Original Article

The attitudes, knowledge and practices of Maltese family doctors in disease prevention and health promotion

Lynn Pace, Mario R Sammut, Charmaine Gauci

Abstract

Introduction: Family doctors are in a unique position to advocate health promotion and disease prevention**,** though it is known that this is not always given its due importance due to various reasons.

Aim: To assess the knowledge, attitudes and practices of Maltese family doctors in health promotion and disease prevention. The results of the study were compared with a similar study in 2000.

Methodology: A validated questionnaire was sent in 2011 to all Maltese general practitioners (GPs) and GP trainees. The results were analysed statistically. A focus group was conducted to discuss the results and develop a set of recommendations.

Results: An improvement was seen in health promotion practice since 2000. Family doctors look after their own health better. However, they have difficulties regarding which prevention guidelines they should follow. Time constraints remain the biggest obstacle to promoting health. GPs who are involved in post-graduate teaching activities find it easier to promote health ($p<0.05$), while doctors working in both private and public settings find it most difficult ($p<0.05$). GPs who smoke find it harder to advise on smoking cessation ($p<0.05$), while doctors who are obese find it more difficult to recommend exercise ($p<0.05$).

Conclusions and recommendations: Health promotion practice by family doctors is on the increase, yet there is clearly room for enhancement of their service. Web-based training, lectures and seminars would help family doctors to enhance their knowledge. Flyers, posters and video-clips in waiting areas could increase patient awareness on healthy lifestyles.

Keywords:

Health promotion, attitudes, disease prevention, lifestyle

Lynn Pace MD, MMCFD*
General Practitioner
Department of Primary Health Care
Malta
grech.lynn@gmail.com

Mario R Sammut MScH (Melit.), MScPC&GP (Ulster)
Senior General Practitioner
Department of Primary Health Care
Malta

Charmaine Gauci MSc Ph.D
Secretariat for Health for Health Promotion and Disease Prevention Directorate
Secretariat for Health for Primary Care

**Corresponding author*

Introduction

Chronic lifestyle diseases are responsible for increasing morbidity and mortality.[1] Health promotion and disease prevention are crucial to control this ever-growing pandemic, which is caused by a variety of lifestyle risk factors including unbalanced diet, sedentary lifestyle and tobacco, apart from biological risk factors.[2] Family doctors, being in direct contact with patients in the community, have an important role to play in promoting healthier lifestyles and reducing risk factors. However, it is known that health promotion and disease prevention is not always given its due importance in primary health care due to a number of factors.[3]

The study aims to assess the knowledge, attitudes and practices of family doctors in disease prevention and health promotion. It also explores barriers in implementing health promotion. The main outcome from this study is in suggesting ways of improving the practices of family doctors (both in the private and public sector). The results of the study were also compared with the Maltese results of a similar study

carried out in 2000 by EUROPREV (European Network for Prevention and Health Promotion in General Practice/ Family Medicine).[4] This survey was carried out in 11 European countries, including Malta.[5]

The study was supported by the Health Promotion and Disease Prevention Directorate (HPDPD), EUROPREV and the Primary Health Care Department.

Methods

A tool (adapted from the EUROPREV questionnaire used in 2000) was mailed in 2011 to Maltese general practitioners (283 in total) as per list available at the Health Promotion and Disease Prevention Directorate and to 17 GP trainees (undertaking the Specialist Training Programme in Family Medicine at the time of the study). The questionnaire was sent by the Health Promotion and Disease Prevention Directorate together with a stamped addressed return envelope. A reminder was sent to all by post. The response sheets were anonymous ensuring complete confidentiality.

The questionnaire included demographic and professional data, two clinical scenarios, questions related to barriers in implementing preventive medicine and questions concerning personal health behaviour. Data were analysed by SPSS. *p* values were calculated using the Exact Test (for a 2xK table).

Following analysis of the questionnaires a focus group was conducted to discuss the results. Participants were nominated from organisations of GPs, GP trainers and trainees, patient non-governmental organisations and public health specialists within the HPDPD. The results from the postal study were presented and discussed, with recommendations put forward by participants being collected in writing by a secretary.

Ethical permission was obtained from the Health Ethics Committee.

Results

The study had a response rate of 30.3% (91 out of 300). The male/female ratio was 70% / 30% with a similar ratio in 2000 (74% / 26%). Details of the GPs' professional characteristics (working and teaching activities) are shown in Table 1.

GPs were presented with two clinical scenarios of a 52 year old male who presents with a trivial cough and a 57 year old female who presents with a trivial dermatological problem. Both patients were visiting the doctor for the first time and had no previous "check-ups" or tests, no known risk factors and no personal or family history of any major disease. Tables 2 and 3 show the GPs' response to these scenarios. The tables compare the results of this study with the local results of the EUROPREV 2000 study.

***Table 1**: GPs' professional characteristics (working and teaching activities)*

Working and Teaching Activities	Percentage (this study)	Percentage (study 2000)
Work in : Primary health centre	40.7%	16%
Solo Practice	53.8%	58%
Public Centre	30.8%	19%
Private Centre	53.8%	55%
Postgraduate Teaching Activities	41.8%	26%

***Table 2**: Examinations done and investigations ordered by GPs in reaction to the clinical scenario where a 52 year old male presents with a trivial cough.*

Exam/ investigation/advice	Should it be done? Yes % (this study)	Do I do it? Yes % (this study)	Should it be done? Yes % (study 2000)	Do I do it? Yes % (study 2000)
Blood pressure	98.9%	97.4%	99.0%	88.0%
Glucose level	94.0%	88.3%	80.0%	80.0%
Cholesterol level	93.1%	93.0%	73.0%	74.0%
Faecal occult blood	95.8%	50.0%	23.0%	21.0%
Chest X ray	91.7%	68.8%	52.0%	44.0%
Digital rectal exam	93.9%	73.0%	43.0%	45.0%
Advise quit smoking	98.9%	87.8%	99.0%	66.0%
Advise less alcohol	98.8%	87.5%	97.0%	62.0%
Advise exercise	98.9%	89.2%	97.0%	62.0%
Advise weight loss	98.9%	90.5%	97.0%	61.0%
Body mass index (BMI) estimation	98.6%	84.6%	58.0%	39.0%

***Table 3**: Examinations done and investigations ordered by GPs in reaction to the clinical scenario where a 57 year old female presents with a trivial dermatological problem*

Exam/ investigation/advice	Should it be done? Yes % (this study)	Do I do it? Yes % (this study)	Should it be done? Yes % (study 2000)	Do I do it? Yes % (study 2000)
Blood pressure	97.4%	89.3%	95.0%	81.0%
Glucose level	96.9%	86.9%	88.0%	78.0%
Cholesterol level	96.3%	82.1%	76.0%	75.0%
Faecal occult blood	90.9%	56.5%	22.0%	20.0%
Cervical cytology	94.4%	81.0%	77.0%	64.0%
Breast examination	97.0%	87.5%	88.0%	73.0%
Advise quit smoking	95.2%	89.5%	95.0%	61.0%
Advise less alcohol	97.4%	86.5%	95.0%	60.0%
Advise exercise	97.6%	87.0%	95.0%	59.0%
Advise weight loss	96.4%	86.8%	95.0%	60.0%
BMI estimation	95.7%	82.8%	59.0%	37.0%

When asked about their attitudes to disease prevention and health promotion, about one third of GPs found some (36.3%) or great (1.1%) difficulty, while about two thirds of GPs found little (20.9%) or no (41.8%) difficulty. In 2000, nearly half the GPs found some (44.5%) or great (4.5%) difficulty while the other half had little (30.3%) or no (20.7%) difficulty respectively.

The main barrier perceived by GPs to the implementation of prevention and health promotion activities was heavy workload in their practice and hence lack of time (45.1%). This compares well with what 56% of the doctors studied in 2000 stated. 17.6% of GPs found lack of consensus and discrepancies in recommendations to be another barrier. 11% of GPs believe that patients have doubts about effectiveness of prevention measures while 9.9% of GPs have insufficient personal training.

GPs found themselves reasonably effective at promoting tobacco reduction (53.8%), alcohol reduction (41.8%), weight loss (53.3%) and regular exercise (69.2%).

Regarding the health behaviour of GPs themselves, 14.3% stated they smoked on a daily basis (cigarettes – 7.7%, cigars/pipe – 6.6%) compared to 15% in 2000 (cigarettes: 12% and cigars/pipe: 3%). 17.6% admitted they were former smokers compared with 29% in the 2000 study. While 37.3% of GPs reported that they do not drink alcohol, 16.% consume 1-2 drinks a week, 44% 3-14 drinks/week and only 2.2% drink 15 units or more (with 1 drink or unit consisting of 100ml wine, 200ml beer or 25ml whisky). The consumption of alcohol by GPs in the 2000 study showed 25% consuming 1- 2 drinks per week, 31% consuming 3 -14 drinks per week and 6% consuming 15 units or more per week.

On a more positive note, 58.3% of GPs exercise regularly (daily or 2-3 times a week), 29.7% exercise rarely (just once a month or week), while 12% of GPs never exercise at all. This shows an overall improvement compared to 2000 where 37% of GPs exercised regularly, 39% exercised rarely and 24% never exercised.

Once a year, 79.1% of GPs check their own blood pressure and 54.4% check their own serum total cholesterol. This also shows an improvement compared to 2000 where 74% of GPs checked their blood pressure yearly and only 37% checked their cholesterol levels yearly.

Family doctors were also asked regarding self screening procedures and vaccinations. There was good feedback for vaccinations. (Table 4).

***Table 4**: Self-screening procedures and vaccinations undergone by GPs*

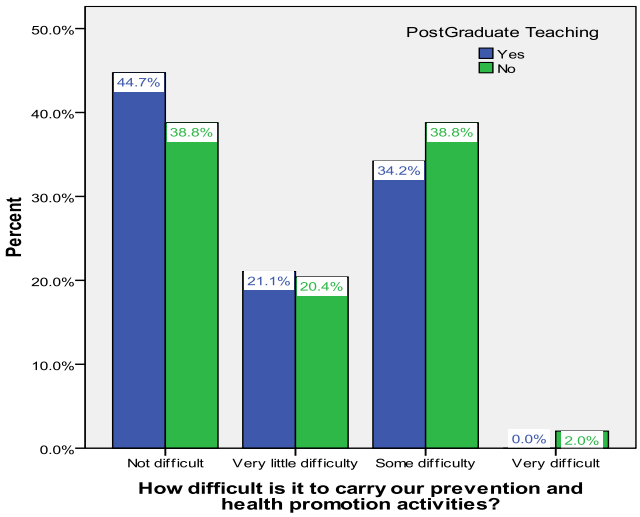
Underwent screening procedure/vaccination	Yes (%) (this study)	Yes (%) (2000 study)
Hepatitis B	93.3	84
Cervical Cytology	85.2	83
Rubella (females)	96.3	91
Clinical breast exam (females)	70.4	83
Digital rectal examination (males)	21	19
Influenza	84.6	62
Tetanus	91.2	89
Test for faecal occult blood	6.6	7

GPs were also requested to provide their weight and height so that the mean body mass index (BMI) could be determined.

The mean BMI for female GPs at 23.9% fell within normal limits (normal range – 20 – 24.9), while the mean BMI for male GPs at 26.7% fell within the overweight category (overweight range – 25-29.9). These values were very similar to the mean BMIs of GPs in 2000 (mean BMI for female GPs – 23.9% and mean BMI for male GPs– 27%).

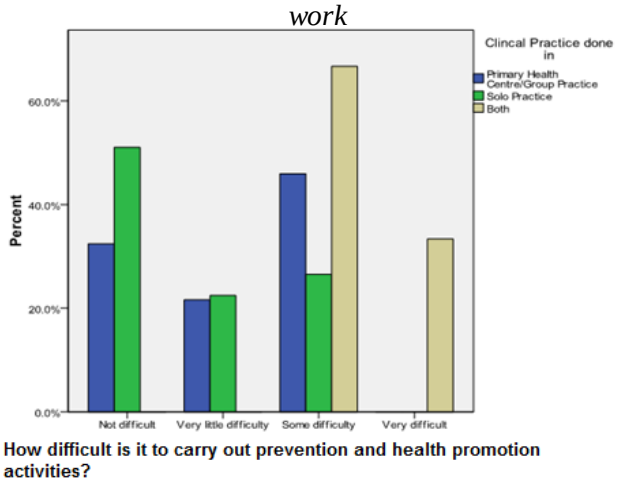
From the cross-tabulations, it is noted that GPs who are involved in post-graduate teaching activities find it easier to do health promotion and disease prevention (p<0.05) (Figure 1).

***Figure 1**: Cross-tabulation*
difficulty in carrying out health promotion with post graduate teaching activities



Doctors in private practice find it easier to promote healthier lifestyles than those working in public centres (p<0.05). Doctors working in both private and public settings find it most difficult (p<0.05) (Figure 2).

Figure 2: Cross-tabulation
difficulty in carrying out health promotion with place of work



As expected, GPs who smoke find it harder to advise smoking cessation (p<0.05) (Figure 3) and doctors who are obese find it harder to advise on exercise (p<0.05) (Figure 4).

***Figure 3**: Cross-tabulation*
smoking history versus effectiveness of smoking cessation

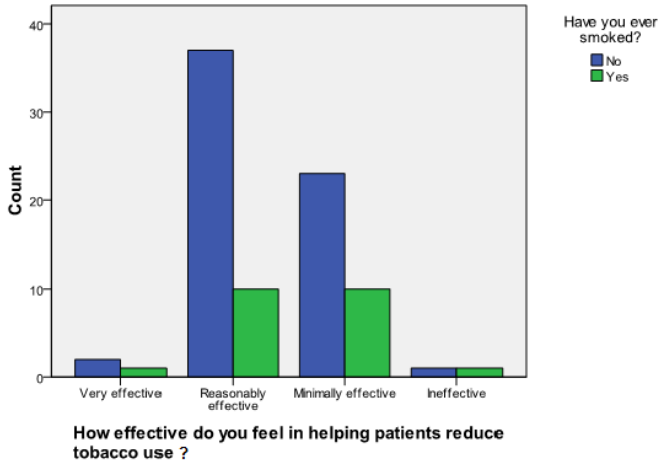
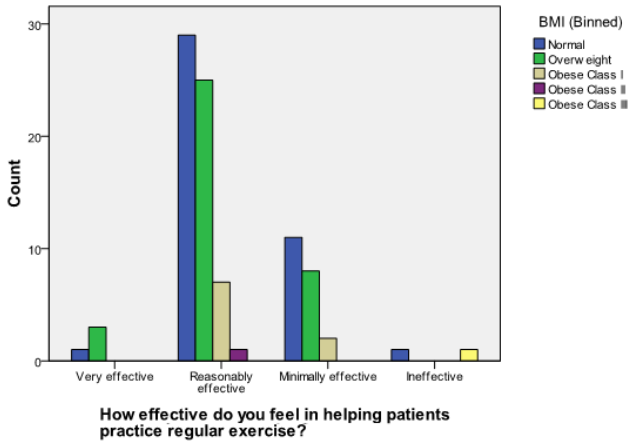


***Figure 4**: Cross-tabulation*
BMI versus effectiveness at helping patients practice exercise



Discussion

This study attempted to evaluate the health promoting service provided by general practitioners. From the two clinical scenarios it was noted that there is a difference between the belief that certain health promotion activities should be done (e.g. decrease in smoking, alcohol and weight) and the GPs actually doing them. In the 2000 study this difference is more drastic. This implies that health promotion is being practised more in 2011 than in 2000; however, there is still room for improvement. This compares well with results of another European project – Health promotion in primary health care: general practice and community pharmacy.[6]

A study in the Netherlands concluded that there was greater awareness of a healthy lifestyle in 2008

compared to 1975, but there were only limited lifestyle behaviour discussions during GP consultations.[7] Another study in Australia suggested that patient-reported GP management of smoking, nutrition, alcohol, physical activity and weight is "less frequent than is optimal", as GPs provide education or advice to "between one-quarter to one-third of those at risk for each risk factor".[8] As regards barriers to health promotion, 10 years down the line, doctors still find their heavy work load and time constraints a major obstacle. The introduction of specialised clinics run by other health care professionals can help here. GPs also have difficulties regarding which guidelines to follow and what to recommend to patients.[4] A possible solution to this obstacle is the distribution to patients of leaflets with specific guidelines on disease prevention which can assist GPs in their busy practices. A similar study conducted in the Netherlands concludes that the main barriers to health promotion include lack of motivation to make lifestyle change, insufficient re-imbursement, lack of proven effectiveness of interventions and lack of overview of health promoting programmes in the neighbourhood.[9] On the other hand, patients in Malta are finding it easier to access health promotion activities.[10]

When it comes to GPs' own health, it seems that family doctors have become more health conscious and looked after their own health better in 2011 than they did in 2000. More doctors check their own cholesterol and blood pressure levels yearly, perform exercise and take vaccinations (Hepatitis B, Rubella, Influenza, Tetanus). Less doctors smoke cigarettes and consume $\geq$ 15 alcoholic drinks per week. Overall, male doctors are still more obese than female doctors. GPs' healthy behaviour helps to encourage patients to improve their lifestyles as they see their family doctors as role models.

From the cross-tabulation results, it is a bonus to see that GPs who are involved in post-graduate teaching activities carry out health promotion activities as they pass this on to GP trainees. A study conducted in Switzerland concludes that the integration of health promotion in medical education may be needed to increase knowledge as well as attitudes of GPs regarding health promotion.[11] Doctors working in both private and public settings find it most difficult to put into practice disease prevention, possibly due to heavy workloads.

Moreover, GPs who smoke find it harder to advise smoking cessation. A European Project (General Practitioners and the Economics of Smoking Cessation in Europe), which explored the extent of GPs' engagement in smoking cessation, reported that various factors are involved, including GP's own smoking status and their attitudes towards smoking cessation advice.[12] On a similar note, doctors who are obese find it harder to advise exercise.

Limitations of the study

The study's response rate was low at 30.3%. Hence it is limited in generalisability. There could also be some desirability bias where doctors reported on what they feel they should do than what they actually do.

Moreover, those GPs who did reply probably had a greater interest in health promotion and disease prevention compared to family doctors in general and this could have affected the results.

Another limitation is lack of analysis of the difference between male and female GPs regarding the percentage difficulty of promoting health and the reason/s for such.

Furthermore, the qualifications of GPs were not recorded. Therefore the association between GPs having insufficient personal training in health promotion and their professional academic roles could not be studied.

Concluding recommendations from focus group

General practitioners would benefit from some training on health promotion, be it in the form of web-based training or seminars as part of Continuing Professional Development (CPD) meetings.

Information from the Health Promotion and Disease Prevention Directorate provided on the website of The Malta College of Family Doctors (MCFD) would also be helpful. Leaflets (both soft and hard copies) can serve as an asset to distribute or share with patients. Buying or renting monitor screens for waiting rooms to display health promotion videos on topics like exercise, nutrition, alcohol, hypertension, hypercholesterolemia, diabetes etc. could also help. GPs should ideally be role models to their patients, through their own healthy lifestyles.

GP trainees would benefit from an optional 2 month placement in the Health Promotion and Disease Prevention Directorate as part of the Specialist Training Programme in Family Medicine.

The Health Promotion and Disease Prevention Directorate (HPDPD) can help by providing flyers/ leaflets (soft and hard copies) and video clips with short clear messages for the public. Moreover, the provision of training for family doctors (e.g. through the MCFD website or through lectures given at CPD meetings) would also help.

The Primary Health Care Department (PHCD) in collaboration with the HPDPD can introduce special clinics to counsel patients wishing to change unhealthy lifestyles. Weight management and smoking cessation classes are already available; however these do not involve a GP in the team. New clinics introduced so far by the PHCD include Lifestyle Clinics, Chronic Disease Management Clinics and Chronic Kidney Disease Prevention Clinics, which models would benefit from being evaluated for their effectiveness.

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References

1. Kearns K, Dee A, Fitzgerald AP, Doherty E, Perry IJ. Chronic disease burden associated with overweight and obesity in Ireland: the effects of a small BMI reduction at population level. BMC Public Health. 2014 Feb 10;14(1):143.
2. Allen C. Supporting effective lifestyle behaviour change interventions. Nurs Stand. 2014 Feb 12;28(24):51-8.
3. Levine D M. The Physician's role in health-promotion and disease prevention. Bull N Y Acad Med. 1987 Dec; 63(10): 950–956.
4. Brotons C, Björkelund C, Bulc M, Ciurana R, Godycki-Cwirko M, Jurgova E, et al. Prevention and health promotion in clinical practice: the views of general practitioners in Europe. Preventive Medicine 2005;40(5):595–601.
5. Sammut MR. Family Doctors and Health Promotion: Do we practice what we preach? MMJ 2006;18:26-31
6. Healthealt [Internet]. Vienna: Health promotion in primary health care: general practice and community pharmacy – a European project. [cited 2001]. Available from: http://www.univie.ac.at/phc/e/tx_1010_18.htm
7. Noordman J, Verhaak P, van Dulmen S. Discussing patient's lifestyle choices in the consulting room: analysis of GP-patient consultations between 1975 and 2008. BMC Fam Pract. 2010 Nov 9;11:87.
8. Harris MF, Fanaian M, Jayasinghe UW, Passey M, Lyle D, McKenzie S, et al. What predicts patient-reported GP management of smoking, nutrition, alcohol, physical activity and weight? Aust J Prim Health. 2012;18(2):123-8.
9. Geense WW, van de Glind IM, Visscher TL, van Achterberg T. Barriers, facilitators and attitudes influencing health promotion activities in general practice: an explorative pilot study. BMC Fam Pract. 2013 Feb 9;14:20
10. Sammut MR. Lifestyle, prevention, change and support: the views and attitudes of patients in Maltese family practice. MMJ 2013;25:41-48
11. Badertscher N, Rossi PO, Rieder A, Herter-Clavel C, Rosemann T, Zoller M. Attitudes, barriers and facilitators for health promotion in the elderly in primary care. A qualitative focus group study. Swiss Med Wkly. 2012 Jul 11;142:w13606.
12. Stead M, Angus K, Holme I, Cohen D, Tait G; PESCE European Research Team Factors influencing European GPs' engagement in smoking cessation: a multi-country literature review. Br J Gen Pract. 2009 Sep;59(566):682-90.