

Caring practices of medical interns for chronically ill patients at Jimma University Medical Center: A cross-sectional study

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Abstract: *Background:* The increasing prevalence of chronic disease and death from those diseases in both developed and developing countries is a considerable concern to numerous international organizations. Data on practice of medical interns in chronically ill patient care is deficient in Ethiopia. *Objective:* this study is aimed to assess the knowledge, attitude, and practices of medical interns in caring for chronically ill patients at Jimma University Medical Centre. *Method:* Across-sectional study was conducted with self-administered approach for data collection. Multiple regression was done and P-value <0.05 was considered for statistical significance. *Result:* 235 medical interns were participated among which 173(73.6%) are male. More than half 126(53.6%) of the participants had good knowledge, 159(67.7%) had positive attitude, and 95(40.4%) had good practice. Medical interns who were working in a medical ward [AOR=0.403 95% CI: 0.170-0.956 had better practice. Medical interns in ≤24 years old were almost three times more likely to better practice than those >25years old [AOR=2.757 95% CI: 1.391-5.465]. *Conclusion:* Caring practice medical interns for chronically ill patient is low. This finding clearly indicates the importance of better follow up of caring practice of medical interns for chronically ill patients.

Keyword: Chronically ill patient, Chronic Disease, Care Practice

Introduction

Death from chronic disease such as cardiovascular diseases, stroke, chronic obstructive pulmonary disease (COPD) and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) is increasing globally [1]. Similarly, chronic respiratory diseases such as asthma and COPD are persisted to be the leading causes of morbidity worldwide [2].

In the same way, non-communicable chronic diseases were the leading causes of age standardized mortality rates in Ethiopia from 1990 to 2015 [3]. According to the result of systematic review, cardiovascular disease, cancer, diabetes mellitus, and COPD are the major chronic diseases causing high proportions of morbidity and mortality in rural and urban parts of Ethiopia [4].

The increasing prevalence of chronic disease and death from those diseases in both developed and developing countries become a concern to numerous international organizations [1, 5-6]. In line with this, promoting high quality of care and effective use of patient data are important to design interventions to address burdens of chronic diseases [7-8]. Likewise, studies in Ethiopia had recommended the requirement of evidence based interventions as chronic diseases are highly increasing most recently [4, 9].

Furthermore, scientists had revealed the importance of strengthening public sector to facilitate providers engagement with patients in a way that supports the therapeutic alliance together with improvement in drug supply chains, ambulance services, referral systems and clinical capacity at public clinics for

patients with chronic disease [10]. Besides to this, physicians' knowledge and characteristics have an impact on health outcomes for clients presented with chronic diseases [11]. Evidence shows that clinicians must be motivated to alter their practice in light of new evidence while caring for patients with chronic disease [12]. This is because, regardless of the clinical differences across chronic diseases, each illness confronts patients with the same spectrum of needs to alter their behavior, to deal with the social and emotional impacts of symptoms and disabilities, to take drug, and to interact with medical care over time. Furthermore, healthcare practitioners must ensure the patients receive the best treatment regimens to control disease and mitigate symptoms, as well as the information and support needed effectively to self-manage their health [13-15].

Good caring practices for chronically ill patients is also cost effective from the provider, patient, and hospital system perspective while it is essential for better health outcome and to improve patients' quality of life [16]. Primary health care providers always act as the critical hub in caring for patient with chronic illness [17].

Consequently, assessing the care practice of medical interns on caring for chronically ill patient is a pioneering point for intervention and better performance. However, there is a paucity of data on this area in Ethiopia. The few previous studies conducted focused on full health professionals who are specialists or seniors rather than interns who are more working for chronically ill patients in teaching hospitals [18-19]. On the other hand, medical interns are at a better appropriate period to implement intervention in improving quality of care for chronically ill patients in health facilities. Therefore, this study was aimed to assess the knowledge, attitude, and practices of medical interns in caring for chronically ill patients.

Material and Methods

Study design, area and period: Cross-sectional study was conducted to assess knowledge, attitude and practice of 2019/2020 batch medical interns in caring for chronically ill patients at Jimma University medical center, from October-December 2019. Jimma University Medical Center finds in southwest Ethiopia and provides

services for over 15 million people (approximately 15,000 inpatient, 160,000 outpatient, 11,000 emergency and 4500 child deliveries per year). It is 356km far away from Addis Ababa, a capital city of Ethiopia [20].

Sampling procedure: All medical interns who were on work during the study period were included in to the study. Medical interns who are non-Ethiopians and those who have incomplete or fail status with one or more attachment were excluded. Finally, a total of 235 medical interns were included in to the study.

Data collection tool and procedure: The authors had prepared data collection tool in English from relevant literatures [21-23] and did pretest on the tool before the actual data collection on 10% of the sample size in Hawassa University Referral Hospital. The data were collected by self-administered method using structured questionnaire under the supervision of one male and one female trained supervisors and the principal investigator. Completeness of the data was checked on daily bases by the authors and the supervisors.

Data processing and analysis: The data were cleaned and checked for completeness and consistency and entered in to Epi data version 3.1 by the authors before exported to SPSS version 24 for analysis. Leaner, binary and multivariable logistic regression was done to determine the frequency, to identify candidate variables for multivariable analysis, and to assess association between dependent and independent variables respectively. All factors with p-value <0.25 in the bivariate logistic regression were selected for further cofounding effects controlled analysis by multivariable logistic regression. Adjusted odds ratio with 95% confidence interval and p<0.05 were reported to show presence and strength of association between dependent and independent variables.

Measurements: Patients who had admitted with communicable and non-communicable disease that may not have a cure were considered as chronically ill patients [24-25]. Knowledge among medical interns was

measured using 11 questions with “yes” or “no” response. During analysis, interns were considered as having “good knowledge” for the score of mean and above to chronically ill caring knowledge statements. Similarly, attitude was measured using 15 questions. Interns were classified a shaving “positive (favorable) attitude” when they scored mean and above the mean positive response to chronic ill caring attitudes scales. Cronbach’s alpha was computed on pretest data and it was 0.91. To measure caring practice of the interns for the chronically ill patient, seven questions were used. Mean score of positive response to the caring practice questions was computed. Medical interns who had scored mean and above the mean were considered as having good practice [26-29].

Results

Socio-demographic characteristic of the medical interns: A total of 235 medical interns

participated in this study of which 173 (73.6%) were male. More than half of the participants 154(65.5%) were >25 years of age while 81(34.5 %) were ≤24 years. Majority 104 (44.3%) of them are Oromo, followed by Amhara 56(23.8%). More than one-third 98(41.7%) of the participants were Orthodox Christians. About 68 (28.9%) were in medical ward, 72(30.6%) were in Surgical, 44(18.7% were Gynecology and 51(21.7%) were in pediatrics ward during data collection.

Assessment of medical interns’ knowledge: Majority 149(63.4%) and 154(65.5%) of the medical interns knew chronically ill patients and cases of chronic illness respectively. A total of 187(79.6%) participants knew how to care for chronically ill patients. In general, 126 (53.6%) medical interns have good knowledge scoring equal or above the mean (mean =14.7489) (table-1).

Table-1: Distributions of Medical Interns Knowledge toward caring chronically ill patients at Jimma University Medical Center (N=235)		
Statements	Yes (%)	No (%)
Do you know the chronically ill patient?	149 (63.4)	86 (36.6)
Do you think non-communicable diseases are the major cause of chronic illness?	54 (65.5)	81 (34.5)
Do you know how to care for the chronically ill patient?	187 (79.6)	48 (20.4)
Do you have experience in caring for chronically ill patients?	146 (62.1)	89 (37.9)
Do you know the management mechanism of the pain of chronically ill patients?	227 (96.6)	8 (3.4)
The extent of the disease determines the method of pain treatment.	64 (27.2)	171 (72.8)
Adjuvant therapies are important to manage pain of chronic patients	205 (87.2)	30 (12.8)
The provisions of care for chronically ill patients require emotional detachment.	115 (48.9)	120 (51.1)
The philosophy of care for chronically ill patients is compatible with that of aggressive treatment.	186 (79.1)	49 (20.90)
The use of placebos is appropriate in the treatment of some types of pain.	161 (68.5)	74 (31.5)
Terminally ill patients should be encouraged to have hope against all odds.	173 (73.6)	62 (26.4)
Overall knowledge	≥ Mean score	126 (53.6%)
	< Mean score	109 (46.4%)

Assessment of medical interns’ attitude: For all fifteen statements used to assess the attitudes of medical interns, the maximum score was 57.00 and the minimum was 17.00. Based on the response, majority 159(67.7%) of medical interns scored the mean and above (≥41.9319)and were

considered as having positive(favorable) attitude whereas medical interns who scored less than mean score of attitude statement scale were considered as having negative (unfavorable) attitude towards caring for chronically ill patients 76(32.3%) (table2).

Table-2: Distribution of medical interns attitude towards caring chronic ill patients at Jimma University Medical Center (N=235)					
Statements	^aSAN (%)	^bAN (%)	^cNN (%)	^dDAN (%)	^eSDN (%)
Care should be given only for a chronically ill patient	12(5.1)	28(11.9)	19(8.1)	94(40.0)	82(34.9)
As a patient nears death; the physician should withdraw from his/her involvement with the patient	8(3.4)	18(7.7)	11(4.7)	102(43.4)	96(40.9)
Giving care to the chronically sick patient is a worthwhile learning experience.	93(39.6)	110(46.8)	9(3.8)	16(6.8)	7(3.0)
It is beneficial for the chronically ill person to verbalize his/her feelings.	89(37.9)	106(45.1)	12(5.1)	21(8.9)	7(3.0)
Family members who stay close to chronically ill patients often interfere with a professionals' job with the patient.	88(37.4)	103(43.8)	14(6.0)	23(9.8)	7(3.0)
The length of time required to give care to chronically ill patients would frustrate me.	20(8.5)	29(12.3)	22(9.4)	79(33.6)	85(36.2)
Families should be concerned about helping their chronically ill patient's members make the best of his/her remaining life.	25(10.6)	23(9.8)	20(8.5)	99(42.1)	68(28.9)
A family should maintain as normal an environment as possible for their chronically ill patients	25(10.6)	23(9.8)	20(8.5)	99(42.1)	68(28.9)
The family should be involved in the physical care of the chronically ill patients	20(8.5)	30(12.8)	22(9.4)	78(33.2)	85(36.2)
It is difficult to form a close relationship with the family of chronically ill patients	26(11.1)	16(6.8)	5(2.1)	7(3.0)	181(77.0)
Chronically ill patients and his/her family should be the in-charge decision-makers.	149(63.4)	53(22.6)	2(0.9)	16(6.8)	15(6.4)
I am afraid to become friends with chronically ill patients.	103(43.8)	112(47.7)	7(3.0)	9(3.8)	4(1.7)
I would be uncomfortable if I entered the room of chronically ill patients and found him/her crying.	97(41.3)	51(21.7)	49(20.9)	34(14.5)	4(1.7)
I would feel like running away when the person chronically ill condition.	203(86.4)	8(3.4)	8(3.4)	12(5.1)	4(1.7)
I would not want to be assigned to care for chronically ill patients	51(21.7)	133(56.6)	33(14.0)	11(4.7)	7(3.0)
Overall attitude category	≥ Mean score		159(67.7%)		
	< Mean score		76(32.3%)		
aSA = strongly agree, bA=Agree, cN=Neutral, dDA=Disagree, eSD=strongly disagree					

Assessment of medical interns' caring practice: Majority 140(59.6%) of the medical interns had poor practices (<mean score, 15.2809) while 95(40.4%) had good practices in caring for chronically ill patients. About 174 (74.0 %) of the participants initiate palliative care discussion

during diagnosis, 106 (45.1%) were considered medical conditions when they discussed with chronically ill patients, and 175(74.5%) addressed spiritual of the patients by connecting spiritual counselor (table-3).

Table-3: The practice of Medical Interns in caring for chronically ill patients at Jimma University Medical Center (N=235)

Statements	Responses	Frequency (%)
Initiate palliative care discussion	During diagnosis	174(74.0)
	When the disease progress	47(20.0)
	At the end of life	14(6.0)
Factors considered when dealing with a chronically ill patient	Spiritual	99(42.1)
	Medical condition	106(45.1)
	Cultural	11(4.7)
	Psychological	19(8.1)
Address spiritual issue	Connect with a spiritual counselor	175(74.5)
	Listen with empathy	43(18.3)
	Impose your view	17(7.2)
Cultural assessment during patient care should include	Truth-telling and decision making	106(45.1)
	Preference regarding disclosure of information	96(40.9)
	Dietary preference	32(13.6)
	Language, family communication	1(0.4)
Addressing psychological	Emotional support	178(75.7)
	Counseling the patient	57(24.3)
Whom do you involve in decision making?	Families	132(56.2)
	Patient	14(6.0)
	My own	87(37.0)
	Other health professionals	2(0.9)
How do you perceive chronically ill patient concerns or questions?	Patient right	116(49.4)
	Treat	100(42.6)
	Doubting professionalism	19(8.1)
Overall practice category	≥Mean score	95(40.4%)
	<Mean score	140(59.6%)

Table-4: Factors associated with the Practice of Medical Interns in caring for chronically ill patients at Jimma University Medical Center (N=235)

Variables	Category	Practice		COR (95% CI)	AOR (95% CI)
		Poor Practice	Good Practice		
Age	≤24	59(72.8%)	22(27.2%)	0.414(0.231-0.741)	2.757(1.391-5.465) ^a
	>25	81(52.6%)	73(47.4%)	1	
sex	Male	97(56.1%)	76(43.9%)	1.773(0.956-3.289)	0.515(0.249-1.063)
	Female	43(69.4%)	19(30.6%)	1	
ward	Medical	38(55.9%)	30(44.1%)	0.667(0.272-1.635)	0.698(0.294-1.653)
	Surgical	35(48.6%)	37(51.4%)	2.114(1.005-4.446)	0.403(0.170-0.956) ^a
	Gynecology	33(75%)	11(25%)	1.579(0.743-3.355)	1.493(0.537-4.156)
	pediatrics	34(66.7%)	17(33.3%)	1	

Factors associated with caring practice of medical interns: Age of the medical interns and the ward they were working in during data collection were the two independent variables associated with the outcome variable, “caring

practice for chronically ill patients”. Accordingly, medical interns who were in age group of ≤24 years were almost three times [AOR=2.757 95% CI: 1.391-5.465] more likely to have good caring practice for

chronically ill patients compared to medical interns in age group of >25 years. On the other hand, medical interns who were working in medical ward during data collection were 0.4 times [AOR=0.403 95% CI: 0.170-0.956] more likely to have good caring practice for chronically ill patients than medical interns who were working in pediatrics ward (table-4)

Discussion

Patients are foundation in medical education where patient- student relationship is important to the same level as patient-doctor relationship [30]. In this study, knowledge, attitude, and practices of medical interns towards caring for chronically ill patients at Jimma University medical center were assessed. Discussion of this finding was challenging as there was scarcity of study on comparable study population.

Medical interns' knowledge in caring for chronically ill patients: The overall good knowledge of medical interns incaring for chronically ill patients was 126(53.6%). This finding indicates nearly half of the medical interns had no good knowledge of caring for chronically ill patients. Even though, it could be difficult to conclude level of their knowledge by single study, it shows a seriously poor level of knowledge status to treat patient. However, knowledge in this study is higher compared the study finding in Addis Ababa Ethiopia(30.5%) [31]. The difference can be due to variation in study population where, this study was focused on students who are on education while the Addis Ababa study was among official workers. Students could read more for academic exam and hence they can have more knowledge.

Medical interns' attitude towards caring for chronically ill patients: Medical students who were having good or favourable attitude towards caring for chronically ill patients were 159 (67.7%). This positive attitude is higher among Addis Ababa study participants (76%) which might be due to those group can have attended different training and are also worked for longer duration to develop positive attitude comparing to the current study participants [18]. Since, health care providers are instrumental in stimulating, creating and maintaining health care improvement in the world, where there is rapidly shifting balance between acute and chronic health

problems, the interns need to have more positive attitude toward caring for patients with chronic diseases [32].

Medical interns' caring practice for chronically ill patients: The general scored good chronically ill patient caring practice of medical interns was 95(40.4%). This could be in association with the low good knowledge of medical interns in this study which is essential for having good practice [33]. Low good caring practice in this specific study suggests the importance of improving the knowledge of the medical interns on the area of caring for chronic disease in parallel to improve their practice in the caring.

Factors associated with caring practice of medical interns: In this study finding, age of medical interns being less than or equal to 24 years was positively associated with having good practice in caring for chronically ill patients [AOR=2.757 95% CI: 1.391-5.465]. This can be happen because; medical interns can start feeling of themselves as a colleague with senior staff as their age increase. It is a culture in Ethiopia that less aged peoples do respect much higher for elders and try to cover every gap in the work area. However, this should not be realized and applied in medical area since single deficiency can result in life losing to the patients. On the other hand elders are pacemakers and better to have good practice in caring for their patients to motivate the younger students and physicians [34]. Consequently, Medical educators/senior doctors should closely monitor their medical interns' practice in caring for the patients especially as the age of the medical interns' increase.

By the same token, working in medical ward also had a significant association with the practice of medical interns to care for chronically ill patients [AOR=0.403 95% CI: 0.170-0.956]. This probably can be happen for the reason; most of the chronically ill patients do admitted to the medical ward relative to other wards and, thus, medical interns who work in this ward have daily contact with those patients, and may have developed better experiences to practice service provision more. Likewise, medical interns' educators/

doctors also talk and teach most frequently about chronic disease and caring for chronically ill patients in medical ward since educating students in ward is either bed side teaching or round bed teaching putting the patients at the center [35-36].

Conclusion

Majority of medical interns have good knowledge and a positive (favorable) attitude toward caring for chronically ill patients. In opposite to this, caring practice medical interns for chronically ill patient is low. This finding clearly indicates the importance of better follow up of caring practice of medical interns for chronically ill patients.

Strength and Limitations: This study focused on medical interns who are at early stage for

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intervention in a plan of having good health professionals cost effectively. It also addressed chronic illness which is a critical area especially in developing countries as it is creating double burden of disease currently in the area. However, this study was conducted only in single hospital which could be difficult to generalize for Ethiopian medical interns. Hence, the authors recommended further study with more strong study design including wide study area coverage.

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