

# A Cross-Sectional Study to Assess the Knowledge and Practice of Life Style Medicine Among Physicians

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## ABSTRACT

**Introduction:** Lifestyle medicine is in essence a scientific approach to use life style changes and intervention to decrease morbidity, risk of disease and burden of disease in the community. The growing burden of non-communicable diseases has brought forth and cemented the importance of preventive measures in area of non-communicable diseases. Further knowledge regarding only minimal role of genes in most non-communicable diseases has highlighted the need of education and counseling regarding lifestyle changes and training of doctors in this regard. Our study assessed the level of lifestyle changes counseling done by the doctors in our region.

**Methodology:** Cross-sectional study was done using a validated structured questionnaire shared electronically as well as hard copy. Sample size was n=390. Doctors registered in the year 2021-22 were included using snowball sampling method. Analysis was done on SPSS version 21.

**Results:** 390 participants were included in the study, 90% participants agreed that they counseled patients about exercise but only 1 knew about weekly requirements. 77% asked about smoking and 18% asked about alcohol but only from males. 97% of physicians asked about salt intake but only 67% knew about daily salt requirements. Only 55% of participants were trained formally in life style medicine as under or post graduate.

**Conclusion:** Although the physicians are aware that life style modifications have an impact on non-communicable disease but specific knowledge to practically guide and counsel the patients was missing. The difference in knowledge and practice of physicians trained in life style medicine as compared to those who were not trained is apparent.

**Recommendation for frequent evidence based CMEs and training programs for physicians should be made to help physicians proactively counsel patients in their clinical practice.**

**Keywords:** Life style medicine, Life style modifications, Saudi Arabia, Non-communicable

## INTRODUCTION

In 1903, Thomas Edison predicted that the doctor of the future will give no medicine, but instead *“instruct his patient in the care of the human frame in diet and in the cause and prevention of disease”*.<sup>1</sup> According to WHO, 74% of all deaths in the world is to non-communicable diseases which in return are based on our life style choices<sup>2</sup>.

Life style medicine is a new field, defined in the American college of life style Medicine as:

*‘The evidence-based practice of helping individuals and families adopt and sustain healthy behaviors that affect health and quality of life’.*<sup>3</sup>

The American college of preventive medicine implemented a new resolution known as 959 in 2017 which highlighted the importance of training under and post graduates in lifestyle medicine.

The approval of the resolution was based on evidence that suggested the important role of life style modification on prevention of life style diseases. The proposal included a framework for implementing

education and training from the level of undergraduate medical students up to the practicing residents and consultants<sup>4</sup>.

Lifestyle medicine focusses on our life style choices of the amount of exercise or physical activity we do, our nutrition, smoking and alcohol consumption habits as well as our levels of stress and rest and the interventions that can be done to control these factors and overall decrease the rising morbidity and mortality in the community.

In the United States alone around 18% of premature deaths in the adult population are related to life style choices like tobacco use, unhealthy and poor diet and a sedentary life style.

According to the American association of life style medicine less than 25% of physicians give life style advice during consultations<sup>3</sup>.

The growing burden of non-communicable diseases has brought forth and cemented the importance of preventive measures in areas stated above. Further knowledge regarding only minimal role of genes in

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most non communicable diseases has highlighted the need of education and counseling regarding lifestyle changes and training of doctors in this regard. The clichéd phrase ‘prevention is better than cure’ in these non-communicable diseases translates in considerable decrease in burden of disease and cost on treatment and rehabilitation.

Saudi Arabia is a developed country with a high burden of life style diseases which is increasing the morbidity of the nation. According to a survey report by WHO in 2012, 73% of deaths in Saudi Arabia were due to non-communicable diseases<sup>5,6</sup>. The report also presented evidence on the cost effectiveness of programs that focus on the prevention of non-communicable diseases through life style changes.

Keeping this in view, it was essential to assess the knowledge and practice of physicians regarding life style medicine in Saudi Arabia.

These life style diseases can be controlled to an extent by life style modifications.

The purpose of our study was to assess the level of lifestyle changes counseling done by the doctors in our region and to use this knowledge to develop an education and training program for the physicians as well as the medical students.

Key words: Life style diseases, non-communicable diseases, Saudi Arabia, life style medicine

## AIM

To assess the knowledge of life style medicine among doctors in Saudi Arabia.

## OBJECTIVES

To assess the knowledge of physicians in Saudi Arabia regarding life style medicine.

To assess the practice of physicians in Saudi Arabia regarding life style medicine.

To make training and education guidelines for students according to perceptions and practices of physicians.

## METHODOLOGY

Setting: Government and private hospitals, clinics, medical college and PHCs in Sakaka, Doumatul Jandal, Qurayyat.

Study Participants: All doctors working in health care sector of Aljouf region during (2021-22) were invited to take part in the study.

Sample Size: The sample size calculated using open EPI sample size calculator keeping confidence level at 95% was found to be 285 our final sample size was 390. It was calculated according to number of doctors registered in year 2021-22. The data was obtained from open data website of ministry of health KSA<sup>7</sup>.

Sampling Technique: Snowball sampling.

For this purpose, contact information of medical directors/consultants/admin of clinics of tertiary and secondary care hospitals was obtained. Focus persons in were identified and the questionnaire was shared in hard copy as well as various whatsapp doctors’ groups of regional hospitals. For some private hospitals and clinics, the co-investigators visited clinics during O.P.D to hand out hard copies of questionnaire with a request to complete and submit to information desk and forms were collected the next day.

Further contact information regarding physicians in outskirts hospitals were obtained from the ministry of health head office after approval for data collection from the university.

The graduates of College of Medicine, Jouf University were contacted via their batch emails and were asked to share the forms at their work place.

Inclusion criteria: All employed doctors of Aljouf region (private and government sectors) in the year 2021-22.

Tool for Data Collection: A structured questionnaire was used for data collection. A pilot study with 30 forms was conducted for questionnaire validation. Data from pilot study was not included in the final analysis  
Ethical Consideration: The study was conducted after approval of ethics review committee (LCBE) of Jouf University.

Statistics: Data analysis was performed using SPSS version 21. As this was a cross sectional study and defined the parameters of the selected population only so descriptive statistics were performed to assess the relations of the variables.

## Data Management Plan

Data forms were confidential and stored under lock and key in the community medicine department, female side. OFFICE C3 third floor. Electronic forms were protected by passwords

## Budget/Funding

Self-funded. This study was entirely self-funded no sponsorship in any form whatsoever had been acquired

## RESULTS

**Table 1:** Socio-demographic table

N= 390		
GENDER	Male	Female
	74%	25%
NATIONALITY	N= 289	N= 101
	Saudi	25%
	Pakistani	20%
	Egyptian	20%
	Indian	18%
	Canadian	2%
SMOKER	Others	15%
	Yes 11%	No 89%
DEPARTMENT	Medicine and allied	42%
	Surgery	12%
	Gynae/OBS	10%
	ER	7%
	Pediatric	6%
	Others	23%

Regarding impact of life style modification on non-communicable diseases, 85% doctors responded that it has more than 60% impact while 15% said that it has less than 40% impact.

Although 90% of the physicians advised their patients about exercise but they did not specify about number of days or duration of exercise, only one response said he advises patients to do exercise 5 days or 150 minute /week, 95% said 3-4 times a week while 4% said 5 days a week.

65% of the physicians knew that there was a nutrition clinic in the hospital. Most of the physician (77%) always asked male patients about smoking, and only 15% asked female patients about smoking.

Regarding alcohol consumption 18% of the physicians asked male patients while none of the doctors asked female patients about alcohol consumption.

65% of the physicians knew that there was a nutrition clinic in the hospital.

95% of the physicians agreed that they asked their patients about salt intake, however, only 67% were aware of the daily required salt intake.

Regarding stress management 46% physicians said it should be done in their O.P.D, while 39% said patient should be sent to psychiatric clinic.

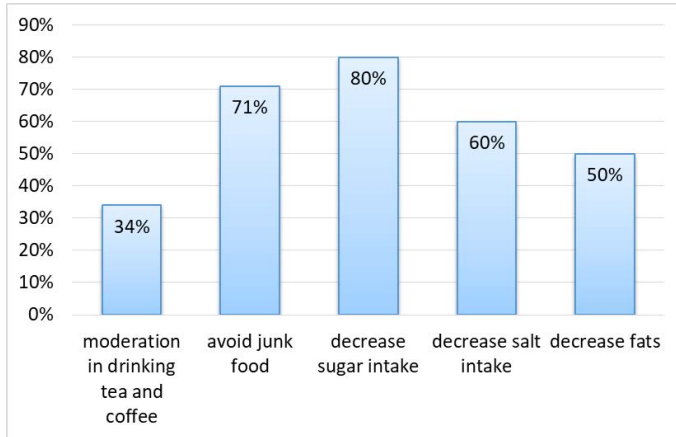


Figure 1: Types of dietary advice to patients by doctors

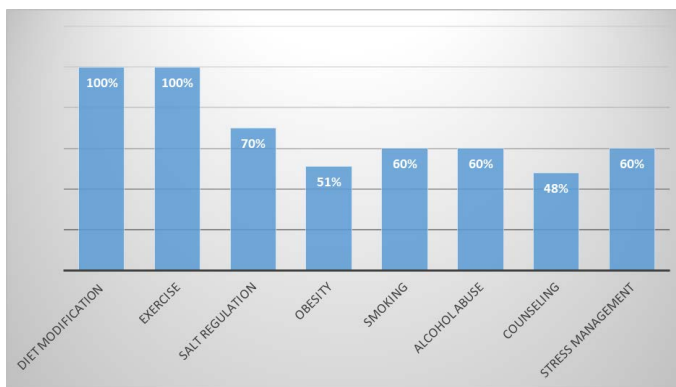


Figure 2: Opinion of doctors about what is included in life style medicine

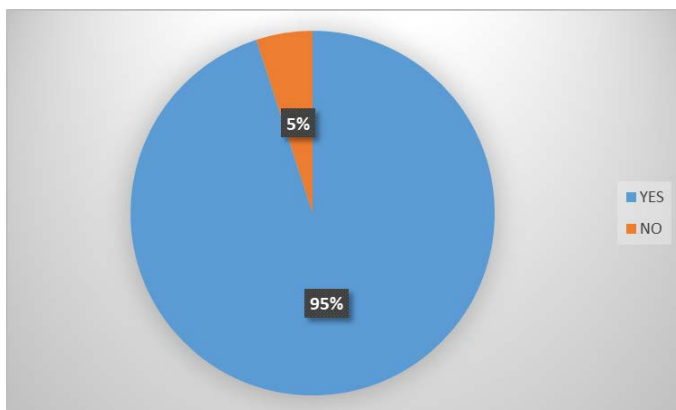


Figure 3: Percentage of physicians advising about salt intake

55% of the physicians said they received formal education about life style medicine either in their medical school/college or during clinical training period.

There was moderate positive correlation between doctor’s knowledge about life style medicine and counseling/advising patients about correct exercise requirements, daily salt requirements and advise about stress management.

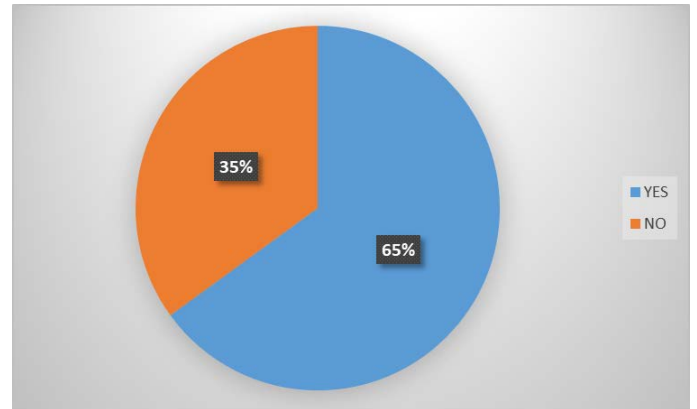


Figure 4: Awareness of physicians about daily requirement of salt

## DISCUSSION

The lack of any formal education on life style medicine was recognized in America as early as 1975, where they found only 16% medical schools practicing life style medicine, which did go up to 27% in 10 years but there was no drastic improvement although the need for training at all levels from medical school to practicing physicians<sup>8</sup>. Our study also found that only 55% of physicians working in Saudi Arabia had received formal education about life style medicine either in medical school or as part of their clinical training.

According to Mondala et al physicians spend an average of 10 seconds counseling patients about nutrition. In our study 97% physicians agreed that they ask patients about nutrition but only 67% were aware of the daily salt requirement and only 65% were aware that a nutrition clinic is actually present in the hospital<sup>9</sup>. Lianov et al in an article in JAMA and Wayne Dysinger in an article in AMA journal of ethics highlighted 15 competencies or assessment skills related to lifestyle medicine that included asking patients about their alcohol consumption, smoking or tobacco usage, exercise frequency, sleep and stress levels as well as calculating BMI among other things<sup>10,11</sup>. However, physicians in our study asked about smoking only 77% of the time and about alcohol consumption only 18% and they only asked male patients. This could be due to cultural sensitivity and acceptance also.

Cardinal et al in their article ‘If exercise is medicine, where is exercise in medicine?’ state that nearly half of the physicians are not trained enough to counsel patients about exercise, although 90% of physicians in our study said they advised patients about exercise only 1 in 390 participants knew the exact amount of exercise that should be advised per week<sup>12</sup>.

## CONCLUSION

**Although the physicians are aware that life style modifications have an impact on non-communicable disease but specific knowledge to practically guide and counsel the patients was missing. The difference in knowledge and practice of physicians trained in life style medicine as compared to those who were not trained is apparent.**

**Life style modifications are an important factor in the rising epidemic of non-communicable diseases. To exert full effect of these modifications it should be incorporated into the medical school curricula as well as part of core training and continuous medical education of physicians.**

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**Potential Conflict of Interest:** None

**Competing Interest:** None

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