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Original Article

Evidence Based Nutrition: knowledge and use among dietitians of Pakistan

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Summary. *Background:* Evidence Based Practice, a relatively new term in Pakistan; is pivotal to achieve optimum patient care and satisfaction. Most of the healthcare providers, including dietitians are unaware of its importance. The objective of the study was to identify knowledge and use of Evidence Based Nutrition (EBN) among dietitians of Pakistan. *Methods/subjects:* A cross sectional survey was carried out and structured, pretested questionnaires were e-mailed to the dietitians working in Pakistan. The response rate was 45% (23/51). Mean age of the respondents was 29.134 years and mean years of practice were 4.347. 87% (n=20) were females and 52.2% (n=12) had 16 years of education.34.8% (n=8) were registered dietitians and 47.8% (n=11) were employed full time as dietitians across Pakistan. *Results:* 82.6% (n=19) reported to engage in research activities and 60.9% (n=14) stated to use EBN in their practice. 52.2% (n=12) sometimes encountered knowledge gaps; for 60.9% (n=14) these were related to MNT and 78.2% (n=18) performed their own literature search on internet. Almost half (48%) had access to evidence based libraries and 52.2% (n=12) reported to use them. Reported barriers to implement EBN were lack of skills for critical appraisal of articles (39.1%, n=9); lack of knowledge of EBN (43.5%, n=10); and lack of time (8.7%, n=2). Main source of information was internet 65.2% (n=15). All of them were of the view that EBN should be used in routine clinical practice. *Conclusion:* It can be concluded that there is a lack of knowledge and use of EBN among dietitians in Pakistan. Providing adequate on-job training to current dietitians and incorporating EBN in nutrition and dietetics curriculum will enable future practitioners to implement EBN.

Key words: Evidence Based Nutrition, dietitians, barriers, Pakistan

Background

Evidence Based Practice is "The conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research" [1]. It has three basic components; best research evidence, clinical expertise and patient values and preferences. Best research evidence means searching appraising clinically relevant research; conducted using sound methodology. Clinical expertise means ones education and experience gained during practice. Patient values and preferences refer to patient's concerns, questions, expectations, experiences, clinical history and consultation.

Evidence-based practice is playing an increasingly important role in various fields of study. This term was first coined in 1992 to teach students of medicine; yet it is a relatively new term in Pakistan. With an explosion of information on internet; the dietitians and nutritionists must incorporate evidence-based nutrition into their decisions to remain competitive. Evidence-Based Nutrition enhances credibility and help dieti-

tians be more effective and efficient in their practice [2]. A cross-sectional survey among Australian pediatric dietitians revealed that most dietitians favoured evidence-based nutrition but 73% did not practice it or rated themselves as beginners. Reported barriers to using EBN were lack of time and lack of skills for critical appraisal of published articles. [3]. Another study conducted among renal dietitians of Australia and New Zealand reported that nearly all routinely used EBN guidelines; however, only 55% and 66% indicated they had successfully implemented the guidelines regarding minimum 6-monthly nutrition assessment of dialysis patients and use of the SGA [4].

Usual barriers to the implementation of EBN were insufficient training, and limited time [5], and an inefficient referral system [4]. Dietitians' ability to incorporate an evidence-based approach is largely determined by their perceptions, attitudes, and knowledge, education and training of evidence-based practice, work experience, and professional association involvement [6, 7]. A few studies have been conducted to identify knowledge and use of Evidence Based Practice among dietitians in developed countries but there is scarcity of data regarding evidence based practice among dietitians in Pakistan. Hence, this study was designed to explore knowledge and use of evidence based practice among dietitians of Pakistan.

Methodology

A cross sectional survey was carried out and questionnaires were e-mailed to dietitians working in Pakistan. The dietitians and nutritionists were searched on internet using key terms "Dietitian in Pakistan" and "Nutritionist in Pakistan" during August 2015. As there are very few dietitians and nutritionists working in Pakistan, so the sample was purposefully/theoretically selected and they were contacted through E-mail and Social media. The response rate was 45% (23/51). The study was conducted in August-September 2015.

The data collection instrument was a structured questionnaire designed by researcher for the current study. The questionnaire was pretested to validate and ambiguous questions were rephrased accordingly. Majority of the responses were multiple choice questions with a few open ended questions. As there was minimal risk involved to participants therefore; there the study was exempted by Institutional Review Board. The participants were explained the voluntary nature and aim of the study. Only those who consented participated and completed the questionnaire. The right to anonymity and confidentiality of data was assured.

Responses were tabulated, descriptive statistics were calculated for continuous data and frequency and percentages were calculated for categorical data. SPSS version 17 was used to analyze data.

Results

Mean age of the respondents was 29.134 years (range=22-40 years) and mean years of practice were 4.347 (range=1-16 years). 87% (n=20) were females and 52.2% (n=12) had 16 years of education; 43.5% (n=10) had done M.S. /M. Phil and one had done PhD. Only 34.8% (n=8) were registered dietitians, 47.8% (n=11) were employed full time and 39.1% (n=9) were employed as part time dietitians (Table 1). Almost half (n=11, 47.8%) were practicing in Lahore, Pakistan (Fig. 1).

82.6% (n=19) reported to engage in research activities and 60.9% (n=14) stated to use evidence based nutrition in their practice. Three (13%) stated that they rarely encountered knowledge gaps while twelve (52.2%) sometimes faced a deficiency of knowledge. Knowledge gaps were related to medical nutrition therapy for 14 (60.9%) participants. Majority (78.2%,

Table 1. Characteristics of the Respondents n=23

Characteristics		**N**	**%**
Gender	Female	20	87
	Male	3	13
Education	BS. / M.Sc.	12	52.2
	MS. / M. Phil	10	43.5
	Ph D.	1	4.3
Registered dietitian	Yes	8	34.8
	No	15	65.2
Employment status	Full time	11	47.8
	Part time	9	39.1
	Self employed	3	13

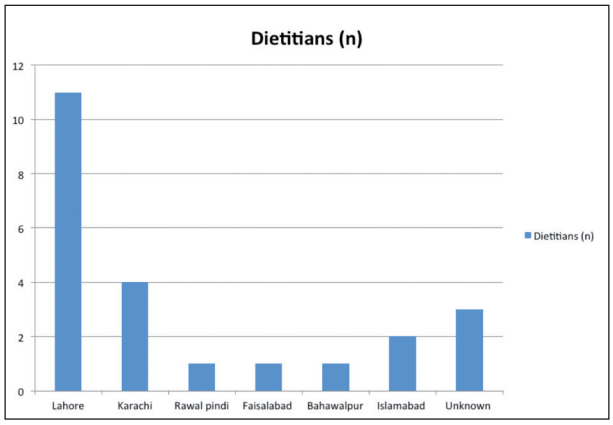

Figure 1. City-wise Distribution of Dietitians in Pakistan

n=18) performed their own literature search on internet and only 21% consulted evidence based library. Almost half (48%) had access to evidence based libraries and 52.2% (n=12) reported to use them. Reported barriers to implement EBN were lack of skills for critical appraisal of articles (39.1%, n=9); lack of knowledge of EBN (43.5%, n=10); and lack of time (8.7%, n=2). Main source of information was internet 65.2% (n=15); teachers 26.1% (n=6) and colleagues 8.7% (n=2). All of them were of the view that evidence based nutrition should be used in routine clinical practice to increase quality of care provided to the patient (Table 2).

Table 2. Knowledge and Use of Evidence Based Nutrition n=23

Knowledge/Use	**Responses**	**N**	**%**
Engage in research	Yes	19	82.6
	No	4	17.4
Use of EBN	Yes	14	60.9
	No	9	39.1
Encounter knowledge gaps	Rarely	3	13
	Sometimes	12	52.2
	Frequently	6	26.1
	Always	2	8.7
Gaps related to MNT	Yes	14	60.9
	No	9	39.1
Strategy to fill knowledge gap	Perform your own literature search	18	78.2
	Consult an evidence base library	5	21.8
Have access to	N/A	12	52.2
	MEDLINE	6	26.1
	ADA Evidence Analysis Library	1	4.3
	Cochrane Library	2	8.7
	USDA Nutrition Evidence Library	2	8.7
Use Evidence Library	Yes	12	52.2
	No	11	47.8
Barriers to use of EBN	Lack of time	2	8.7
	Lack of skills for critical appraisal of articles	9	39.1
	Lack of knowledge of EBN	10	43.5
	N/A	2	8.7
Sources of information	Internet	15	65.2
	Teachers	6	26.1
	Colleagues	2	8.7
Believe EBN should be used	Yes	23	100
	No	No	0

Discussion

The current study aimed at exploring knowledge and use of EBN among practicing dietitians in Pakistan. Majority of dietitians in Pakistan are females and a lack of knowledge regarding EBN was reported. For efficient and effective assessment, diagnosis and treatment, the dietitians need to keep themselves abreast with latest research (2). Best research evidence means searching and evaluating relevant research, which requires training in research methodology (7). But most of dietitians of Pakistan have no background of research. They have graduated in nutrition and dietetics but majority have not specialized an dietetics and majority are not registered. Knowledge gaps were related to Medical Nutrition Therapy and the usual source of information was internet. Australian pediatric dietitians also accessed electronic literature databases (3). But with the presence of numerous websites it becomes extremely difficult to decide which source and recommendations to follow. Almost half do not have access to and do not use Evidence Based Libraries (EBL). On the contrary, majority of dietitians in developed countries have access to EBL (3). The ultimate goal of EBN is to provide utmost patient care (1), keeping in view patient values and preferences. This requires a lot of time on part of dietitian. One of the reported barriers was lack of time. Others were lack of skills for critical appraisal of articles and lack of knowledge of EBN. Similar issues were reported in previous studies (3, 5).

Action should be taken to remove these barriers to improve patient outcomes and satisfaction. Training in research methodology, and evidence-based nutrition [7], group training [4], targeted educational interventions [5] has been suggested to increase involvement in research and implementation of EBN among practicing dietitians.

The current study has a limitation of a small sample size that was just 23 nutritionists and dietitians. Nutrition and dietetics is an emerging field in Pakistan and there are a very few practicing dietitians and nutritionists in hospitals; though many are self employed. The response rate was also quite low; 45% (23/51). This could be attributed to the fact that majority were even unaware of the term Evidence Based Practice. But a major strength of the current study is that it provides a baseline on the grieve condition and highlights the gaps in knowledge and thus practice of nutritionists and dietitians of Pakistan.

Conclusions

It can be concluded that there is a lack of knowledge and use of EBN among dietitians in Pakistan. Research studies in developed countries have identified a need to integrate principles of evidence-based nutrition into dietetics curriculums so that future practitioners are able to integrate research findings to clinical practice. The current study also supports and recommends teaching EBN at graduate and post graduate level to food, nutrition and dietetic students.

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