

ORIGINAL RESEARCH

Measuring Healthy Lifestyle and Mental Health Indicators in South Asian Women Using the “Your Health: Quality of Life and Well-Being” Questionnaire



Nida Ahmed, MBBS, Sabahat Ahmed, BSc, Zartasht Carmichael, BSc, Amtul Salam Sami, MBBS
London, Manchester, United Kingdom

Abstract

INTRODUCTION Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. A literature review has revealed that there is no specific questionnaire available to assess well-being within the community.

METHODS Fifty South Asian women were randomly selected to complete the “Your Health: Quality of Life and Well-being Questionnaire” assessing diet, lifestyle, and mental health among others. Data from the questionnaires was extracted and participants were categorised based on these findings.

RESULTS This tool has positively identified a number of key risk factors for poor health, symptoms associated with mental illness, and the burden of comorbidities within the assessed cohort. Sixty-three percent of the women had an unhealthy body mass index (BMI), over half did not know the maximum limit of salt per day, and almost one-fourth had multiple health conditions.

CONCLUSIONS This questionnaire is an effective tool to use within the community. There is a significant burden of obesity, complicated by poor lifestyle habits and significant mood and anxiety symptoms within the studied South Asian population.

KEY WORDS diet, health promotion, lifestyle risk factors, mental health, public health, questionnaire, well-being.

INTRODUCTION

Health care provision in the United Kingdom is changing from mainly hospital-based care to care in the community; the number of hospital beds in Great Britain peaked in the 1960s and has been in decline over the last 50 years.¹ Initiatives by NHS England are focusing on a greater emphasis on prevention of disease, which currently only receives 4% of the entire health care budget,² with a similar emphasis seen in the budget for health care in the United States of America.³

The concept of well-being was incorporated into the definition of health by the World Health

Organization in 1946, as follows: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”⁴

Implying that this construct applies to all people, irrespective of physiological state, over time, the concept of well-being has been dissected and expanded. In 1978, Shin and Johnson defined well-being as a “global assessment of a person’s quality of life according to his/her own chosen criteria.”⁵ Emerson in 1985 and Felce & Pery in 1995 believed that well-being stems from individuals’ perceptions of their current situation and their aspirations.⁶ Diener and Suh,⁷ in 1997, stated that subjective well-being consists of three interrelated

All authors had access to the data and a role in writing the manuscript.

Conflicts of Interest: All authors declare they have no conflict of interest.

From the Newham University Hospital, Barts Health NHS Trust, London, United Kingdom (NA); GKT School of Medical Education, King’s College London, London, United Kingdom (SA); School of Medical Sciences, University of Manchester, Manchester, United Kingdom (ZC); and ENT and Allergy Department, Lewisham and Greenwich NHS Foundation Trust, London, United Kingdom (ASS). Address correspondence to N.A. (nida_3683@hotmail.com).

components: life satisfaction, pleasure effect, and unpleasant effect. Effects refer to pleasant and unpleasant moods and emotions, whereas life satisfaction refers to a cognitive sense of satisfaction with life.⁷

In some circles, this concept is used interchangeably with quality of life; however, this is defined by the World Health Organization as follows:

“an individual’s perception of their position in life in the context of the culture and values systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept effected in a complex way by the person’s physical health, psychological state, personal belief, social relationship and their relationship to salient features of their environment.”⁸

Quality-of-life assessments have been manipulated to produce quality-of-life tools for specific disease entities (eg, sinonasal disease⁹) and as the conceptual health-related quality of life, whose role in the Centre of Disease Control and Prevention is to “[allow] health agencies to legitimately address broader areas of healthy public policy around a common theme in collaboration with a wider circle of health partners, including social service agencies, community planners, and business groups.”¹⁰

These definitions clarify how quality of life can be considered a distinct aspect of well-being.

The aims of the study were as follows:

1. Identify unhealthy life activities that may have subsequent health-related consequences, in either short, medium, or long term.
2. Identify the burden of chronic disease in the target population.
3. Identify the prevalence of mood symptoms in the target populations.
4. Gauge overall well-being of target population using well-being and quality-of-life indicators.¹¹

Combining these aims with the aforementioned concepts, the questionnaire took the form of “Your Health: Quality of Life and Well-being Questionnaire” (Supplementary Appendix 1). Questions were developed based on their roles in completing the core aims; a few of the rationales are explained in Table 1.¹¹⁻³⁰

METHOD

The aforementioned questionnaire was used at a national educational convention run by the Ahmadiyya

Muslim Community in October 2015. This was a female-only event due to religious reasons and was attended by a large number of South Asian members who were at the event being held in Hampshire, United Kingdom. The questionnaire was completed by 50 randomly selected women who were in attendance. Data were collated and then analyzed.

RESULTS

Fifty female attendees were given the questionnaire, of which all of them were analyzable.

The majority of participants were <44 years old (Fig. 1, yellow fill). Body mass index (kg/m²) grading was used to assess weight status; <18 = underweight, 19-24.9 = healthy weight, >25-30 = overweight, >30 = obese. Half of all those surveyed were over the healthy weight for their height, with just under 1 in 10 classed as obese. Thirteen percent of the women were underweight.

Fifty-two percent classed themselves as housewives, and 1 in 10 attendees were students. Those who were employed held careers as doctors, teachers, civil servants, and members of the police force.

Of all surveyed, 60% of the women had never counted how many calories they had per day, and 1 in 20 had last counted calories a year or more ago. Twenty-six percent had counted their caloric intake that day or the day before.

Regarding knowledge of fat types, saturated fats are considered in lay terms to be “bad” fats because they are linked to heart attacks and strokes, a concept significantly pushed by public health authorities. Almost 30% of the women did not know which type was considered unhealthy.

The following questions looked at lifestyle habits and activities that can have negative health complications. Regarding fizzy drinks, 4% of the women drank a can of fizzy drink per day, and over a quarter of all surveyed had 3 or more cans per day (Fig. 2). The maximum cans one woman drank per day was 8.

To contextualize this, one small can of a fizzy drink can contain up to 36 g of sugar; the maximum recommended intake of sugar per day for women is 30 g.

Only 1 in 5 women have 5 portions of fruit and vegetables per day, with 54% managing 2-3 portions weekly. Ten percent of the women had either one or no pieces of fruit per week.

The majority of the women (72%) had 2 or more portions of fish per week, and 25% had at least one portion per week (minimum recommendation is 2 portions per week). One in 20 women had no fish at all per week.

Table 1. Basis for development of questions incorporated in “Your Health: Quality of Life and Well-being Questionnaire”

| Question | Rationale |
|--------------------------------------|---|
| Gender | Men are at an increased risk of heart disease; after menopause, women’s risk of heart disease increases to a similar level as in men. ¹¹ |
| Age | People in their middle years (35-59) report the highest levels of anxiety compared to other age groups. ¹² |
| BMI | Calculated using a person weight and height, a BMI of over 25 indicates that a person is overweight (≥ 30 is classed as obese), which increases the risk of developing diabetes and certain cancers. In Asians, a BMI of ≥ 23 is associated with an increased risk of diabetes, compared to a BMI of ≥ 25 in the white population. ¹³ |
| Marital status | Marital status and living conditions significantly affect a person’s health and mortality: married adults were generally found to be healthier than adults who were not married (irrespective of health indicators or population subgroup). The one negative health indicator is that married adults have a higher rate of being overweight or obese. ¹⁴ |
| Occupation | Women generally have more work-related cases of carpal tunnel syndrome, tendonitis, respiratory diseases, and anxiety and stress disorders. Women may fear that bringing up a safety issue could result in job loss or more difficult work situations. They may also be less likely to report a work-related injury. ¹⁵ |
| Calories | Calorie information is available for most foods and is a good marker of the responder’s awareness of the concept of limits of energy intake. |
| Fats | There is good evidence that replacing saturated fats with unsaturated fats can help lower cholesterol ¹⁶ ; as such, it is important to check awareness of the different types of fats. |
| Fruits and vegetables | Fruit and vegetable intake provides crucial nutrients and fiber and is linked to a lower incidence of cardiovascular disease and obesity. ¹⁷ |
| Fish | Oily fish such as salmon, mackerel, and sardines are said to help against cardiovascular disease, prostate cancer, age-related vision loss, and dementia and are a good source of key vitamins. ¹⁸ |
| Water | The UK Government recommends drinking 1.2 L of water a day to keep up with losses, though further studies still need to be done to look into some of the other claims of hydration (eg, skin contour and slowing renal decline). ¹⁹ |
| Use of fizzy drinks | Fizzy drinks can contain large amount of sugars, and excessive use is associated with damage to teeth. ²⁰ |
| Salt | Excessive salt in the diet is associated with hypertension and other cardiovascular comorbidities. ²¹ |
| Smoking | Smoking is strongly associated with cardiovascular disease and many forms of cancer. ²² |
| Exercise | Latest recommendations indicate that adults aged 19-64 should try to exercise for 150 minutes of moderate aerobic activity weekly (which can be done as 30 minutes 5 days a week), including strength exercises on 2 or more days of the week. This question aims to identify how much time people spend exercising in the context of these guidelines. ²³ |
| Vision and use of electronic screens | Optometrists recommend that everyone has an eye test about every 2 years. People over 40 and people from black or minority ethnic groups may need sight tests more frequently. ²⁴ People who spend excessive time in front of electronic screens can have complications affecting sleep, vision, and obesity. ^{25,26} |
| Sleep | Humans naturally feel tired at two times in the day: 2 AM and 2 PM. Disorders of sleep can have consequences on mental health and energy levels, significantly affecting quality of life. ²⁷ |
| Depression | Depression can present with a multitude of symptoms, so related diagnostic questions are added in the questionnaire. Mixed anxiety and depression is the most common mental disorder in Great Britain, with almost 9% of people meeting criteria for diagnosis. As such, it is important to document common stressors and whether people feel they cannot control their worries, which could indicate an anxiety state. ²⁸ |
| Socializing | Studies have shown that people who are more socially connected are happier and live healthier lives than their more isolated peers are. ²⁹ |
| Long-term conditions | It is estimated that just over 15 million people in the United Kingdom suffer from a long-term condition; this question allows us to track its prevalence in our target population. ³⁰ |

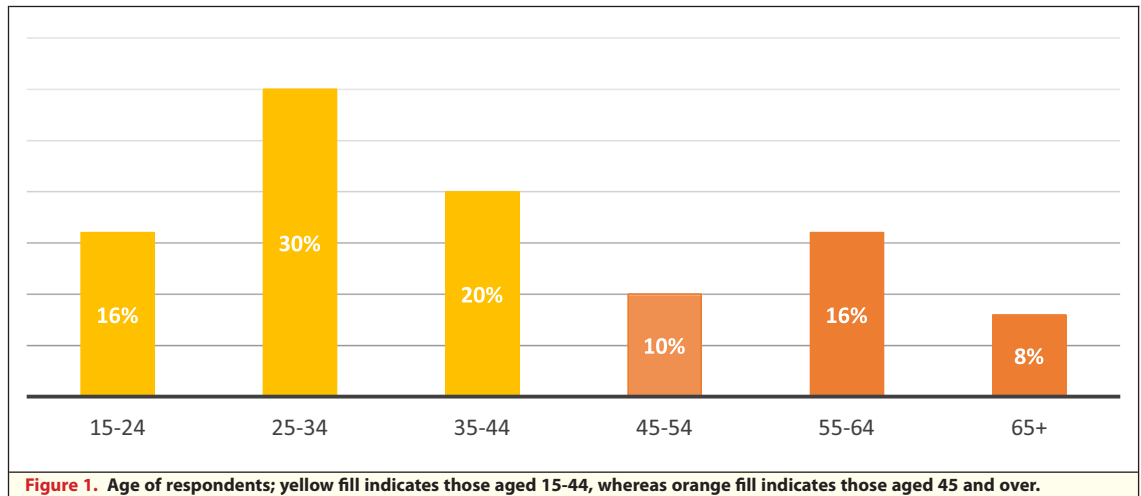
European recommendations are for women to drink 1.6 L of water daily (on average 8×200 mL glasses). Of those surveyed, only 14% of the women drank adequate amounts of water; over one-third of the women drank half or less than what they should (Fig. 3).

Drinking appropriate amounts of water can help people lose weight, prevent urinary infections, and improve skin complexion.

Of all surveyed, 56% of the women did not know the maximum amount of salt allowed per day, and just under three-fourths of the women walked for 30 min daily.

The majority of the women (96%) were nonsmokers. Almost one-quarter of all women surveyed had multiple medical conditions (Fig. 4).

Over one-half of all surveyed (54%) spent more than 4 hours in front of an electronic screen (Fig. 5).



Fifty-five percent of all women who took part wore glasses, with just under half (46%) of all women having their eyes checked every 6 months and just under 30% having their vision checked every year.

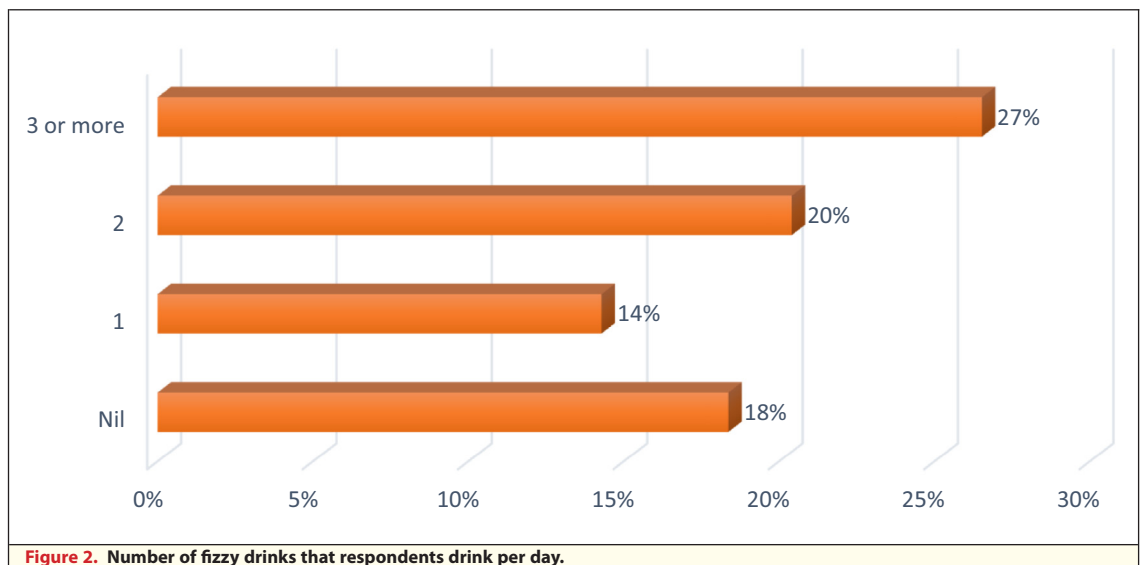
Mood and psychological well-being are key aspects that warranted exploration. When considering socialization, 78% of women in the study had at least one meal per day together with their family. Forty-two percent of the women attended a weekly community meeting, whereas 35% attended a monthly meeting. Socializing and eating in congregation have proven stress-relieving properties and psychological benefits.

Symptoms of depression can manifest themselves in different ways. Figure 6³¹ shows symptoms known to be caused by depression; if individuals are suffering, they may benefit from support.

Just under half (49%) of the women were affected by not being able to stop or control their worrying. Seventy-three percent of all women were stressed by one or more of the stressors listed in Figure 7.

DISCUSSION

Our study revealed a number of health concerns in the studied population of South Asian women;



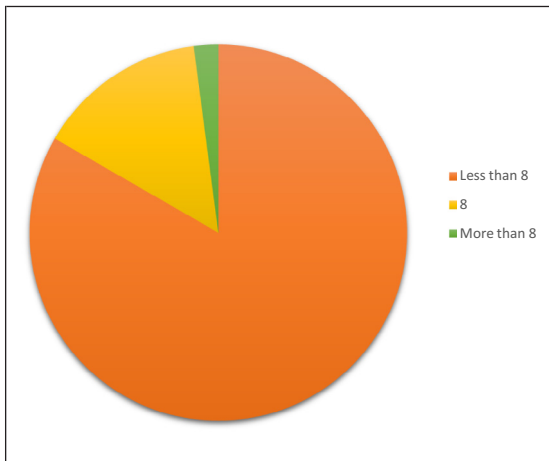


Figure 3. Number of glasses of water that respondents drink per day.

50% of the women were classed as overweight and 60% had never counted the number of calories they consume in a day. This poor weight proportion and approach to calorie intake is having grave complications. Studies have shown that the incidence of breast cancer is increasing in South Asian women, which can, in part, be attributed to being overweight,³² and the link to cardiovascular disease and being overweight is clearly documented.³³ Consequences of being overweight may be noted already, as 1 in 5 women surveyed suffered from diabetes or hypertension.

Review of the diet itself reveals what may be contributing to the above; over a quarter of the women drank 3 or more fizzy drinks per day, and fewer than 15% drank the recommended amount of water per day. One in 10 women ate 1 or no pieces of fruit and vegetables per week, and over half did not know the maximum amount of salt allowed per day. Current public health initiatives of the healthy plate³⁴ could be considered as a way to approach this in the community, and it would be interesting to note how aware such members are of these initiatives.

Regarding the use of electronic devices, >50% spent >4 hours in front of an electronic screen; >50% of the women wore glasses.

In our studied cohort, 43%-65% of the women suffered from symptoms that occur in depression, and almost half of all women felt they could not control their worries; the most common issue of concern was their health. Mental health in the South Asian community has been well researched,³⁵ with the following points being identified as key complicating factors:

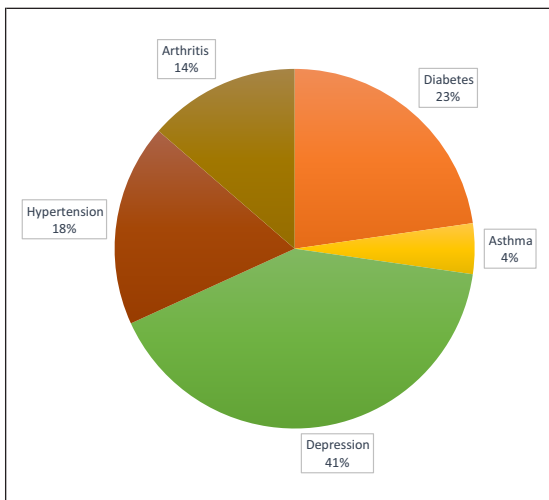


Figure 4. Prevalence of medical conditions among respondents.

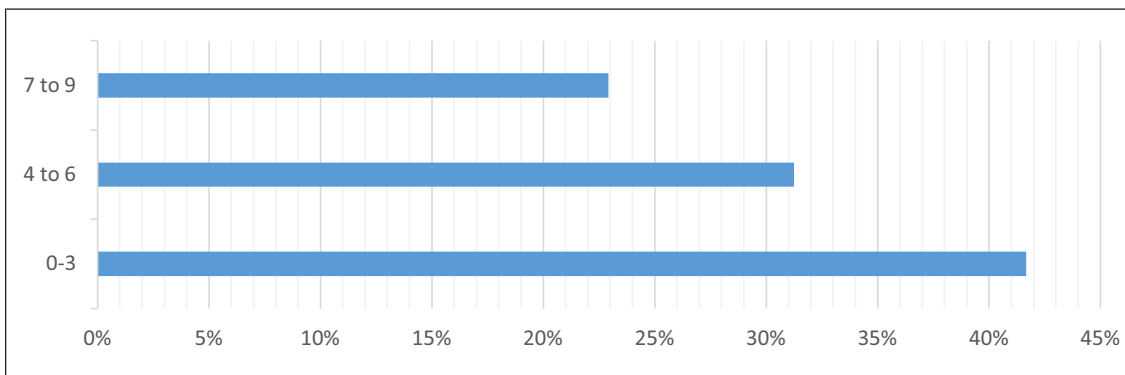


Figure 5. Hours spent in front of an electronic screen, as reported by respondents.

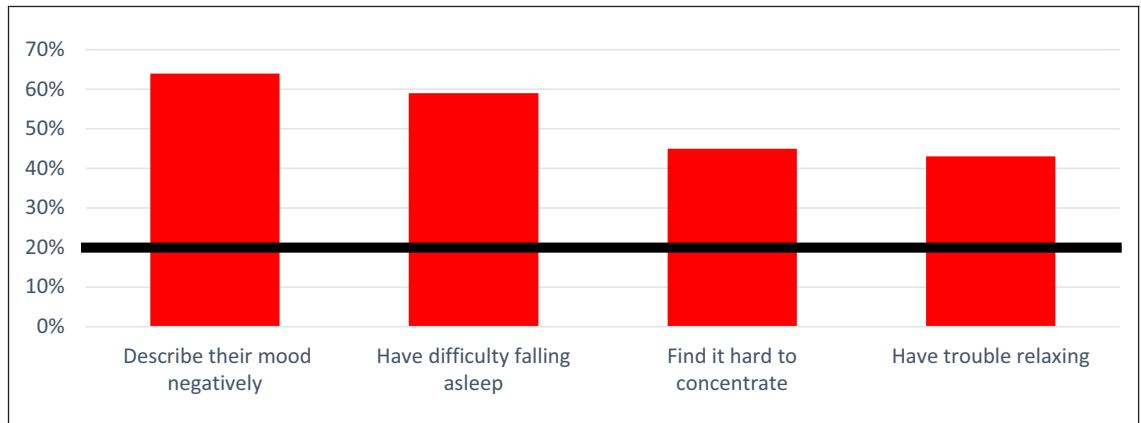


Figure 6. Those who answered “yes” to impairment of mood, sleep, concentration, and ability to relax. The percentage of people who suffer from depression and/or anxiety in the UK is also noted with a black horizontal line.³¹

- Fear and secrecy surrounding mental illness
- Cause of mental health diseases often being misunderstood
- Social pressure to conform
- Sufferers of mental health often not being valued
- Marriage prospects being damaged by mental illness

It will be interesting to explore the symptom prevalence and identify disease incidence further to see if any of the above points are involved.

A recent systematic evidence-based review looking over a 10-year period produced good evidence that religious involvement is correlated with better mental health, especially in depression and some evidence in stress-related disorders and dementia.³⁶

Of the responses analyzed; the majority, if not all, were not descriptive of a healthy lifestyle or indicative of well-being. Though this is a relatively small sample to extrapolate many generalizing statements, our findings merit expansion of the project in the future. They can also be used as the basis to develop health promotional interventions that are language-specific and sensitive to cultural and religious differences.

The limitations in our study include sample size and being gender specific. To ensure we could approach our target population *en masse*, we requested access to an event where a religious compulsion of segregation had to be observed. Though we did approach male teams to do a similar



Figure 7. Number of women answering “yes” to stressors.

project, this had not been completed at the time of publication.

Personal well-being, no matter what gender, culture, race, or community, is an essential factor as it is related to the development of a healthy personal and social environment, crucial for building a peaceful society and healthy new generations.

CONCLUSION

Our study of 50 South Asian women has revealed a number of concerns regarding lifestyle habits, diet, use of electronic devices, and psychiatric symptoms. Further projects on a larger scale are needed to fully understand the trends within this and other cohorts, with the potential to devise and introduce targeted initiatives to combat these issues. Addressing these issues within the community will significantly support the preventative medicine strategy to avoid

adverse health care outcomes. To this end, the “Your Health” questionnaire will be a useful tool to assess both current well-being and areas of concern to support and direct needed interventions.

ACKNOWLEDGMENTS

The authors thank Nina Ahmad and all those involved in this project, without whom this would not have been possible. The authors would also like to acknowledge all the subjects who took part and staff involved; without their cooperation, this would not have been possible.

SUPPLEMENTARY DATA

Supplementary data accompanying this article can be found in the online version at doi:10.1016/j.aogh.2017.09.007.

REFERENCES

1. Armstrong D. Decline of the hospital: reconstructing institutional dangers. *Social Health Illn* 1998;20:445-57.
2. Murray CJ, Richards MA, Newton JN, et al. UK health performance: findings of the Global Burden of Disease Study 2010. *Lancet* 2013;381:997-1020.
3. Miller G, Roehrig C, Hughes-Cromwick P, Lake C. Quantifying national spending on wellness and prevention. *Adv Health Econ Health Serv Res* 2008;19:1-24.
4. WHO. Constitution of WHO: Principles. Geneva: World Health Organization; 2016 Available at: <http://www.who.int/about/mission/en/>. Accessed August 7, 2016.
5. Shin DC, Johnson DM. Avowed happiness as an overall assessment of the quality of life. *Soc Indicators Res* 1978;5:475-92.
6. Dodge R, Daly AP, Huyton J, Sanders LD. The challenge of defining well-being. *Int J Wellbeing* 2012;2:222-35.
7. Diener E, Suh E. Measuring quality of life: economic, social, and subjective indicators. *Soc Indicators Res* 1997;40:189-216.
8. WHO. WHOQOL: Measuring Quality of Life. Geneva; 1997. Available at: <http://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/>. Accessed August 8, 2016.
9. Sami AS, Scadding GK. Rhinosinusitis in secondary school children-part 2: main project analysis of MSNOT-20 Young Persons Questionnaire (MSYPQ). *Rhinology* 2014;52:225-30.
10. Kindig DA, Booske BC, Remington PL. Mobilizing action toward community health (MATCH): metrics, incentives, and partnerships for population health. *Prev Chronic Dis* 2010;7:A68.
11. Rosano GM, Panina G. Oestrogens and the heart. *Therapie* 1999;54:381-5.
12. Martin P. The epidemiology of anxiety disorders: a review. *Dialogues Clin Neurosci* 2003;5:281-98.
13. WHO Expert Consultation. Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies. *Lancet* 2004;363:157-63.
14. Schoenborn CA. Marital Status and Health, United States 1999-2002. Advance data from vital and health statistics; no 351. Hyattsville, MD: National Center for Health Statistics; 2004.
15. National Institute for Occupational Safety and Health (NIOSH). Women's safety and health issues at work; 2013. Available at: <https://www.cdc.gov/niosh/topics/women/>. Accessed August 7, 2016.
16. NHS Choices. Fat: The facts; 2015. Available at: <http://www.nhs.uk/Livewell/Goodfood/Pages/Fat.aspx>. Accessed August 7, 2016.
17. Slavin JL, Lloyd B. Health benefits of fruits and vegetables. *Adv Nutr* 2012;3:506-16.
18. NHS Choices. Oily fish: Mighty omega-3 or codswallop?; 2015. Available at: <http://www.nhs.uk/Livewell/superfoods/Pages/is-oily-fish-a-superfood.aspx>. Accessed August 7, 2016.
19. NHS Choices. Six to eight glasses of water “still best”; 2011. Available at: <http://www.nhs.uk/news/2011/07/July/Pages/eight-glasses-of-water-a-day.aspx>. Accessed August 7, 2016.
20. Cheng R, Yang H, Shao M, Hu T, Zhou X. Dental erosion and severe tooth decay related to soft drinks: a case report and literature review. *J Zhejiang Univ Sci B* 2009;10:395-9.
21. Meneton P, Jeunemaitre X, de Wardener HE, MacGregor GA. Links between dietary salt intake, renal salt handling, blood pressure, and cardiovascular diseases. *Physiol Rev* 2005;85:679-715.
22. Sasco A, Secretan M, Straif K. Tobacco smoking and cancer: a brief review of recent epidemiological evidence. *Lung Cancer* 2004;45:S3-9.
23. NHS Choices. Physical activity guidelines for adults; 2016. Available at: <http://www.nhs.uk/Livewell/fitness/Pages/physical-activity-guidelines-for-adults.aspx>. Accessed July 11, 2015.
24. NHS Choices. Look after your eyes; 2015. Available at: <http://www.nhs.uk/>

- Livewell/Eyehealth/Pages/Looking-after-youreyes.aspx. Accessed August 7, 2016.
25. Rosenfield M. Computer vision syndrome: a review of ocular causes and potential treatments. *Ophthalmic Physiol Opt* 2011;31:502-15.
 26. Rosiek A, Maciejewska NF, Leksowski K, Rosiek-Kryszewska A, Leksowski L. Effect of television on obesity and excess of weight and consequences of health. *Int J Environ Res Public Health* 2015;12:9408-26.
 27. Colten HR, Altevogt BM, eds. *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem*. Washington, DC: National Academies Press; 2006.
 28. Mental Health Foundation. *Mental health statistics*; 2016. Available at: <https://www.mentalhealth.org.uk/statistics>. Accessed January 1, 2016.
 29. Umberson D, Montez JK. Social relationships and health: a flashpoint for health policy. *J Health Soc Behav* 2010;51(Suppl):S54-66.
 30. Naylor C, Parsonage M, McDaid D, Knapp M, Fossey M, Galea A. *Long-Term Conditions and Mental Health: The Cost of Co-Morbidities*. The King's Fund; 2012.
 31. Evans J, Macrory I, Randall C. *Measuring National Well-Being: Life in the UK, 2015*. Office for National Statistics; 2015.
 32. Stotter A, Jenkins J, Edmondson-Jones M, Blackledge H, Kearins O. Temporal changes in breast cancer incidence in south Asian women. *Cancer Epidemiol* 2014;38:663-9.
 33. Poirier P, Giles TD, Bray GA, et al. Obesity and cardiovascular disease: pathophysiology, evaluation, and effect of weight loss. *Arterioscler Thromb Vasc Biol* 2006;26:968-76.
 34. Public Health England. *The Eatwell guide*; 2016. Available at: <http://www.nhs.uk/Livewell/Goodfood/Pages/the-eatwell-guide.aspx>. Accessed August 15, 2016.
 35. Time to Change. *Family matters: A report into attitudes towards mental health problems in the South Asian community in Harrow, North West London*; 2010. Available at: https://www.time-to-change.org.uk/sites/default/files/imce_uploads/Family%20Matters.pdf. Accessed October 24, 2017.
 36. Bonelli RM, Koenig HG. Mental disorders, religion and spirituality 1990 to 2010: a systematic evidence-based review. *J Relig Health* 2013;52:657-73.