

## KNOWLEDGE OF DOCTORS IN AL-YARMOUK TEACHING HOSPITAL REGARDING ELDERLY HEALTH

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### ABSTRACT

**Background:** As the global old population grows, so does their use of healthcare services like hospitals, making it crucial to know how to handle them. In Iraq, geriatric health initiatives are developing, therefore physicians must be knowledgeable about this vital demographic. **Objectives:** Assess the level of knowledge of doctors in Al-Yarmouk teaching hospital regarding elderly health and trying to focus on the core weakness in their knowledge trying to overcome it. **Methods:** A descriptive cross-sectional study with analytic element covering 250 physicians in Al-Yarmouk teaching hospital of both sexes, different specialties and different job descriptions who were available at the time of data collection. Data collection was done using written 18-questions valid questionnaire. **Results:** Only (12%) of doctors in collected sample had good knowledge while (51.6%) of the doctors had fair knowledge and the remaining (36.4%) had poor knowledge. There was a highly significant association between receiving a training course in geriatric health and the level of knowledge, so the doctors who received training had good level of knowledge as compared with other doctors who did not. There is no significant association between doctors' level of knowledge and their gender, age, educational level, specialty, job description, years of experience and whether live with elderly or not. **Conclusion:** Nearly half of doctors who participated in this study had a fair level of knowledge with significant association between training in geriatric health care and good level of knowledge which highlights the importance of integrating geriatric health care into undergraduate and postgraduate curricula.

**KEYWORDS:** Knowledge, Doctors, Elderly health, Al-Yarmouk teaching hospital.

### INTRODUCTION

There is a persistent increase in the global elderly population, which consequently leads to a heightened demand for various healthcare services, including those provided by hospitals. It is essential to understand how to effectively engage with this demographic. By the year 2030, it is projected that one in every six individuals globally will be aged 60 years or older. At this juncture, the proportion of the population aged 60 years and older is projected to rise from 1 billion in 2020 to 1.4 billion. By the year 2050, the global population of individuals aged 60 years and older is projected to double, reaching a total of 2.1 billion. The population of individuals aged 80 years or older is projected to increase threefold between 2020 and 2050, ultimately reaching 426 million.<sup>[1]</sup> Iraq is currently experiencing a demographic transition, with projections indicating that the population aged 60 and above is anticipated to increase more than threefold from 2 million (5.1% of the total population) in 2020 to 7.5

million (10.6%) by 2050.<sup>[2]</sup> In Iraq, the geriatric health program is undergoing expansion; consequently, it is imperative to enhance physicians' understanding of this significant demographic. Global populations are experiencing a trend of ageing. This demographic transformation will significantly influence the social, political, and public health arenas of the 21st century. The literature in the fields of medical and social sciences is abundant with commentaries and interventions aimed at addressing the scale and implications of this phenomenon. Numerous perspectives and findings have contributed to advancements in both medical and social care for elderly individuals and their carers. These advancements have encompassed a variety of domains within healthcare, including the management of transitions in medical care, the optimisation of medication prescription practices, the reduction of falls, the control of pain and associated symptoms, and the alleviation of carer burden.<sup>[3]</sup> Ageing constitutes a

significant aspect of human existence, embodying both the biological transformations that transpire and the cultural and societal shifts that accompany them. By enhancing awareness of this phenomenon, we can augment the prospects for healthy ageing, which ultimately represents the paramount objective. It is imperative that all physicians possess a fundamental understanding of optimal ambulatory care for older individuals in order to augment the healthcare system's ability to effectively serve this demographic. As of the present date, there exists no knowledge assessment instrument that is specifically tailored to geriatric ambulatory care.<sup>[4]</sup> This study seeks to evaluate the extent of knowledge possessed by physicians of various specialities at Al-Yarmouk Teaching Hospital regarding critical issues related to elderly health. The objective is to enhance physicians' understanding and awareness of the unique challenges faced by elderly patients visiting different departments within the selected hospital. It is particularly important to address the multifaceted nature of health concerns in the geriatric population, where patients often present with multiple overlapping complaints and diseases. Consequently, it is imperative that each physician involved in the care of older patients reviews the diverse treatment modalities applicable to these individuals.

## METHOD

A descriptive cross-sectional study with analytic element covering a convenient sample of 250 physicians in Al-Yarmouk teaching hospital of both sexes, different specialties and different job descriptions who were available at the time of data collection after their verbal approval. Data collection was done during the period from first of August to the end of October 2024 using a printed 18-questions valid questionnaire. The main parts of questionnaire questions have been quoted from UCLA Geriatrics Knowledge Test<sup>[5]</sup> with some modifications and additions. The sample was collected as convenient sample of (250 physicians) from total 702 physicians who work in the hospital, as 25% of each specialty (including specialists and residents).

Information obtained from individual participants kept secure and confidential.

The questionnaire consists of two parts; the first part is the sociodemographic questions.

- Gender, age, educational level, specialty, job description, years of experience, living with an elderly and receiving any training courses in geriatric health.

The second part is the knowledge questions.

1. In Iraq elderly is the person ages  
1.60. 2.65. 3. don't know
2. Elderly clinics in hospitals in Iraq provide health services  
1. free of charge. 2.subsidised. 3. don't know

3. Elderly health program in the ministry of health provides its services through:

1. elderly clinics in hospitals.
2. age friendly PHC, elderly clinics in hospitals and medical units in residential care homes.
3. don't know

4. Aging process leads to anatomical and physiological changes.

- 1.yes. 2.no. 3. don't know

5. Supportive cares needed by an elderly are (nutritional, medical, emotional and social support).

- 1.yes. 2.no. 3. don't know

6. Delirium is reversible many times.

- 1.yes. 2.no. 3. don't know

7. Delirium is diagnosed accurately in an acute medical service.

- 1.yes. 2.no. 3. don't know

8. You would call it polypharmacy if the patient is taking mor than 3 medication a day.

- 1.yes. 2.no. 3. don't know

9. Basic ADLs (activities of daily living) refer to capacities required for personal care, including walking, dressing, bathing, using the toilet, transferring from the bed to a chair, grooming, and eating.

- 1.yes. 2.no. 3. don't know

10. The memory deficit that is most commonly caused by depression is difficulty with free recall.

- 1.yes. 2.no. 3. don't know

11. Serial wight measurement is best way used for routine evaluation of nutritional status in elderly.

- 1.yes. 2.no. 3. don't know

12. The most common community acquired infection that result in hospitalization in older persons is influenza.

- 1.yes. 2.no. 3. don't know

13. The most appropriate step in management of urge incontinence after transurethral resection of prostate for BPH is oxybutynin tab 2.5 mg three times daily for two-week trial.

- 1.yes. 2.no. 3. don't know

14. It is common and natural to have chronic pain after the age of 70.

- 1.yes. 2.no. 3. don't know

15. It is common and natural to be mildly cognitively impaired after the age of 80.

- 1.yes. 2.no. 3. don't know

16. It is common and natural to fall frequently after the age of 75.

- 1.yes. 2.no. 3. don't know

17. Diazepam considered inappropriate and harmful to older people.

- 1.yes. 2.no. 3. don't know

18. Anticholinergic medications can be used safely in older people.

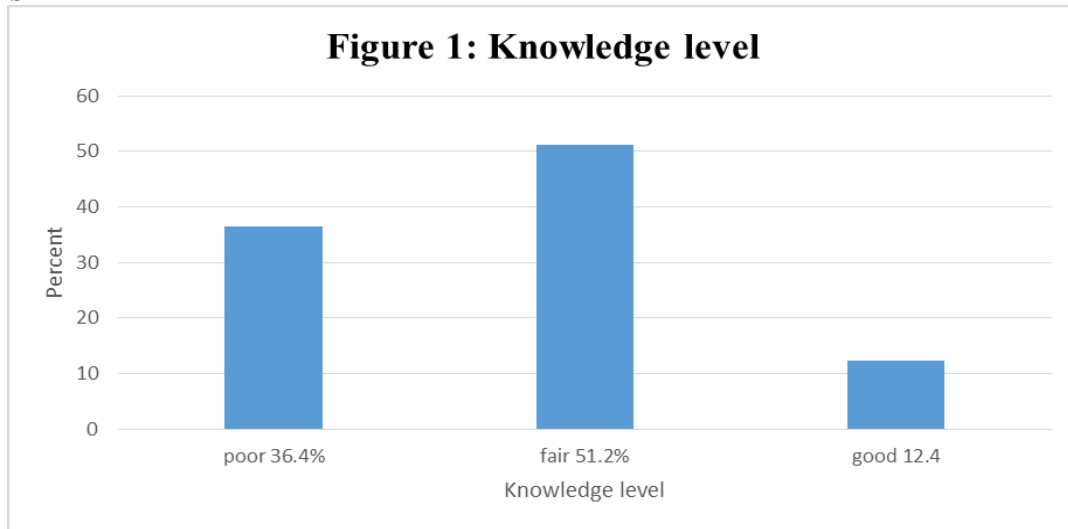
- 1.yes. 2.no. 3. don't know

Each correct answer will get one point and each wrong answer including (Don't know) will get zero point. The collected points will classify the knowledge level accordingly as (poor, fair, good).

Statistical analysis was done using SPSS, version 27. Data were analyzed by measurement of frequencies, percentages and using of chi-square test to measure the statistically significant association between level of knowledge and the sociodemographic variables of each participant. P value was used for significance <0.05.

Only (12%) of doctors in the sample had good knowledge while (51.6%) of the doctors had fair knowledge and the remaining (36.4%) had poor knowledge, (Figure1).

## RESULTS

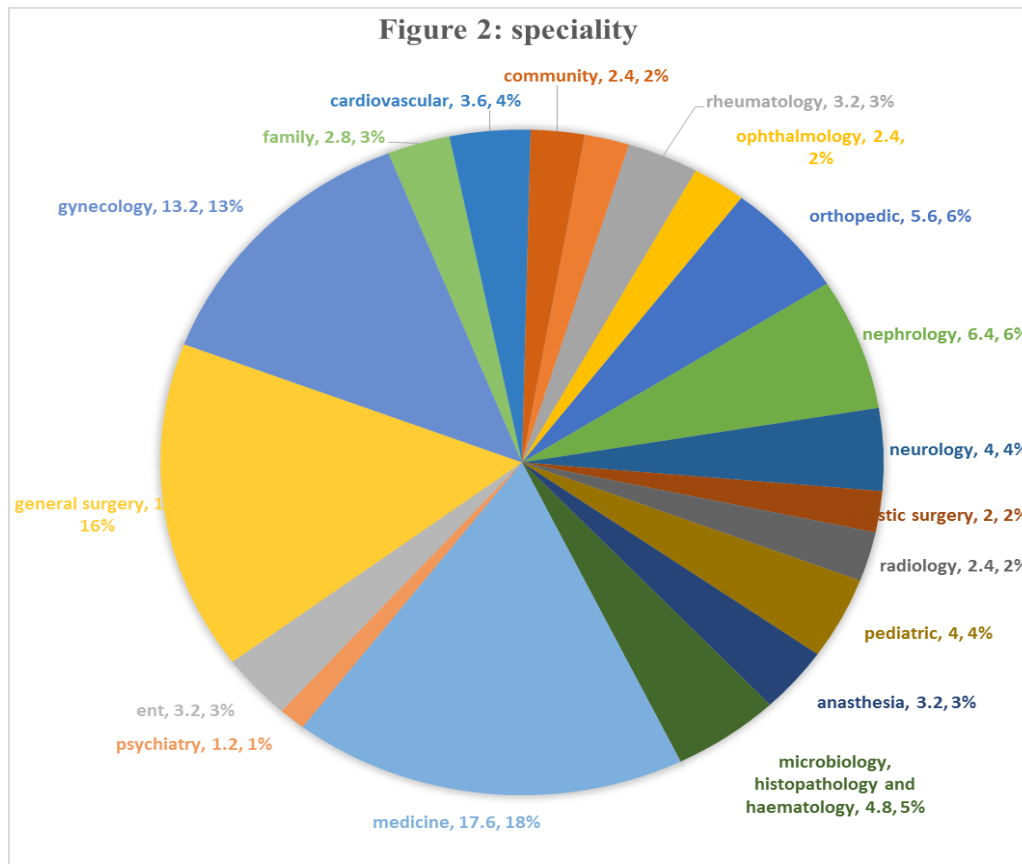


The distribution of the study sample by sociodemographic variables is shown in (table 1). Nearly half of the study sample were males (54%). The highest percentage of the sample (43.6%) was (35-45) years old. Regarding the educational level, the vast majority was board or master certified (73.6%). About (49.2%) of the

sample were specialists with about (54%) of the sample had more than 10 years of medical experience. (64%) of the studied sample are living with an elderly while only less than one fifth of the sample studied had received elderly health training (17.2%).

**Table 1: Sociodemographic variables of the studied sample.**

Variable	No. (%)
<b>Gender</b> Male	135 (54)
Female	115 (46)
<b>Age</b> 24-34	60 (24)
35-45	109 (43.6)
>45	81 (32.4)
<b>Educational level</b> College	66 (26.4)
Diploma or board	184 (73.6)
<b>Job description</b> Resident	70 (28)
Specialist	123 (49.2)
Consultant	57 (22.8)
<b>Years of experience</b> <5	43 (17.2)
5-10	72 (28.8)
>10	135 (54)
<b>Living with elderly</b> Yes	160 (64)
No	90 (36)
<b>Training in geriatric health</b> Yes	43 (17.2)
No	207 (82.8)



Regarding the specialty, we took 25% of each specialty who were available at the time of data collection regardless of their job description, so the (Figure 2) shows the percentage of each medical specialty.

(Table 2) shows the association between sociodemographic variables and the level of knowledge, there was a highly significant association between receiving a training course in geriatric health and the level of knowledge, so the doctors who received training

had good level of knowledge as compared with other doctors who did not. There is no significant association between doctors' level of knowledge and their gender, age, educational level, specialty, job description, years of experience and whether live with elderly or not.

**Table 2: Association of sociodemographic variables with doctor's level of knowledge.**

		Poor No. (%)	Fair No. (%)	Good No. (%)	Total (%)	X <sup>2</sup> , df, P value
<b>Gender</b>	Male	41 (30.4)	74 (54.8)	20 (14.8)	135	5.06, 2, <b>0.080</b>
	Female	50 (43.5)	54 (47)	11 (9.6)	115	
<b>Age</b>	24-34	15 (25)	36 (60)	9 (15)	60	7.122, 4, <b>0.130</b>
	35-45	46 (42.2)	54 (49.5)	9 (8.3)	109	
	>45	30 (37)	38 (47)	13 (16)	81	
<b>Educational level</b>	College	22 (33.33)	34 (51.5)	10 (15.2)	66 (100)	0.781, 2, <b>0.677</b>
	Diploma or board	69 (37.5)	94 (51.1)	21 (11.4)	184 (100)	
<b>Job description</b>	Resident	24 (34.3)	36 (51.43)	10 (14.3)	70 (100)	4.817, 4, <b>0.307</b>
	Specialist	51 (41.5)	61 (49.6)	11 (8.9)	123 (100)	
	Consultant	16 (28.1)	31 (54.4)	10 (17.5)	57 (100)	
<b>Years of experience</b>	<5 years	15 (34.88)	23 (53.49)	5 (11.36)	43 (100)	2.216, 4, <b>0.696</b>
	5-10 years	26 (36.1)	40 (55.56)	6 (8.33)	72 (100)	
	>10 years	50 (37.04)	65 (48.15)	20 (14.8)	135 (100)	
<b>Living with an elderly</b>	Yes	54 (33.75)	86 (53.75)	20 (12.5)	160 (100)	1.425, 2, <b>0.490</b>
	No	37 (41.1)	42 (46.67)	11 (12.2)	90 (100)	
<b>Training in elderly health</b>	Yes	3 (6.97)	12 (27.9)	28 (65.12)	43 (100)	134.2, 2, <b>&lt;0.001</b>
	No	88 (42.5)	116 (56)	3 (1.45)	207 (100)	

The distribution of questionnaire correct answers shown in (table 3) revealed highest percentage (98.4%) of correct answers was in (Q.5. Supportive cares needed by an elderly are (nutritional, medical, emotional and social support). While the lowest percentage (16.8%) of correct answers was in (Q.8. You would call it polypharmacy if the patient is taking mor than 3 medication a day).

**Table 3: Distribution of questionnaire correct answers.**

Question no.	No. of correct answers	%
Q1	92	36.8 %
Q2	168	67.2 %
Q3	71	28.4 %
Q4	239	95.6 %
Q5	246	98.4 %
Q6	125	50 %
Q7	107	42.8 %
Q8	42	16.8 %
Q9	202	80.8 %
Q10	114	45.6 %
Q11	133	53.2 %
Q12	75	30 %
Q13	81	32.4 %
Q14	155	62 %
Q15	183	73.2 %
Q16	115	46 %
Q17	139	55.6 %
Q18	152	60.8 %

## DISCUSSION

In this investigation, the percentages of male and female participants were 54% and 46%, respectively, which is considered acceptable. A significant proportion of the physicians surveyed, specifically 43.6%, were aged between 35 and 45 years. Furthermore, approximately 73.6% of the sample possessed either a diploma or board certification. Notably, around 49.2% of the participants were specialists, and 54% had over ten years of professional experience. This demographic composition can be attributed to the fact that the sample was drawn from the consulting clinics at Al-Yarmouk Teaching Hospital, where each clinic is overseen by a specialist. Approximately two-thirds (64%) of the examined sample resided with an elderly individual, indicative of the familial cohesion that is characteristic of Iraqi society. Nevertheless, despite this intimate interaction, no substantial correlation was observed between cohabiting with an elderly individual and the level of knowledge attained. This phenomenon may be ascribed to an absence of formal education or training in the management of elderly health, a limited understanding of the specific needs of geriatric populations, or societal norms that emphasise caregiving responsibilities without adequately preparing individuals with the requisite expertise to effectively address complex health issues. Furthermore, there was no notable correlation observed among gender, age, educational attainment, job

classification, and years of experience. Regrettably, only 17.2% of the participants had undergone training in geriatric care, which emerged as the sole highly significant variable associated with a commendable level of knowledge. This underscores the critical significance of providing training for physicians across various specialties in the care of the elderly. The healthcare requirements of elderly individuals significantly diverge from those of younger patients. The physical, social, and behavioral consequences of ageing frequently manifest concurrently with both acute and chronic illnesses. The synergistic effects are frequently detrimental. In advanced age, both the manifestation of illness and the corresponding responses are modified.<sup>[6]</sup> Frailty, a prevalent condition among elderly individuals, is frequently associated with urinary incontinence, falls, and changes in mental status. In the sample, only 12.2% of physicians demonstrated a high level of knowledge, while approximately 51.2% exhibited a moderate level of knowledge, and around 36.4% displayed a low level of knowledge. These findings are inconsistent with studies conducted in Oman<sup>[7]</sup> and Nigeria<sup>[8]</sup>, but align with research from Baghdad/Alkarkh<sup>[9]</sup>, Saudi Arabia<sup>[10]</sup>, and Uganda.<sup>[11]</sup> This phenomenon can be ascribed to their foundational medical education and extensive experience; however, it is accompanied by a deficiency in advanced training specifically pertaining to geriatric healthcare.

Given that approximately fifty percent of the participants exhibited an overall fair level of knowledge, the questions that received the lowest percentages of correct responses (Q8, Q3, Q12, Q13, Q1), arranged in ascending order, will be addressed individually.

In response to Question 8, which defines polypharmacy as the concurrent use of more than three medications daily, the percentage of correct responses was a mere 16.8%. This finding stands in contrast to a study conducted in Nigeria.<sup>[12]</sup> Polypharmacy is characterised by the concurrent administration of five or more medications, a phenomenon frequently observed among the elderly population. As individuals age, they frequently face the challenge of managing multiple chronic health conditions, which often necessitates the use of five or more medications. This polypharmacy can lead to an increased risk of adverse outcomes, including falls, frailty, disability, and mortality.<sup>[13]</sup> This deficiency in knowledge can be attributed to several factors, including the absence of explicit guidelines pertaining to general prescriptions, as well as the existence of guidelines that are specific to the treatment of individual diseases. Additionally, this issue is linked to the healthcare system itself, which is characterised by a lack of centralised databases for each patient. This situation is further complicated by the reality that many patients consult multiple physicians concurrently, coupled with inadequate adherence to prescribed treatments. Question 3 pertains to the geriatric Health Program within the Ministry of Health, which delivers its services through

age-friendly primary healthcare, specialised geriatric clinics in hospitals, and medical units located in residential care facilities. However, the percentage of clinicians who provided the correct response was only 28.4%. This phenomenon can be elucidated by the observation that primary health centres are not fulfilling their essential functions in diagnosis, treatment, and the effective referral system. Consequently, a majority of physicians opted for the response indicating "elderly clinics in hospitals," which suggests a lack of awareness regarding the existence of age-friendly primary health centres and medical units within residential care facilities. This underscores an urgent necessity to enhance physicians' awareness of these available services.

In response to Question 12, which posits that the most prevalent community-acquired infection leading to hospitalisation among the elderly is influenza, it is important to note that the accurate answer is, in fact, streptococcal pneumonia. Notably, only 30% of physicians provided the correct response. Community-acquired pneumonia (CAP) can manifest at any stage of life; however, its incidence and associated mortality risk are correlated with advancing age. Community-acquired pneumonia (CAP) in the elderly constitutes a significant health concern, characterised by elevated rates of readmission, morbidity, and mortality. Given that the clinical manifestation of pneumonia in the elderly population may be unconventional, healthcare practitioners should maintain a high index of suspicion for pneumonia in older patients exhibiting symptoms such as falls, altered mental status, fatigue, lethargy, delirium, and anorexia. This vigilance is essential to mitigate the complications associated with delayed diagnosis and treatment.<sup>[14]</sup> Question 13: The most suitable course of action in the management of urge incontinence following transurethral resection of the prostate for benign prostatic hyperplasia (BPH) is to initiate a trial of oxybutynin 2.5 mg tablets administered three times daily for a duration of two weeks. Approximately 32.4% of physicians provided the correct response. The significance of this inquiry lies in the fact that benign prostatic hyperplasia (BPH) continues to be a prevalent condition among elderly males, which may result in a reduced quality of life. According to autopsy findings, the prevalence of benign prostatic hyperplasia (BPH) reaches approximately 50% by the sixth decade of life and approaches 90% among males aged 80 years and older.<sup>[3]</sup> Post-prostatectomy incontinence may be a temporary impairment which may spontaneously resolve. Most patients recover urinary continence within the first 6 months following surgery. Early incontinence is usually related to urge incontinence, either because of irritative symptoms due to the prostatic fossa healing and associated urinary tract infections or detrusor overactivity caused by long-lasting BPH.<sup>[15]</sup> So, being familiar with the treatment is very essential. Q1 (In Iraq elderly is the person ages), the correct answer for this question is (60 years) but only (36.8%) answered

correctly which is expected as most global resources consider geriatric age group starting from (65 years). In Iraq the elderly is defined as the person over 60 years of age depending on United Nations (UN) and WHO definitions. However, families and communities often use other socio-cultural referents to define age, including family status (grandparents), physical appearance, or age-related health conditions.<sup>[16]</sup> Some countries have accepted the chronological age of 65 years as a definition of 'elderly' or older person, but this does not adapt well across different countries. In many parts of the world, chronological time has little or no importance in the meaning of old age. Other socially constructed meanings of age are more significant, such as the roles assigned to older persons; in some cases, it is the loss of roles accompanying physical decline is significant in defining old age.<sup>[17]</sup>

## CONCLUSION

Approximately fifty percent of the physicians who took part in this study demonstrated a moderate level of knowledge, with a notable correlation identified between training in geriatric care and a high level of knowledge. This underscores the critical significance of incorporating geriatric health care into both undergraduate and postgraduate educational programs. Furthermore, it is imperative to emphasise the importance of team collaboration and to promote the establishment of multidisciplinary teams dedicated to geriatric care within hospital settings. Such teams should enhance their professional expertise through ongoing medical education (CME) and participation in workshops, conferences, and seminars specifically focused on geriatrics. Additional research should be undertaken in various hospitals across Iraq to evaluate the physicians' understanding of this significant demographic.

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