

# Competence of Primary Healthcare Physicians in Breaking Bad News in Eastern Province Capital of Saudi Arabia

Nada A. Albunaian<sup>1</sup>, Manal R. Koura<sup>2</sup>

<sup>1</sup>Consultant family medicine, Saudi Post-graduate Family Medicine Center, Eastern Province, Ministry of health, KSA

<sup>2</sup>Professor, Community Medicine, Family and Community Medicine Department

**Abstract:** Background: one of the most physicians' important and difficult duties is breaking bad news (BBN). Objectives: The present study aimed to assess knowledge, perceived importance and competence of primary healthcare (PHC) physicians in Eastern Province Capital in Saudi Arabia about BBN for patients. Material and methods: A cross-sectional study was conducted in 24 governmental PHC centers of Dammam among practicing physicians using self-administered questionnaire. Results: Out of 119 participants, 58% were female physicians and 49% were Saudis. Most of them had bachelor degree in medicine (84.9%). In-service trained on BBN was 40.3%. The average number of patients seen per day was 48 patients. The average number of BBN per month was 6. Among all physicians 23.5% had poor knowledge and 9.2% had good knowledge about BBN. The perceived competence was low in 15.1% and high in 40.3%, while the level of perceived importance was high in 64.7% and low in 5.9%. Female physicians showed significant better knowledge ( $p=.04$ ). Those who received in-service training showed significant better knowledge ( $p<.001$ ), perceived importance ( $p<.001$ ) and competence ( $p=.006$ ). There is positive significant correlation between perceived importance and knowledge, as well as perceived competence. There was negative correlation between number of patients seen per day and physicians' knowledge, perceived importance and competence. Conclusion: Most of physicians believed that BBN is important in PHC in spite of deficiency in knowledge. Physicians who received in-service training had better knowledge, perceived importance and competence. Accordingly, BBN should be systematically introduced in PHC.

**Keywords:** Breaking Bad News, BBN

## 1. Introduction

Bad news in the medical context has been defined as "any news that drastically and negatively alters the patient's view of her or his future." [1]

Medical education offers little preparation in BBN which made it unpleasant. Without proper training, the discomfort associated with BBN may lead physicians to be emotional disengaged from patients. [2] BBN is usually associated with a terminal diagnosis, however family physicians encounter many situations that involve providing bad news; e.g. a pregnant woman's ultrasound verifies fetal death. Education in BBN may be ineffective for improving patients' well-being unless informed by a sound evidence base [3]. Fallowfield L stated that poor delivery of bad news appears to have important effects on patients' subsequent coping and anxiety [4]. Researchers explained that the most important features of delivering bad news are the physicians' attitude, clarity of the message, privacy, and news giver's ability to answer questions [5]. Most articles measured BBN among physicians by using the famous SPIKE protocol, which is, used more for cancer patients [6]. The American Academy of Family Physicians used a simple mnemonic, ABCDE, developed by Rabow and McPhee to remind physicians how to BBN, which are more suitable for PHC practitioners. Mnemonic ABCDE includes: Advance preparation; Building a therapeutic relationship; Communicating well; Dealing with patient and family reactions; Encouraging emotions<sup>2</sup>.

Evidence BBN to patients is essential to provide better health care, gain patients trust and management plan cooperation which lead to a better prognosis [7]. As far as to the author's knowledge the only studies done in Saudi Arabia among physicians were about attitude of oncologists and medical students towards breaking bad news. Therefore, assessing knowledge and competence of primary health care doctors in breaking bad news for sick patients is important, because the way clinicians break bad news might be associated with poor psychosocial outcomes for patients and poor compliance with treatment<sup>2</sup>. Therefore, this study aimed to assess knowledge, perceived importance and competence of PHC physicians in Dammam, Eastern Province, Saudi Arabia about BBN for patients. Also, to assess and the factors that affect their knowledge, perceived importance and competence.

## 2. Methodology

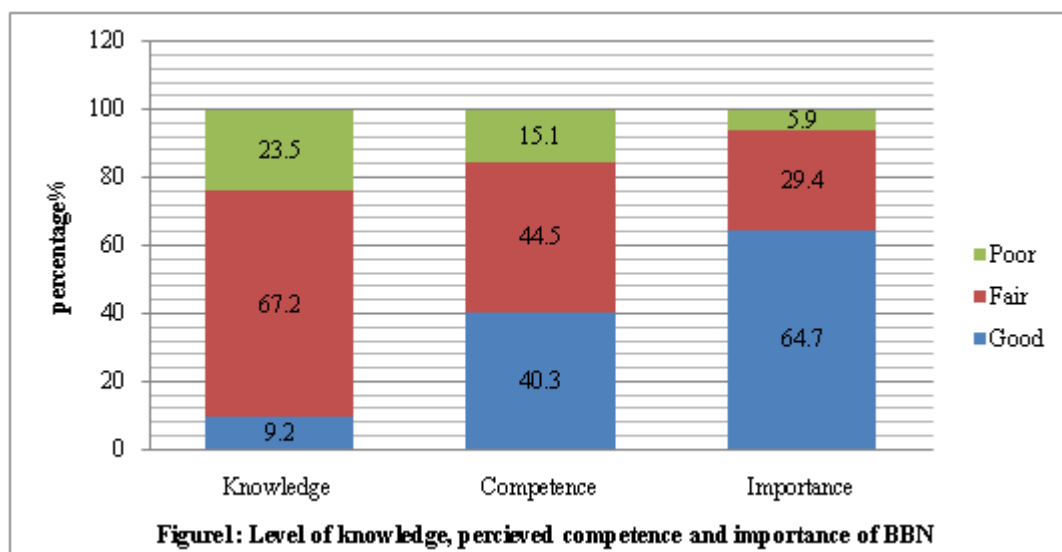
A cross-sectional study was conducted for assessing knowledge, perceived importance and competence of BBN among all practicing physicians in 24 governmental PHC centers in Dammam, Saudi Arabia. Approval was obtained from the Ministry of Health to conduct the study. The accepted participants were 119 physicians out of 137 with 86.9% response rate. Data was collected by structured self-administered questionnaire following Rabow and McPhee's ABCDE mnemonic for BBN<sup>2</sup> during the month of January 2012. This questionnaire was reviewed by the Saudi Board of Family Medicine research committee. The questionnaire was divided into 4 sections: **Section (A)** background information about the participants as age, gender, nationality, language,

job, years of experience, university of graduation, undergraduate and in-service training in BBN, average number of patients seen per day and average number of BBN done per month **Section (B)** Knowledge questionnaire about BBN **Section (C)** a 4 Likert scale for perception of importance of BBN **Section (D)** a 4 Likert scale for perception of competence in BBN. Questionnaires were delivered and collected on the spot after checking that all answers were completed. Two pilot studies were done to assess the questionnaire clarity. The reliability test (Cronbach's Alpha) for knowledge, perception of importance and competence was calculated 0.649, 0.879, and 0.895 respectively. Knowledge, perception of importance and competence scores were calculated. Each correct answer of 25 knowledge questions was given 1 point and the incorrect answer given 0 point. The total knowledge score equals to the sum of correct answers scores. The total knowledge score was classified into 3 levels: poor (less than 60% of maximum i.e. 0-14), fair (60-80% i.e. 15-19) and good (more than 80% of maximum i.e. 20-25). Subscale scores were also calculated for each section of the questionnaire. The total perceived importance and competence scores were equal to the sum of scores given to each statement on the 4 Likert scale. Twenty-two items were listed, the minimum score was zero and the maximum score was 66. The total perceived importance and competence scores were categorized into 3 levels: low 0-39 (less than 60% of maximum), moderate 40-53 (60-80% of

maximum), and high level 54-66 (more than 80% of maximum). All data was entered to SPSS program Version 16 and verified. Data was presented in descriptive tables and figures. Statistical analysis was done using t-test and correlation analysis. P-values less than 0.05 were considered significant.

### 3. Results

The mean age of the participating physicians was 37.43 +/- 9.6 years; 58% were females. Saudi and Non-Saudi physicians were almost equal in number. The majority were Arabic speaking (88.9%) and working as residents (90.8%). About one-third had less than 5 years of experience (35.5%) and another one-third had more than 15 years of experience (30.3%). The majority graduated from Non-Saudi universities (61.3%) and about 40% received undergraduate and in-service training in BBN. The mean number of patients seen per day per physician was 46 and the mean number of BBN done per month was six. About 9% of PHC physicians had good knowledge of BBN, while 23.5% had poor knowledge. The majority of physicians believe that BBN is of high importance (64.7%), while only 5.9% consider it of low importance. Forty point three percent of physicians self-reported a high level of competence, while 15.1% self-reported a low level of competence about BBN to patients. (figure 1)



The mean knowledge score of females was significantly higher than males ( $P=0.04$ ), while no significant difference was detected concerning perceived importance or competence. Moreover, Nationality, language, undergraduate training, job, years of experience and university of graduation did not significantly affect the total knowledge score of PHC physicians (Table 1).

**Table 1:** Mean knowledge, perceived importance and competence scores about Breaking Bad News by gender

Total Scores	Gender				t-test P-value
	Male(n=50)		Female(n=69)		
	Mean	SD	Mean	SD	
Knowledge	15.5	3	16.6	2.7	0.04
Importance	55.5	8.1	55.9	9.2	0.80
Competence	50	9.5	50.4	10.8	0.86

The physicians who received in-service training about BBN had significant better total knowledge, total perceived importance and competence than their colleagues who did not receive training. However, training could not improve their knowledge about dealing with patient and family reactions and encouraging emotions. It was also noticed that more than half of the physicians (about 54%) considered presence of a family member or support person extremely important during BBN, compared to only 4.2% who considered it not at all important. Received in-service training could not improve their perceived competence in advanced preparation for the BBN. It was also found, that physicians who received in-service training about BBN had significant better knowledge than others concerning touching patient when appropriate, asking patient what s/he

already knows about his/her condition, giving the patient time to cry and proceed on patient pace, as well as offering referral if needed ( $P<0.05$ ); and that PHC physicians had insufficient knowledge about the following items; Advance Preparation( arranging for no interruption during consultation time) ;Building Therapeutic Environment/ Relationship( asking about preference to provide the diagnosis and warning the patient that bad news are coming);Communicating Well( avoiding medical terms during the consultation and allowing for silence and tears to proceed at the patient's pace);Dealing with Patient and Family Reactions(dealing with patient and family emotional reactions, showing empathy and checking patient emotions in every visit);Encourage and Validate Emotions by providing emotional and spiritual support after exploring what the news means to the patient and offering referral if needed (Table 2).

**Table 2:** Mean knowledge, perceived importance and competence scores about Breaking Bad News by in-service training

Score	In-Service Training				
	YES (n= 48)		NO (n= 71)		t-test
	Mean	SD	Mean	SD	P-value
<b>Total knowledge</b>	17.4	2.4	15.3	2.9	<0.001
Advance preparation	4.6	0.6	4.2	1	0.02
Building therapeutic relationship	4.4	1	3.4	1.1	0.001
Communication	4.6	1.2	3.9	1.2	0.002
Deal with reactions	1.2	0.8	1.2	0.8	<b>0.94</b>
Encouraging emotions	2.7	0.8	2.4	0.8	<b>0.07</b>
<b>Total importance</b>	58.3	8.5	54	8.7	<0.001
Advance preparation	11.3	1.3	10.9	1.3	<b>0.07</b>
Building therapeutic relationship	12.2	2.6	10.8	3.2	0.01
Communication	16.3	2.6	15.1	2.9	0.03
Deal with reactions	8.2	1.5	7.2	1.7	0.002
Encouraging emotions	10.9	1.8	10.3	2	<b>0.115</b>
<b>Total competence</b>	53.3	8.7	58.1	10.7	0.006
Advance preparation	9.5	2	9.3	2.2	<b>0.62</b>
Building therapeutic relationship	10.8	2.7	9.2	3	0.006
Communication	15.1	2.8	13.6	3.4	0.01
Deal with reactions	7.6	1.7	6.6	2	0.007
Encouraging emotions	10.4	2.1	9.3	2.4	0.01

There is a weak positive significant correlation between knowledge and perceived importance of BBN and a weak positive correlation between knowledge and competence. Also, a moderate positive significant correlation between perceived importance and competence in BBN. Moreover, a significant weak negative correlation between number of patients seen per day and perceived importance of BBN was detected (Table 3).

**Table 3:** Correlation between breaking bad news knowledge, perceived importance and competence scores

	Knowledge score		Competence score	
	r	P-value	r	P-value
Knowledge Score	1	.....	0.150	0.051
Importance Score	0.205	0.013	0.55	<0.001

## 4. Discussion

This study revealed only 9.2% of PHC physicians had good knowledge about BBN, while 23.5% had poor knowledge. Similar findings of poor knowledge about communication skills and BBN among doctors were reported in Iran and India [8, 9]. In our study, 63% of physicians did not receive under-graduate training in BBN and 59.7% didn't receive post-graduate training. A British recommendation implicates the importance of teaching communication skills and BBN in general practice and undergraduate training [10, 11]. Research has demonstrated that communication skills and BBN training using behavioral, cognitive and affective domains can increase the potentially beneficial, effective interviewing styles, alter attitudes and grant other benefits. [12, 13]

Western research studied the outcome of BBN training programs on doctors' knowledge and competence. Although, doctors were trained in how to BBN, but still evidence suggests that there are difficulties in giving the bad news to patients [14, 15]. It was well recognized that delivering bad news is a difficult task which required skills and sensitivity [16]. In our study, 15.1% of physicians have low perceived competence and 40.3% have high perceived competence in BBN. This result might be due to physicians over-estimating themselves or because the questionnaire didn't elicit the practical part for BBN competency.

Our study revealed that female physicians had better knowledge about BBN than males, but no gender difference in perceived importance or competence could be detected. On the contrary, the Iranian study showed a lower level of BBN knowledge and perceived competence among females<sup>9</sup>. In USA 2002, a survey was done among all practicing specialists to assess the relation between background physicians' data with emotional support and environmental support in BBN. The results were significant difference in emotion support by gender in favor of female physicians and with those who receive training, but no significant difference in environmental support [17]. Therefore, it might be the effect of cultural background in the Middle East region.

Regarding Physicians' perception of importance of BBN in our study, 64.7% of PHC physicians believed that it's highly important and 29.4% believed it is moderately important. A study done in 1993 among internal medicine and critical care physicians in six hospitals in Saudi Arabia, aiming to assess physicians' attitude towards disclosing information and decision making with patients in case of serious illness reported that 47% of physicians provided the diagnosis to patients or patients' families, but 75% preferred to tell the patient's family rather than the patient. [18] Furthermore, another study done in 2008 in Saudi Arabia showed that 67% of physicians prefer to tell the patients about cancer diagnosis after informing their family, while in case of HIV infection 59% of physicians prefer to inform the patients [119]. In Egypt 1997, Dr El-Ghasali mentioned that patients should be allowed to be dependent, free from worry and not to be involved in decision making, which should be left to the family [20]. On the other hand, physicians from US and Japan preferred to tell the patient out of respect to patient autonomy [21]. In the current study, it was noticed that more than half of the physicians considered the presence of a



family member extremely important during BBN. This variance results from religious and cultural differences in different areas of the world in addition to nature of the disease.

Regarding in-service training, the physicians who received in-service training about BBN had better knowledge, as well as perceived importance and competence. Many papers studied the efficacy of training programs among residents about BBN which showed a significant better outcome. [22] a study done in USA 2007 assessing knowledge and performance of oncology residents after BBN workshop, showed significant difference in post-workshop assessment. It showed significant difference in assessing the patient's understanding of the situation, giving time for tearing after bad news delivery, showing empathy, exploring patients' emotions, assessing patients' emotion and using simple clear language. However, it elicits insignificant difference in summarizing the follow-up plan and responding to patients' emotion [23]. Our study also showed a significant difference in knowledge of physicians who received in-service training in assessing the patient's understanding of the situation, giving time for tearing after bad news delivery and showing empathy by touching patient when appropriate. Furthermore, it showed insignificant difference in summarizing the follow-up plan and responding to patients' emotion. Another randomized control study done among post-graduate residents from different specialties in France 2010, showed significant increase in the rate of empathy, emotional and social support, as well as using clear language in trained residents compared with untrained residents [24]. Whatever variety of practical training styles always post-graduation training is effective.

Regarding efficacy of under-graduation training, a longitudinal study among medical students 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> level at 1996-1998 at the Limburgs University in Belgium, showed that students in all levels prefer the individualized disclosure model. [25] A study was done in Royal Cornhill Hospital, Aberdeen, U.K. among students before and after receiving BBN training. They had better ratings in terms of responding empathically in addition to showing regard and concern for the patient [26]. In our study under-graduate training had insignificant effect on perceived importance and competence. This could be due to ineffective or limited variability of training methods.

In studying the effect of work load on perceived importance and competence, it was clear that increased number of patients seen per day had a negative effect on the physicians' perceived importance and competence in BBN. One article in American Academy of Family physician gave a solution for that by calculating the PANEL SIZE [27]. Panel size is the number of patient that can be managed by one physician. This might help in reduce the negativity when applied in PHC centers.

## 5. Conclusion

This study showed that most of physicians believed that BBN is important in PHC, in spite of deficiency in knowledge. Female physicians had better knowledge.

Physicians who received in-service training had better knowledge, perceived importance and competence. Based on these findings it's recommended to train all PHC physicians in BBN following evidence based guidelines, provide all PHC centers with BBN guidelines, introduce practical training in BBN in the under and post-graduate family medicine curriculum, and conduct further studies to assess patients' satisfaction with BBN in PHC centers, as well as the practice of PHC physicians and barriers leading to ineffective BBN.

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