

The ethical responsibility of healthcare providers to advise patients with diabetes on lifestyle modifications

SHALINI GARG, V RAMAN KUTTY

Abstract:

There is clear evidence of a link between health and physical activity (PA). PA is universally prescribed as a primary treatment for most chronic diseases. However, studies show that not many health professionals advise patients about PA. The current study examines how a cost-effective tool to improve population health has been completely neglected in professional practice in a state with maximum healthcare availability. Is this malfeasance in practice or a violation of human rights? Are healthcare providers exempted from their responsibilities because they choose to neglect them? Who should be held responsible for the increasing disease-related deaths that are easily preventable?

Keywords: physical activity, inactivity, advice, low- and middleincome country, health professionals, providers, chronic disease, diabetes, lifestyle modification, counselling

Background:

Diabetes and physical activity

Recent reports show that non-communicable diseases are responsible for nearly 62% of all deaths in India (1). Approximately 65 million people had diabetes in 2016 (2), and it contributed to 3% of the total mortality burden, most of them premature, occurring between the ages of 30 to 70 years. This massive burden of disease implies huge economic and health losses for the country (3)

Advice and counselling on physical activity (PA) is one of the three pillars of diabetes treatment. It is now considered a principal component of diabetes management (4). Research has shown that controlling blood sugar levels, blood pressure, and low density lipids (LDL) can reduce the risk of long-term complications and death among people with diabetes (5, 6, 7). Regular PA improves glycaemic control, which can prevent or delay type 2 diabetes and controls lipids, blood pressure, and

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cardiovascular co-morbidities (8, 9) The International Diabetes Federation (IDF) recommends PA for at least 3–5 days a week for a minimum of 30–45 minutes (10).

Role of health professionals

Health professionals are key to chronic disease prevention and health promotion (11). Primary care physicians are often in a good position to provide regular advice to patients to facilitate healthier choices. PA advice is an effective strategy for PA promotion (5, 12, 13). In combination with other interventions, providing regular advice about PA has been shown to lower the rates of diabetes in patients with glucose intolerance (14). Healthcare workers' advice and support have been found to motivate patients to initiate exercise (15) and adhere to selfmanagement practices (16).

Studies have found that only 25–50% of healthcare professionals advised patients to start or increase PA, suggesting missed opportunities for disease prevention (17, 18, 19). Similar studies on self-care practices among people living with diabetes show that merely 40% of patients were advised by healthcare professionals to start or increase their PA. The overall rates of PA counselling and referral to diabetics were found to be 18–36% (20, 21, 22).

Through this study, we integrate the available evidence from the literature and the findings of our own study to highlight the fact that regular physicians do not adequately advise patients encouraging the use of PA as a cost-effective tool (23) to improve health. We also attempt to draw attention to the fact that this has been completely neglected in professional practice in countries like India, leading to questions about patient care accountability (24, 25).

Methods and findings

We conducted secondary data analysis using data from the Prevention and Control of Non-communicable Diseases in Kerala Project Report, 2016-17 (26) which was a large-scale survey of over 12,000 households, covering all districts of Kerala. The primary objective of this survey was to assess the need for a large-scale behavioural intervention. For the purpose of the current study, we analysed the proportion of patients from Kerala living with diabetes who receive regular physicians' advice about starting or increasing their PA. As stated in the survey, participants were asked, "To lower your risk for certain diseases, during the past 12 months, have you ever been told by a doctor or health professional to start or increase your PA or exercise?" Response options were "Yes" or "No".

We found that only 30% of adult individuals living with diabetes were advised by health professionals to start

exercising during the last 12 months. Among the adults who participated in the study, only 17% had been given such advice. Among the adults reporting low levels of exercise, only 19% had been advised to increase their PA levels. Only 21% of overweight and obese adults were advised to increase their PA levels (27)

Discussion

This discussion section will cover the importance of information in health promotion, the current research evidence on effective provision of health-related information for patients with diabetes, and the ethical responsibility of physicians to provide health information to patients with diabetes.

Is information important for health?

The public health approach underlines the significance of preventing a disease by empowering people with different ways to lead healthier lives (28). This empowerment could be best accomplished by providing full information and making patients aware of their condition, how to manage it, and where and how to avail of the required services (24, 29). For many patients, these healthcare providers are their only source of information on how to lead healthier lives. Therefore, health workers should play an active role in promoting healthy lifestyles (11, 14). Unfortunately, studies show low levels of such advice from health professionals to individuals.

Present scenario of advice on lifestyle modifications

Kerala recorded the highest prevalence of diabetes (19%) in the country in 2016 (1, 10), which is expected to double by 2030. This could lead to a health system crisis in the state (30). The National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS) provides a comprehensive framework and adequate training to health providers for communication regarding the benefits of PA and the damaging effects of a sedentary lifestyle (31). Our analysis shows that in 2016, less than one-third of adults living with diabetes had been told by a healthcare professional to start or increase their exercise. It seems inadequate that such a small share of patients receive lifestyle modification advice. Although this study suffers from several limitations, as the analysis was based on a single question and included information only about the past twelve months, we try to highlight a muchneglected aspect of primary and secondary disease prevention in our country.

Effective management of diabetes

The effective management of diabetes requires a combination of medication and lifestyle modification. However, there is a complete lack of education on lifestyle modification during patients' first and subsequent review visits (24, 32). The patients are clearly not participating in active decision making, during which they could be informed about the various choices they have for disease prevention or treatment for long-term effects and a complication-free healthy life. Doctors were found to underrate patients' need for information (33). Their consultation mostly included quantitative measures such as blood glucose levels or glycated haemoglobin levels, which was difficult for patients to relate to their physical experiences (34). The doctors talked about the importance of PA but focused mostly on the use of medications for treatment (35). Various individual and organisational barriers like a lack of knowledge and training in PA counselling, perceptions about their qualifications to offer PA advice, and lack of time and self-efficacy (35, 36) need to be addressed to improve PA advice and counselling in clinical settings.

Is advice by healthcare professionals enough?

Although in most cases this advice would not be enough to translate into sustained behaviour (37), this should not act as an impediment for the healthcare provider to communicate useful information. When it is hardly the doctors' choice whether to give medication to patients or not, why apply this to lifestyle advice? Patients' compliance with medication and monitoring is also low. In a state like Kerala with high availability and accessibility of healthcare services, patientprofessional contact is very high and, though awareness among patients regarding their diabetes status is almost 60%, control is very low—only 16% (26). This is a missed opportunity in terms of health promotion as well as disease prevention. There may be multiple levels of factors for non-adherence, and interventions should be initiated to target those barriers. While transformation is necessary at multiple levels, it is also imperative that all change agents perform their role to bring about significant modifications in the current lifestyle patterns among patients (38, 39).

Why is it the physician's responsibility?

PA reduces the risk of mortality, complications associated with long-term medication, surgeries, and co-morbidities. In low-resource countries, this strategy could improve glycaemic control, bring down the burden of chronic diseases, increase life expectancy and the quality of life of the population, thereby bringing down the cost of care for patients and the country's health expenditure (8, 40, 41, 42, 43).

Healthcare professionals are responsible for giving advice and treatment to patients. Advice should not be limited to medication, devices, and surgeries, which require the physician's technical knowhow. It should also include advice on practices that could holistically improve their health without any expenditure. There is a need for more concrete communication by the providers so that they partner with the patients in finding feasible solutions for adopting and maintaining this behaviour (39, 44). As stated by WHO, "Advice and prescribed medicines from physicians are seen by many as the ultimate source of and resource for healthier lives. Physical activity must be a part of this, in the form of opportunistic advice or encouragement, as well as more profound and committing written 'prescriptions'" (11).

Conclusion

The doctor-patient contract is based upon the trust of the patients and the physicians' ethical responsibility to



place patients' interests first. Patients believe in the doctor's conviction in the best possible treatment for them (45, 46). The responsibilities of physicians involve informing patients about the contraindications and side effects of interventions. Advice on the benefits of PA and threats of sedentary lifestyle should be a part of this.

"Physicians have an ethical (and perhaps medical–legal) obligation to inform patients of the dangers of inactivity and promote PA to their patients in the clinical setting" (39). Hence, by not providing regular advice regarding PA to diabetic patients, the physicians are not only denying patients their right to correct information that will facilitate informed decision making, but are also violating one of the fundamental tenets of the ethical code—doing good to ones' patients.

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References

- Indian Council of Medical Research, Public Health Foundation of India, and Institute for Health Metrics and Evaluation. *India: Health of the Nation's States: The India State-Level Disease Burden Initiative*. New Delhi: ICMR, PHFI, IHME; 2017[cited 2019 Aug 12]. p 34. Available from: https:// www.healthdata.org/sites/default/files/files/policy_report/2017/ India_Health_of_the_Nation%27s_States_Report_2017.pdf
- 2. India State Level Disease Burden Initiative Diabetes Collaborators.. The increasing burden of diabetes and variations among the states of India: the Global Burden of Disease Study 1990–2016. *Lancet Global Health.* 2018 Dec; 6(12):e1352-e1362. Doi: 10.1016/S2214-109X (18)30387-5.
- 3. Arokiasamy P. India's escalating burden of non-communicable diseases. Lancet Glob Health. 2018 Dec; 6(12): e1262-e1263. Doi: 10.1016/S2214-109X(18)30448-0.
- 4. Task Force Members: Rydén L, Grant PJ, Anker SD, Berne C, Cosentino F, Danchin N, et al. ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD. The Task Force on diabetes, pre-diabetes, and cardiovascular diseases of the European Society of Cardiology (ESC) and developed in collaboration with the European Association for the Study of Diabetes (EASD). *Eur Heart J.* 2013 Oct; 34(39): 3035–87. Doi:10.1093/eurheartj/eht108.
- 5. Castaneda C. Diabetes control with physical activity and exercise. *Nutr Clin Care* 2003 May-Sep; 6(2):89–96.
- 6. Hawley JA. Exercise as a therapeutic intervention for the prevention and treatment of insulin resistance. *Diabetes Metab Res Rev.* 2004 Sep-Oct; 20(5): 383-93.DOI: 10.1002/dmrr.505..
- Riddell MC, Miadovnik L, Simms M, Li B, Zisser H. Advances in exercise, physical activity, and diabetes mellitus. *Diabetes Technol Ther.* 2013 Feb; 15(S1): S-96. DOI: 10.1089/dia.2013.1511.
- Colberg SR, Sigal RJ, Yardley JE, Riddell MC, Dunstan DW, Dempsey PC, et al. Physical activity/exercise and diabetes: A Position Statement of the American Diabetes Association. *Diabetes Care*. 2016 Nov; 39(11):2065– 79. DOI: 10.2337/dc16-1728.
- Bazzano LA, Serdula M, Liu S. Prevention of type 2 diabetes by diet and lifestyle modification. J Am Coll Nutr. 2005 Oct; 24(5): 310–19.
- 10. The IDF Diabetes Atlas. 8th ed. India Country report 2017. Brussels, Belgium: IDF; 2017 [cited 2018 Mar 23]. p 22. Available from: http:// reports.instantatlas.com/report/view/846e76122b5f476fa6ef0947196 5aedd/IND
- 11. World Health Organisation. Steps to health. A European Framework to

Promote Physical Activity for Health. Denmark: WHO; 2007[cited 2020 Jan 9]. Pp 21-2. Available from: http://www.euro.who.int/__data/assets/ pdf_file/0020/101684/E90191.pdf

- Armit CM, Brown WJ, Marshall AL, Ritchie CB, Trost SG, Green A, Bauman AE. Randomized trial of three strategies to promote physical activity in general practice. *Prev Med.* 2009 Feb; 48(2): 156–63. DOI: 10.1016/j. ypmed.2008.11.009.
- 13. Morrato EH, Hill JO, Wyatt HR, Ghushchyan V, Sullivan PW. Are health care professionals advising patients with diabetes or at risk for developing diabetes to exercise more? *Diabetes Care*. 2006 Mar; 29(3): 543–8.
- 14. Armstrong MJ, Sigal RJ. Exercise as medicine: Key concepts in discussing physical activity with patients who have Type 2 diabetes. *Can J Diabetes*. 2015 Dec; 39 Suppl 5: S129-133. DOI: 10.1016/j.jcjd.2015.09.081.
- He W, Zhang Y, Zhao F. Factors influencing exercises in Chinese people with type 2 diabetes. *Int Nurs Rev.* 2013 Dec; 60(4): 494–500. DOI: 10.1111/inr.12046.
- Parajuli J, Saleh F, Thapa N, Ali L. Factors associated with nonadherence to diet and physical activity among Nepalese type 2 diabetes patients; a cross sectional study. *BMC Res Notes.* 2014 Oct 24; 7: 758. DOI: 10.1186/1756-0500-7-758.
- Banu B, Shahi MSJR, Begum K, Ahmed T, Choudhury HA, Ali L. Prescribing behavior of diabetes treating physicians in selected health care facilities of the Diabetic Association of Bangladesh. *Indian J Public Health*. 2014; 58(3): 180–5. DOI: 10.4103/0019-557X.138627.
- Pechter U, Suija K, Kordemets T, Kalda R, Maaroos H-I. Physical activity and exercise counselling: a cross-sectional study of family practice patients in Estonia. *Qual Prim Care*. 2012[cited 2019 Dec 31]; 20(5): 355-63. Available from: http://primarycare.imedpub.com/abstract/ physical-activity-and-exercise-counselling-a-crosssectional-study-offamily-practice-patients-in-estonia-259.html
- Patra L, Mini GK, Mathews E, Thankappan KR. Doctors' self-reported physical activity, their counselling practices and their correlates in urban Trivandrum, South India: should a full-service doctor be a physically active doctor? Br J Sports Med. 2015;49(6): 413–16. DOI: 10.1136/bjsports-2012-091995
- Peek ME, Tang H, Alexander GC, Chin MH. National prevalence of lifestyle counseling or referral among African-Americans and whites with diabetes. J Gen Intern Med. 2008 Nov; 23(11): 1858–1864. DOI: 10.1007/s11606-008-0737-3.
- 21. Walsh JME, Swangard DM, Davis T, McPhee SJ. Exercise counseling by primary care physicians in the era of managed care. *Am J Prev Med.* 1999 May; 16(4): 307–13. DOI: 10.1016/S0749-3797(99)00021-5.
- Yang K, Lee Y-S, Chasens ER. Outcomes of health care providers' recommendations for healthy lifestyle among U.S. adults with prediabetes. *Metab Syndr Relat Dis*. 2011 Jun 3;9(3):231–7. DOI: 10.1089/ met.2010.0112.
- Orrow G, Kinmonth A-L, Sanderson S, Sutton S. Effectiveness of physical activity promotion based in primary care: systematic review and metaanalysis of randomised controlled trials. *BMJ*. 2012 Mar 26 [cited 2019 Dec 30]; 344:e1389. Available at: https://www.bmj.com/content/344/ bmj.e1389.long.
- 24. Joshi S, Das A, J Vijay V, Mohan V. Challenges in diabetes care in India: Sheer numbers, lack of awareness and inadequate control. *J Assoc Physicians of India* 2008 Jun; 56: 443–50.
- Holt RIG, Nicolucci A, Burns KK, Escalante M, Forbes A, Hermanns N et al, DAWN Study Group. Diabetes Attitudes, Wishes and Needs second study (DAWN2[™]): Cross-national comparisons on barriers and resources for optimal care—healthcare professional perspective. *Diabet Med.* 2013 Jul; 30(7): 789–98. DOI: 10.1111/dme.12242.
- 26. Achutha Menon Centre for Health Studies and Kerala State Health Services Dept. Prevention and Control of Non-Communicable Diseases in Kerala. Project Report. 2016-17[cited 2019 Dec 30]. Available from: https://www.sctimst.ac.in/resources/Research_Report-Prevention_ and_Control_of_NCDs_in_Kerala_2016-17.pdf
- 27. Garg S, Raman Kutty V. Missed opportunity for health promotion: low levels of advice to be physically active by healthcare providers in Kerala, India. *Int J Diab.* 2019 Jul;19-24 Available from: http://www. ijdonline.com/issues/5.pdf
- Commission on Social Determinants of Health. Final Report. Closing the gap in a generation: health equity through action on the social determinants of health. Geneva: World Health Organization;



2008. P 8.Available from https://apps.who.int/iris/bitstream/ handle/10665/43943/9789241563703_eng.pdf

- 29. Francis V, Korsch BM, Morris MJ. Gaps in doctor-patient communication. Patients' response to medical advice. *New Engl J Med.* 1969 Mar 6; 280(10): 535–40. DOI: 10.1056/NEJM196903062801004
- Thankappan KR, Shah B, Mathur P, Sarma PS, Srinivas G, Mini GK.et al. Risk factor profile for chronic non-communicable diseases: results of a community-based study in Kerala, India. *Indian J Med Res.* 2010 Jan; 131:53–63.
- National Centre for Disease Control, MoHFW. National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke. Training Module for Medical Officers for Prevention, Control and Population Level Screening of Hypertension, Diabetes and Common Cancer (Oral, Breast & Cervical). New Delhi; MoHFW; 2017 [cited 2020 Jan 14]. Available from: http://nhsrcindia.org/sites/default/files/Module%20 for%20MOs%20for%20Prevention%2CControl%20%26%20PBS%20 of%20Hypertension%2CDiabetes%20%26%20Common%20Cancer. pdf
- 32. Tharkar S, Devarajan A, Barman H, Mahesh U, Vishwanathan V. How far has translation of research been implemented into clinical practice in India? Are the recommended guidelines adhered to? *Int J Diabetes Mellit* 2015; 3(1): 25-30.. DOI: 10.1016/j.ijdm.2011.01.002.
- Waitzkin H. Doctor-patient communication: Clinical implications of social scientific research. JAMA 1984 Nov 2; 252(17): 2441–6. DOI: 10.1001/jama.1984.03350170043017.
- Kruse RL, Olsberg JE, Shigaki CL, Parker Oliver DR, Vetter-Smith MJ, Day TM. Communication during patient-provider encounters regarding diabetes self-management. *Fam Med* 2013 Jul-Aug; 45(7): 475–83.
- Persson G, Brorsson A, Ekvall Hansson E, Troein M, Strandberg EL. Physical activity on prescription (PAP) from the general practitioner's perspective – a qualitative study. *BMC Fam Pract.* 2013 Aug 29; 14: 128. DOI: 10.1186/1471-2296-14-128.
- Kennedy MF, Meeuwisse WH. Exercise counselling by family physicians in Canada. *Prev Med.* 2003 Sep; 37(3): 226–32. DOI: 10.1016/S0091-7435(03)00118-X.
- 37. Glasgow RE, Eakin EG, Fisher EB, Bacak SJ, Brownson RC. Physician

advice and support for physical activity: Results from a national survey. *Am J Prev Med.* 2001 Oct; 21(3): 189–96.

- Bauman AE, Reis RS, Sallis JF, Wells JC, Loos RJ, Martin BW; Lancet Physical Activity Series Working Group. Correlates of physical activity: why are some people physically active and others not? *Lancet*. 2012 Jul 21; 380(9838): 258–71. DOI: 10.1016/S0140-6736(12)60735-1.
- Sallis R, Franklin B, Joy L, Ross R, Sabgir D, Stone J. Strategies for promoting physical activity in clinical practice. *Prog Cardiovasc Dis* 2015 Jan-Feb;57(4): 375–86. DOI: 10.1016/j.pcad.2014.10.003.
- Asano RY, Sales MM, Browne RAV, Moraes JF, Coelho Júnior HJ, Moraes MR, Simões HG. Acute effects of physical exercise in type 2 diabetes: A review. *World J Diabetes*. 2014 Oct 15; 5(5): 659–65. DOI: 10.4239/wjd. v5.i5.659.
- 41. Wei M, Gibbons LW, Kampert JB, et al. Low cardiorespiratory fitness and physical inactivity as predictors of mortality in men with type 2 diabetes. *Ann Intern Med* 2000; 132: 605-11. DOI: 10.7326/0003-4819-132-8-200004180-00002.
- Moucheraud C, Lenz C, Latkovic M, Wirtz VJ. The costs of diabetes treatment in low- and middle-income countries: a systematic review. *BMJ Glob Health*. 2019 Feb 27; 4(1): e001258. DOI: 10.1136/ bmjgh-2018-001258.
- Çolak TK, Acar G, Dereli EE, Özgül B, Demirbüken, Alkaç Ç, Polat MG. Association between the physical activity level and the quality of life of patients with type 2 diabetes mellitus. *J Phys Ther Sci.* 2016 Jan; 28(1): 142–7. DOI: 10.1589/jpts.28.142.
- Forbes CC, Plotnikoff RC, Courneya KS, Boule NG. Physical activity preferences and type 2 diabetes: exploring demographic, cognitive, and behavioural differences. *Diabetes Educ.* 2010 Sep-Oct; 36(5): 801– 15.DOI: 10.1177/0145721710378538.
- 45. American Medical Association. Patient-Physician Relationships. Place unknown: AMA; [cited 2020 Jan 12]. Available from: https://www.amaassn.org/delivering-care/ethics/patient-physician-relationships
- Chipidza FE, Wallwork RS and Stern TA. Impact of the Doctor-Patient Relationship. *Prim Care Companion CNS Disord* 2015 Oct 22; 17(5). DOI: 10.4088/PCC.15f01840.

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