

## Impact of Medical Students' Attitude on Referral Intention to Traditional Healers and Traditional Medicine: A Case Study

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**ABSTRACT** Collaboration between traditional healers (TH) and medical doctors is encouraged by the South African Government. The objective of this study was to investigate the frequency and determinants of referral intention of medical students to traditional healers. This cross-sectional study was conducted among medical students from Walter Sisulu University, Mthatha. Socio-demographic factors, ethnicity, beliefs, practices, attitude of students, friends, parents and villagers were the potential explanatory variables in univariate and multivariate analyses. Out of a sample of 98 medical students, only 15% indicated willingness to refer parents and friends to traditional healers. Gender, age, religion, province and district did not influence the referral intention. Positive attitude of friends ( $p=0.031$ ), of villagers ( $p=0.047$ ), of students ( $p=0.004$ ), on consulting traditional healers ( $p<0.001$ ) and beliefs of students in Traditional Medicine (TM) ( $p=0.002$ ) were the significant correlates of referral intention. However, after adjusting for confounding factors, only positive attitude of medical students to TM was found to be the significant and independent determinant of referral intention to traditional healers. The data lead to the conclusion that referral intention to TH and TM was very low among medical students. Therefore, intervention for integrative medicine should begin with medical students to develop a positive attitude towards TM, the important and significant determinant of referral intention to TH/TM. If doctors recognize the effectiveness of CAM in the management of some illnesses, the current gap between both medical approaches will get narrowed.

### INTRODUCTION

Traditional medicine (TM) is a component of complementary and alternative medicine (CAM) which is growing in popularity worldwide (Golbeck-Wood 1996; Eisenberg 2001; Lamarine et al. 2003). There have been research reports on CAM in Western and Asian countries (Astin 1998; WHO 2007). TM continues to be popular, cheaper, and easily available with fewer side effects in rural areas (Freeman and Moseti 1992). More than 80% of Africans consult a traditional healer (TH) before a medical doctor trained in western medicine (WMD) because TM is becoming complementary and alternative medicine (WHO 2007; Onyiaapat et al. 2011). For that reason, the World Health Organization (WHO 2000) and the South African government (Traditional Health Practitioners, Act 35 of 2004) have called for stronger collaboration between TH and WMD. Indeed, it is now established that WMD worldwide needs to gain relevant and up-to-date knowledge on TM/CAM (Harris and Rees 2000; Gaster et al. 2007; Sietpina et al. 2007).

The relatively high use of alternative medicine combined with western and conventional medicines indicates a determination to ameliorate the threat of serious illnesses among US college students (Lamarine et al. 2003). TM in CAM is mainly known in sub-Saharan Africa and Asia and is adopted by other populations. Indeed, TM is the sum total of knowledge, skills and practice based on the theories, beliefs and experiences indigenous to African and Asian cultures that are used to maintain health of more than 80% of people, as well as to prevent, diagnose, improve and treat physical and mental illnesses. Studies have shown that two-thirds of medical students in the USA and Canada now offer either electives or instruction on CAM in their curriculum (Derr et al. 1998; Chez et al. 2001). These studies indicate that about 60 to 80% of medical students now demand to know more about CAM during their medical training.

Recently, South Africa has made a significant integration of TM and CAM into the legislative framework for health practitioners (A National Health Plan for South Africa (NHP),

1994). Approximately, 190 000 THs cooperate with practitioners of allopathic medicine in South Africa (Gqaleni et al. 2007).

Medical students at Walter Sisulu University (WSU), Mthatha, are the future WMD for the Eastern Cape which is one of the poorest provinces in South Africa (The EC Province 2007). They will face frequent queries on the efficacy and safety of TM as well request to TM. However, despite the popularity of TM in Eastern Cape Province, it faces a major barrier to development because of WMD resistance nurtured by Evidence-Based Medicine (EBM) paradigm (Barry 2006; Keshet 2009; Tilburt et al. 2009).

Demographic, professional, organizational and structural factors (age, gender, education, clinical experience, health care system structure, and poverty) have been well identified as the determinants of WMD attitudes, behaviours and practices in other countries (Hrishkorn and Bonfeault 2005). By identifying several facilitating factors and barriers for integrative medicine in Eastern Cape Province, the local and national governments will be able to formulate collaboration strategies between TH and WMD in South Africa. Therefore, the objective of this study was to estimate the frequency and the determinants of readiness (intention) for referral to TM, including gender differences of medical students. The researchers hypothesized that few TM referrals would be made because of the lack of a formal collaboration fostering policy and training programmes in TM for WMD and medical students.

In medical students' future practice, whether they would recommend (referral intention) patients, friends and parents to use TM along with WMD medications had been noted by Webb and Sheeran (2006). In his study, dealing with whether changing behavioural intention engender behaviour change, 47 experimental tests of intention behaviour relations were obtained. Meta-analysis showed that a medium-to-large change in intention (d 0.66) leads to a small-to-medium change in behaviour (d 0.36).

### Objective of the Study

The main objective of this study was to investigate the frequency and determinants of referral intention of medical students to traditional healers.

## METHODOLOGY

This cross-sectional study surveyed 98 MBChB students enrolled in the 1<sup>st</sup> year at the Faculty of Health Sciences, WSU, Mthatha, Eastern Cape, South Africa, between February and July 2010. It was a convenient sampling. No sampling strata were applied and the sample may not be representative of all medical students in South Africa.

A structured and standardized questionnaire was used to collect the information. A validated and short 16-item written survey developed by Lamarins et al. (2003) with a binary scale of 1 = yes; 2 = no was used for the survey. Students completed the survey voluntarily. Socio-demographic factors such as age, gender, ethnicity (Africans vs Asians), religion, province and district were collected. Information was sought on the student beliefs, satisfaction, attitudes, and practices towards TM.

Data were expressed as proportions (%) and frequency (n). Proportions were compared in univariate analysis using Chi-square test. A logistic regression model was applied to assess the association between medical students' referral intention toward TM (dependent variable) and potential explanatory variables after adjusting for confounding factors. The identified explanatory variables accepted by the model were considered as the independent determinants of referral according to calculated Odds ratio (OR) and its corresponding 95% confidence intervals (CI).

Statistical significance was defined at the P-values < 0.05 level. All the analyses were performed using the Statistical Packages for Social Sciences (SPSS) software for Windows version 18.0 (SPSS Inc, Chicago, IL, USA).

## RESULTS

The age of the 98 medical students surveyed varied from 16 to 23 years. The gender ratio was 45% males and 55% females. The cohort contained Blacks, Indians and Whites (84.1%, 15.3%, and 0.6%, respectively). The majority of students was Christians (85%) and Xhosa from Eastern Cape (66%). The characteristics related to TM are shown in Table 1.

Gender did not influence majority of these characteristics as shown in Table 1, except that

**Table 1: Variables related to traditional medicine by gender**

<i>Variables of interest</i>	<i>Males n (%)</i>	<i>Females n (%)</i>	<i>OR (95% CI)</i>	<i>P value</i>
Trad. med/count	21 (55.3)	23 (38.3)	2 (0.9-4.5)	0.076
Satisfied after consultation	10 (27)	13 (21.7)	0.345	
Satisfied after treatment	14 (36.8)	11 (18.3)	2.6 (1.03-6.6)	0.041
Positive attitude of students	21 (55.3)	29 (48.3)	0.504	
Referral intention: yes	6 (15.8)	9 (15.3)	0.943	
Belief in TM: Yes	28 (73.7)	42 (70)	0.694	

males were more and significantly satisfied after TM treatment (36.8%) than females (18.3%).

The univariate analysis is shown in Table 2.

**Table 2: Univariate correlation of referral intention of medical students toward TM**

<i>Variables of interest</i>	<i>Intention to recommend TM</i>	<i>P-value</i>
<i>Positive Attitude of Villagers</i>		
• Positive	14 (18.7)	0.047
• Negative	0 (0)	
<i>Students' Attitude</i>		
• Positive	13 (26)	0.004
• Negative	2 (4.3)	
<i>Consult Traditional Healer Before Modern Doctor</i>		
• Yes	15 (16)	<0.0001
• No	0 (0)	
<i>Students' Belief in TM</i>		
• Yes	15 (20.6)	0.002
• No	0 (0)	

In univariate analysis, positive attitude, consulting traditional healers, and beliefs of students in TM were the significant correlates of referral intention (Table 2). Age, religion, province and district origins did not influence referral intention. However, after adjusting for confounding factors (consulting traditional healers and belief in TM), only positive attitude of medical students to TM emerged as the significant and independent determinant of referral intention to traditional healers (Table 3).

**DISCUSSION**

The present study adds data from the only medical university in the Eastern Cape Prov-

ince in South Africa to the existing ones from the literature on the assessment of TM or alternative medicine among students in the health sciences and pharmacy (Golbeck-Wood 1996; Lamarine et al. 2003; Eisenberg 2001).

Medical student level variation in the referral intention to TH was explored with regard to gender, age, race/ethnicity, geographical and individual attitude, belief and satisfaction towards TM (Table 1). Age, religion, province and district origins did not influence referral intention. The study by Astin (1998) did not predict the use of alternative medicine with respect to age, race and racial/ethnic differences. The present study, therefore, addresses an important gap. In addition, as shown in Table 1, this study did not find gender differences. Lamarine et al. (2003) also did not find gender differences supporting decisions related to using alternative medicine. Astin (1998) further explained that dissatisfaction with conventional medicine was not a significant predictor of alternative health care and that people who have been involved with alternative medicine have had their belief systems influenced by the therapeutic modalities and the philosophies underlying them. The growing interest in alternative medicine may not simply represent a shift in individual beliefs about the nature of health and illness but is rather a phenomenon that is transmitted through and influenced by the culture. Since 80% of African population consider the use of TM as part of their cultural practice (WHO 2007; Onyiaapat et al. 2011), it is important to inculcate a positive attitude towards TM amongst

**Table 3: Independent determinants of referral intention towards TM by medical students**

<i>Independent variables</i>	<i>Coefficient B</i>	<i>Standard error</i>	<i>Wald Chi-square</i>	<i>Exp (B) OR (95% CI)</i>	<i>P-value</i>
<i>Students Attitude</i>					
• Positive	1.946	0.803	5.870	7 (1.5-33.3)	0.015
1 Referent group					
Constant	-3.045	0.724	17.696	<0.0001	

medical students at an early part of their student career. Frenkel (2004) and Majeed et al. (2007) support this observation. that motivation of educators to develop instructional strategies that address these needs can assist curricular innovation and also assist medical students to overcome the attitudinal barriers toward TM. Thornton (2009) emphasizes the transmission of knowledge in South African traditional healing.

South Africa endorsed the WHO African Regional Strategy on TM adopted in 2000 (WHO 2000). The present study concurs with World Health Organization approach (WHO 2000) and Traditional Health Practitioners' Act 35 (2004) in encouraging the integration of TM into National Health Systems and in acknowledging TM as part of primary health care. However, according to World Health Organization terminology (WHO 2000), TM in South Africa should not be confused with CAM (Gqaleni et al. 2007) as TM has been incorporated into the national health care system.

The present findings showed a very low level of referral intention to TM as well as low levels of use and acceptance of TM in concurrence with the literature (Golbeck-Wood 1996; Lamarine et al. 2003; Eisenberg 2001). Despite being aware of the usefulness of CAM, only a few medical students in Pakistan pursued further knowledge (Majeed et al. 2007) which is similar to the trend in the present study.

The extent, to which integration of TM in modern Health systems will occur in the future, will be significantly influenced by the attitudes of the future physicians in Eastern Cape similar to those reported in the Ben-Arye et al. (2008) and Astin et al. (2006) reports. Majeed et al. (2007) has suggested that consideration should be given to incorporating CAM in the medical curriculum in order to prepare the medical students of today to fulfill their duties as tomorrow's physicians.

### CONCLUSION

In the present study, positive attitude of medical students was an important and significant independent determinant of referral intention to TM. Despite TM in the context of medical education is a controversial topic, the present results urge the necessity to develop integrative medicine and education of medical students and

physicians on TM, and also research on medical student attitudes towards TM. These steps ought to assist medical students to overcome the attitudinal barriers toward TM and motivate educators to develop on instructional strategies that address these needs.

If doctors recognize the effectiveness of CAM in the management of some illnesses, the current gap between both medical approaches will get narrowed. Findings from this study suggest that information on CAM and TM should be provided to medical students before they become clinicians. Therefore, including such information on CAM in medical students' curriculum could contribute to their knowing and possibly motivation to refer clients to CAM practitioners.

The present data will help positive action in the Eastern Cape Province of South Africa to promote the use of TM in reducing mortality and morbidity among its impoverished inhabitants. In doing so, the promotion of therapeutically sound use of TM by providers and by consumers as well as the documentation of traditional drugs and remedies will be accelerated.

### RECOMMENDATIONS

Since referral intention was very low among medical students, an intervention for integrative medicine should be organized to develop interest among medical students towards TM. An In-Service Course for medical students and Physicians should be introduced. More research should be conducted on medical students' attitude towards TM. In addition, encourage the integration of TM formally into National Health Systems and acknowledge TM as part of primary health care.

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