cases

Statistics of present			
Information	F	Present	Degree of test
Success	12	54.54 %	110
Fail	10	45.45 %	
Total	22	100 %	

Table (2) the finding of this table show is number of cases (22), number of pass (12) percentage (54.54%) from the total of test (110) and the number of fail (10) percentage (45.45%) from the total of test (110)

Table 3 T-test for the difference between pass and fail in Sample information

Paired Samples test							
Statistics	Result	F	Mean	Sd	Ass.	P - value	Sig
						0.05	
Information	Success	12	61.20	9.80	M	0.006	S
	Fail	10	48.40	4.01	W		

M = medium, w = weak, (P - value) < 0.05 then significant (S), if (P - value) > 0.05 then non-significant (NS), Ass.= assessment

Table 3 shows as following:

Number of sample success (12) with mean (61.20), stander deviation (9.80) and their assessment is medium Number of sample fail (10) with mean (48.40), stander deviation (4.01) and their assessment is weak. As well In this table shows different value between Success and fail by T- test, where P- value equal (0.006), so its significant.

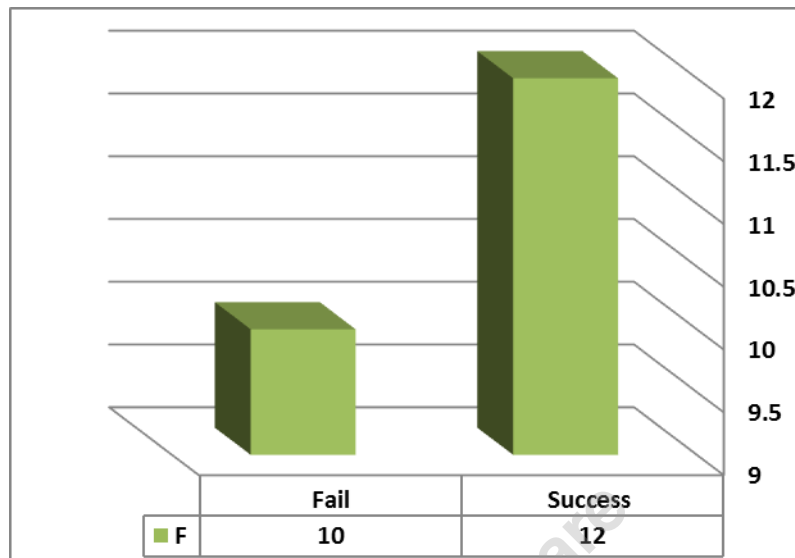


Figure 1 Number of Success and fail cases

3.2 The results of the number of successes and percentages in each functional system.

Table 4 Number of successful and fail sample and their percentages

System	No. of Success	Present	No. of fail	Present	Degree each system
Cell	19	86.36%	3	13.6%	10
Integumentary	5	22.72%	17	77.2%	10
Skeletal	15	68.18%	7	31.8%	10
Nervous	11	50 %	11	50 %	10
Endocrine	12	54.54%	10	45.4%	10
Cardiovascular	16	72.72%	6	27.2%	10
Respiratory	21	95.45%	1	4.54 %	10
Digestive	11	50 %	11	50 %	10
Urinary	13	59.09%	9	40.9%	10
Immune lymph	9	40.90%	13	59.0%	10
Reproductive	17	77.27%	5	22.7%	10
Total					110

Table 4 shows as following:

The best information is in the respiratory system was (95.45%) , but the worst information is about the Integumentary (skin system) was 22.72% (22.72%) and Immune lymph system was (40.90%).

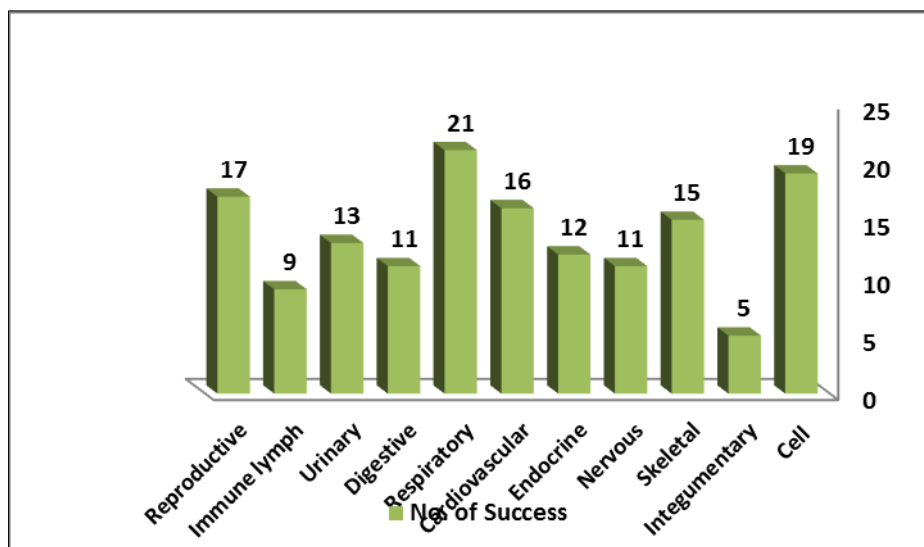


Figure 2 A Number of Success each functional system

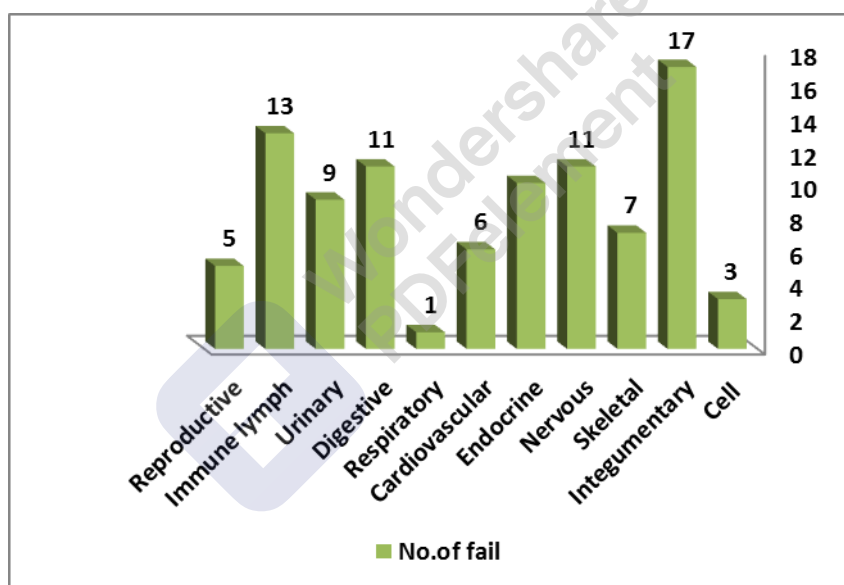


Figure 2 B Number of fail each functional system

4 Discussion

We see in Table 2 a convergence between the level of successful and unsuccessful nurses in the physiology information test, but the difference between them was significant as in Table 3.

Looking at the general assessment of the study sample, we note in Table 1 that the assessment of physiology and anatomy information was at an acceptable level, which indicates the nurses' need for more physiology and anatomy information.

Accordingly, the reason for the acceptable evaluation of nurses is due to the curricula in nursing colleges in Iraq, which place only one course for physiology and anatomy for all of them, and this is insufficient to develop nurses' information in physiology and anatomy, especially since each of them is one of the basics of the nursing profession.

On the other hand, we note in Table 4 that the university nurses had the best information about the respiratory system and the cell, but they had a deficiency and weakness in the information of the skin system and the lymphatic immune system.

There is a shortage of teaching and learning materials in the field of anatomy and physiology for nurses. Anatomy and physiology applied to nurses should cover everything Parts of the body using a systematic approach that contains fourteen functional systems (5).

Academic human anatomy specialists are usually employed in universities, medical schools, and teaching hospitals to increase the level of education for students in anatomy and physiology, because of their importance in studying medicine and health sciences (6).

In addition, we noticed that the vocabulary of the physiology and anatomy curriculum does not cover the important information for many functional systems such as the skin system, the immune system and the lymphatic system, because of the short period of time for teaching physiology and anatomy, which is only one course for each of them.

The curriculum for Anatomy and Physiology for Nursing and Healthcare Students is a brief but complete overview of the structure and function of the human body, with clinical applications throughout (7).

5 Conclusion

- The nurses' information level in physiology and anatomy is acceptable, where the nurses success (54.54 %) while the nurses fails (45.45 %).
- The best information for nurses was recorded in the respiratory system with a percentage of (95.45 %).
- There is a shortage of nurses' information in the Integumentary (skin) system with a percentage of (22.72 %) and Immune lymph system (40.90 %).

Recommendation

- Designed a cycle of education anatomy and physiology in hospital for universal nurses.
- Increased information on the topics of the skin, immune and lymphatic systems.
- We recommended study on the universal nurses about either subject example Biochemistry.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest.

Statement of informed consent

The approval has been taken from the College of Nursing, University of Basra, and there is no problem with the approval.

References

- [1] Arráez-Aybar; et al. (2010). "Relevance of human anatomy in daily clinical practice". *Annals of Anatomy - Anatomischer Anzeiger*
- [2] Oluchi Ann Olofin, *FUNDAMENTAL PRINCIPLES OF HUMAN ANATOMY & PHYSIOLOGY*, Printed and Bound in the Federal Republic of Nigeria, Immaculate Publications Ltd., 2016.
- [3] Fredricks, David N. (2001). "Microbial Ecology of Human Skin in Health and Disease" (PDF). *Journal of Investigative Dermatology Symposium Proceedings*. 6 (3): 167–169. doi:10.1046/j.0022-202x.2001.00039.x. PMID 11924822. S2CID 34741925. Archived from the original (PDF) on 1 August 2020.

- [4] Randolph, K., & Myers, L. (2014). *Basic Statistics in Multivariate Analysis* (1st ed.). New York: Oxford University Press.
- [5] Nega Assefa and Youssef Tsige , human anatomy and physiology, Alemaya University, Jimma University, The Carter Center,, the Ethiopia Ministry of Health, and the Ethiopia Ministry of Education , Funded under USAID Cooperative Agreement, 2003.
- [6] Cortese, M; Frascio (2021). "New settings in Anatomy and Surgery Teaching During the Covid-19 Pandemic". *Anat Sci Educ*. doi:10.1002/ase.2077. PMID 33773083.
- [7] Ian Peate and Muralitharan Nair , *Fundamentals of Anatomy and Physiology: For Nursing and Healthcare Students* 2nd Edition, Hertfordshire University, Wiley-Blackwell, 2016.
- [8] Wasfi Dhahir Abid Ali, Luay Abdulwahid Shihab, Maryam Abdulkareem Abdulrazaq, Noor Sabah Daif, & Nabaamussab Hassan. Assessment of Teachers' Knowledge About First Aid Some Basrah City Schools, Best: *International Journal of Humanities, Arts, Medicine and Sciences*. 2021; 9(2): 7–12.

