

# AWARENESS, ATTITUDES AND KNOWLEDGE OF EVIDENCE-BASED MEDICINE: A CROSS-SECTIONAL BASELINE SURVEY AMONG ACADEMIC HEALTHCARE PRACTITIONERS IN NAMIBIA

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## ABSTRACT

This cross-sectional study examined the awareness, attitudes and knowledge of evidence-based medicine (EBM) among academics in higher education institutions in Namibia, Mozambique, Lesotho and Botswana. Data were collected using a convenient sampling technique and analyzed by SPSS. Thirty-eight academics completed an anonymous questionnaire. Most (76%) of the respondents were aware of the Cochrane Collaboration and 97% have heard about EBM, of whom 89% perceived its benefits. Yet, 74% lacked high level of EBM knowledge, 76% had no formal EBM training and 92% were unfamiliar with the Cochrane library. Motivation to attend EBM training was high among the respondents. Our results highlight the inadequacy of EBM knowledge and training among academics. There is a need to train academics in EBM in order to improve the practice of EBM in teaching.

**KEYWORDS:** Academic, evidence-based medicine, knowledge, attitude, Cochrane Library, Namibia.

## INTRODUCTION

Evidence-based medicine (EBM) involves the integration of clinical expertise, the best available research evidence and patient values (Sackett et al., 2000). The concept was initially drawn up to guide and enhance clinical decision-making (Guyatt et al., 2000) and later became part of medical education (Dawes et al., 2005; Green, 2000; Kulier et al., 2008) and professional education programs (Short et al., 2010; Thangaratinam et al., 2009).

Higher education institutions have an enormous moment of opportunity to promote EBM among academics and students at undergraduate and postgraduate levels. In some affluent countries, EBM teaching is a part of medical education curricula (Dawes et al., 2005; Green, 2000; Kulier et al., 2008). In resource poor-countries while EBM teaching in undergraduate medical training is feasible and beneficial (Okoromah et al., 2006), it is not largely part of the higher education curriculum (Kigali Declaration, 2012; Martis et al., 2008; Agarwal et al., 2008; Forland et al., 2013; Rohwer & Young, 2011). As a result, students complete their program of studies and enter employment without EBM knowledge.

EBM is a key competency for all healthcare practitioners and is highly recommended (Guyatt et al., 2000; Straus et al., 2011; Young et al., 2014). Academic healthcare professionals in higher education are also

expected to have competency in EBM (Guyatt et al., 2000; Thangaratinam et al., 2009; Straus et al., 2011) to base their teachings on the best possible evidence. However, they may not apply EBM in their teachings for various reasons. Their barriers include lack of confidence to teach (Thangaratinam et al., 2009), knowledge and skills (Khanjani et al., 2013; McInerney & Suleman, 2010) and negative attitudes (Khanjani et al., 2013; McInerney & Suleman, 2010). They also reported lack of time (Khanjani et al., 2013; McInerney & Suleman, 2010) knowledge to use EBM resources (Balusamy et al., 2014), and access to evidence (McInerney & Suleman, 2010). To date, very limited evidence is available to describe the extent to which academics in higher education in developing countries are aware of the Cochrane Collaboration and their barriers to practice EBM in teaching. Evidently, knowledge and understanding of their barriers help to develop tailored intervention programs. This study examined the awareness, attitudes and knowledge about EBM of academic staffs in higher education institution in Namibia.

## METHODOLOGY

### Design, setting and recruitment

We conducted a cross-sectional survey as a part of EBM training in August 2012 and April 2014 to study a convenient sample of 38 academics at the University of

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Namibia, School of Medicine (UNAM-SOM) in Windhoek, Namibia. The UNAM-SOM is the Secretariat for the Consortium of New Schools of Medicine in Southern Africa, which includes Namibia, Zambia, Mozambique, Botswana, and Lesotho. Participants were recruited by email and face-to-face. In August 2012, we sent an email invitation with the link to the survey posted on survey monkey to a contact person at UNAM-SOM. He then distributed the email invitation and the link to the online survey to 33 academics at UNAM-SOM and Pharmacy department. In April 2014, we recruited more subjects during EBM workshop at UNAM-SOM.

### Outcome measures

A 29-item anonymous self-administered questionnaire designed by Cochrane South Africa was used for data collection. We added five EBM questions and the final survey had 5 open and 24 closed-ended questions. The first part explained the study aim and ethical issues. The sections thereafter sought information on demographic,

knowledge of the Cochrane Collaboration (2015), Cochrane South Africa (2016), awareness, use and barriers to access the Cochrane Library (2015). It also elicited information on EBM knowledge, attitude, training and institutional promotion. We searched the Archie database to assess Namibian contributors. To verify Namibia's research capacity and outputs, we searched and assessed the Cochrane colloquium abstracts site (2015) and the systematic review by Law et al., (2012). Table 1 shows the survey structure and synopsis of the outcome measures.

### Data analysis

The completed surveys were numbered in sequence, data entered and analyzed by the Statistical Package for Social Sciences software (version 15). The descriptive analysis results were expressed in proportions or percentages. The Fisher's exact test was used to assess the association between categorical variables. P value <0.05 was set for statistical significance.

**Table 1:** Summary of outcome measures and assessment method

Subject/topic	Outcome measure	Assessment
Evidence-based medicine	Ever heard the concept	Yes/No
	Knowledge level	Six-point scale
	Institutional promotion	Yes/No/Don't know
	Prior training/course	Yes/No
	Perceived benefits	Yes/No/Don't know
Cochrane Library	Interest in training	Yes/No/Don't know
	Awareness	Yes/No/Don't know
	Method of access	Free access/ institutional or personal subscription/ Other/ Don't know
	Barriers to access	Open-ended
Cochrane Collaboration	Overcoming access barrier	Open-ended
	Ever heard	Yes/No/Don't know
	Contribution/participation	Yes/No/Don't know
	Reference centre knowledge	Open-ended

## RESULTS

**Subject characteristics:** We distributed the survey to 60 subjects and received 38 completed surveys (response rate 63.3%). More than half (61%) of the sample were between 31-50 years old, 47% male, 84.2% academic staff, 84% permanent residents of Namibia and 97% worked in public sector (Table 2).

Over half (60%, 23/38) were employed at the Faculty of Health Sciences UNAM, and four (11%) at the Consortium of New Southern African Medical Schools (Lurio University SOM-Nampula Mozambique, University of Botswana SOM, National University of Lesotho). For 16% (6/38), English was their first language followed by Oshiwambo (13%) and Afrikaans (11%).

**Table 2:** Demographic profile of respondents

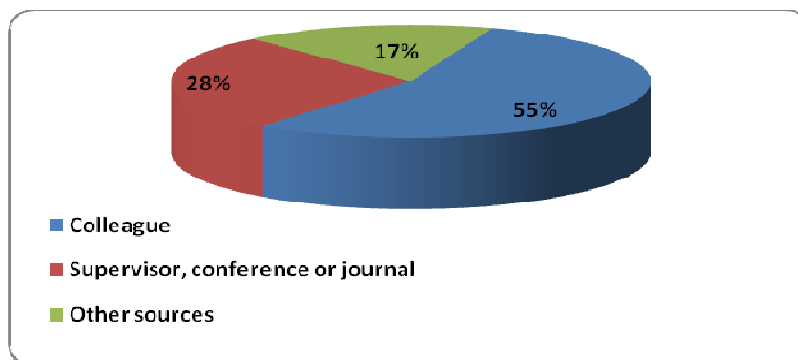
Characteristics	No (%)
Age group:	
≤ 30 years	7 (18)
31 - 40 years	8 (21)
41 - 50 years	15 (40)
> 50 years	8 (21)
Gender:	
Male	18 (47)
Female	20 (53)
Primary type of work/position:	
Academic†	32 (84.2)
Pharmacist	4 (11)
Other‡	2 (5)
Primary employment sector:	
Public/government	37 (97)
Private/industry	1 (3)
Country of permanent residence:	
Namibia	32 (84)
Mozambique	2 (5)
Lesotho/Botswana	2 (5)
Other	2 (5)
†includes 3 academic librarians	‡ Medicine safety regulator & student

**Awareness of the Cochrane Collaboration (CC) and Cochrane South Africa**

The CC is a global organization that generates and disseminates evidence-based information pertinent to policy and practice. The majority (76%) of respondents had heard about Cochrane from various sources (Figure 1) and 24% did not hear. However, the large majority (89%, 34/38) did not contribute to Cochrane. For 18% (7/38) who were aware of Cochrane, their perceived barriers to participate were

lack of knowledge, awareness and internet access. None from Botswana, Lesotho and Mozambique was aware of Cochrane.

Cochrane South Africa (CSA) is located in Cape Town and promotes Cochrane activities in Africa. It is also the reference centre for 25 African countries, including those from Namibia, Mozambique, Botswana and Lesotho. Only nine (24%) of the respondents knew CSA as their reference center, and none from Botswana, Lesotho or Mozambique knew this notion.



**Figure 1:** How participants became aware of the Cochrane Collaboration

**The Cochrane Library**

The Cochrane Library (CL) is a major online resource with high quality evidence that can inform various practices, including teaching. Only 8 % of the total respondents were familiar with the CL and knew how to access it. Close to 26% (10/38, 26%) tried to access the database and faced difficulties, such as lack of knowledge about the database, search skills and poor internet access. They proposed awareness raising, training and improving internet access. Respondents

from Botswana and Lesotho had awareness of the CL, but not those from Mozambique.

**Familiarity with evidence-based medicine (EBM) and perceived level of knowledge**

Almost all (97.4%, 37/38) have heard the concept of EBM. Their self-reported EBM awareness was cross-examined with demographic and other variables. EBM awareness did not differ significantly by gender (p=0.52) despite more female (n=19, 51.4%) than male (n=18,

48.6%) attesting to have EBM awareness. There was also no important correlation between EBM awareness and age group ( $p=0.60$ ).

Respondents assessed their level of EBM knowledge on a six-point scale (Figure 2). About 10 (27%) assessed their knowledge level as "Good" or

higher, 53% as average and 8 (21%) as poor or no knowledge. Overall, 26% (10/38) felt their knowledge level was high and 74% (28/38) as level. The self-rated level of EBM knowledge was marginally related to EBM awareness among respondents ( $p=0.07$ ).

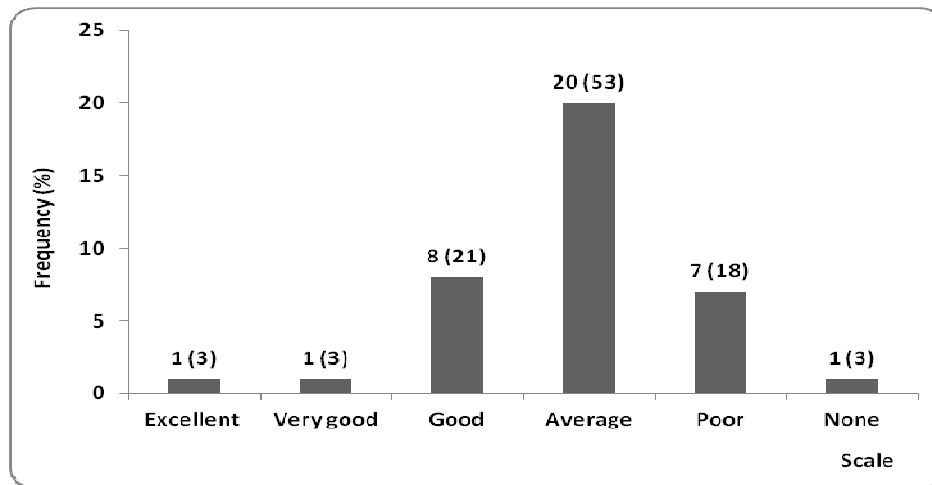


Figure 2: Respondents' self assessment level of EBM knowledge

#### Formal training course in evidence-based medicine

Just about 24% (9/38) had attended EBM training course before and 76% (29/38) did not. Prior EBM training course was significantly associated with self-reported awareness of the CL ( $p=0.04$ ) but not with awareness of the CC ( $p=0.41$ ), level of EBM knowledge ( $p=0.12$ ) or institutional EBM promotion ( $p=0.46$ ). The two respondents from Mozambique had attended prior EBM course but not those from Lesotho and Botswana.

Almost all (97%, 37/38) would like to attend professional development training in EBM.

#### Attitude towards EBM

A large proportion (89%, 34/38) perceived that EBM is beneficial whilst 11% (4/34) disagreed. Over half agreed that EBM is promoted in their institution (Figure 3). Perceived EBM benefits was only associated with awareness of Cochrane ( $p=0.03$ ), but not with other variables.

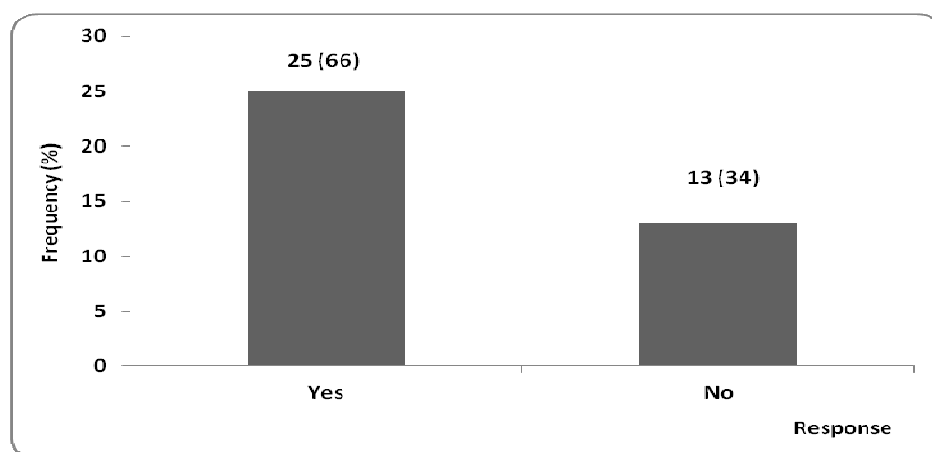


Figure 3: Respondents' perception of EBM promotion in their institution

#### Research capacity and output

There were only two Namibian contributors in the Archie Cochrane database. In the Law et al.'s (2012) study, 15

African countries produced systematic reviews during 1996–2008. Mozambique is among these 15 countries but not Namibia, Lesotho or Botswana.

## DISCUSSION

One previous study has examined a similar research question among academics in higher education in South Africa (McInerney & Suleman, 2010). The present study is the second in Africa to explore a matching topic in a similar population. Some of our findings about the academic sample were positive. The majority (89%) had favorable views of EBM, consistent with academics study by McInerney & Suleman (2010). The presence of positive attitudes towards EBM was also consistent with the findings of other authors in Africa (Boer, 2012; Ntaganira, 2012; Hadgu et al., 2015). In this study, the majority (66%) reported EBM promotion in their institution, which supports a previous finding in South African University (McInerney & Suleman, 2010). In general, our finding confirms the strong inclination of approval of EBM by academics in Namibia.

The awareness of Cochrane Collaboration among respondents was 76%. This figure is higher than the level found by Oliver & Young (2005) in developing countries and Abdulwadud (2010) in academic health professionals in Ethiopia. It is however comparable to 66% nursing faculties in nursing colleges in universities of health sciences in South India (Balusamy et al., 2014). This discrepancy could be due to difference in sample size, sample characteristics or how awareness was assessed between the studies.

For over 18 years, Cochrane South Africa (CSA) has been promoting Cochrane activities and EBM in Africa. A high (76%) proportion of our respondents failed to recognise CSA as their Cochrane reference Centre. This finding concurs with the report by Abdulwadud (2010) that the majority of Ethiopian health professionals did not recognize CSA was their reference centre. This could either be there are no individuals or organizations that promotes CSA in Namibia. The strategy to enhance CSA awareness is by awareness raising campaign-targeting academics in higher education and senior managers.

The number of Cochrane review authors is growing in Africa and Nigeria produces most of the systematic reviews, followed by Kenya and Uganda (Mbuagbaw, 2013; Law et al., 2012). In this study, we found no Cochrane review authors, contributors to Cochrane or research output from Namibia. Many reasons could lead to poor research output. Perhaps research is not a priority or there is no local capacity for research synthesis in Namibia. Our finding indicates that there are barriers to undertaking research and reinforces that academics have prospect to leverage awareness of research and build the local research capacity. Maybe, having fellowship program and research collaboration with international institutions and other countries may provide the support and opportunities for academics to develop capacity for EBM and research synthesis (Short et al, 2010).

Namibia has one-click free access to the Cochrane Library (CL) and can access the database through Wiley-Blackwell, the Health Inter Network Access to Research Initiative and the International Network for the Availability of Scientific Publications' Program. In our study, only a few (8%) of academics were aware of the CL. This figure is lower than 11%

reported in Ethiopia (Abdulwadud, 2010) and 66.7% in India (Balusamy et al., 2014). Generally, awareness and use of the CL are low in Africa (Oliver & Young, 2005; Ajuwon, 2006; Okwundu, 2010). The lack of awareness of the CL by 92% of academics is a major barrier to promoting EBP in Namibia. Our finding confirms the need to seek alternative strategies to improve awareness and use of the CL by academic staff in Namibia.

Respondents also identified barriers to access the CL, such as lack of knowledge, lack of search skills, poor infrastructure and lack of internet access. While the first two hurdles mirror lack of training and overcome by training, the other barriers require adequate investment. In Africa, however, these barriers are common and widely reported (Boer, 2012; Ajuwon, 2006; Okwundu, 2010). One way to address the identified barriers is for their institution to organize hands-on-training in the use of CL.

Nearly all respondents (97%) have heard the concept of EBM. This figure is close to 80% rate in academics in South Africa (McInerney & Suleman, 2010), 80% health workers in Rwanda and Uganda (Boer, 2012), and 74% nurses in Ethiopia (Hadgu et al., 2015). Conversely, 74% and 76% of them had low level of EBM knowledge and lacked EBM training, respectively. These findings agree with earlier studies (Hadgu et al., 2015; Okwundu, 2010; Nwagwu, 2008) that found inadequate EBM knowledge and training in health workers. Our study also revealed that almost all (97%) academics were interest in EBM training consistent with other authors (McInerney & Suleman, 2010; Okwundu, 2010; Hadgu et al., 2015). While we cannot give authentic reasons for these results, EBM training courses could be limited in Namibia. Our finding highlights that academics need more knowledge and very keen to go through effective EBM education to practice EBM in teaching (Agarwal et al., 2008).

We acknowledge the methodological limitations of our study. The major limitations are the use of small sample, self-selected convenience sample, and reliance on respondents' self-assessment of outcome measures that may have biased results. The other limitation was the use of cross-sectional study design that may limit the relevance of data to one single moment in time. We attempted to recruit a large and representative sample but this was not possible for lack of logistics and funding. Therefore, our sample may not be representative of the total academic staff and the findings may not be generalizable to the larger population of academic staff in Namibia, Mozambique, Lesotho or Botswana. Despite potential sampling and selection biases, the study results highlight key messages to optimize the promotion and uptake of EBM in higher education in these countries.

## CONCLUSIONS

This study has implications for the promotion of EBM education among academics in higher education in Namibia. The highlights of our study are (a) there are gaps in EBM knowledge, training, awareness and use of Cochrane Library by academics; and (b) the participation in the Cochrane Collaboration and research

outputs are insignificant. These findings could inform future planning of EBM training as a part of professional development program and awareness raising events for academics in higher education in Namibia. Our findings therefore merit the consideration of all stakeholders including higher education authorities. Academics require leadership, support and training to apply EBM in teaching. We recommend a concerted effort by all stakeholders to better promote EBM in higher education. The institutions must also establish an EBM committee to facilitate the development of policy for staff professional education and self-development. Future research should evaluate the EBM barriers for academics using a larger sample to identify strategies to train and support them.

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