Health behaviour counselling in primary care: general practitioner - reported rate and confidence

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Abstract

Aims: The study aimed to identify variables associated with General Practitioners' (GPs') self-reported rate of health behaviour change counselling and confidence in counselling abilities.

Methodology: This study was a repeat of a similar study carried out at the Mayo Clinic in 2007. The same tool and methodology were used with the permission of the authors. Variables measured by the questionnaire included: participants' characteristics, physical activity, smoking status, healthy eating behaviour, self-reported rate of counselling behaviour, extent of training in counselling, perceived importance of counselling, confidence for health behaviour change counselling. A comparative analysis of the results was made.

Keywords

Primary healthcare, health behaviour, counselling, training, confidence

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Results: The response rate was 70%. Male GPs were somewhat overweight and their exercise frequency on a regular basis was low. Seventy four percent of the GPs never smoked. Quantitative analysis showed that perceived importance of counselling ($p<0.001$) and confidence ($p<0.001$) were associated with GP self-reported rate of health behaviour counselling. Years in practice ($p=0.01$), extent of training ($p=0.01$), and perceived importance of counselling ($p<0.001$) were associated with confidence in counselling in a multiple regression model. Most of the GPs believed that counselling in health behaviour change in primary care was very important and that they had to be role models for their patients as regards health behaviour.

Conclusions: Perceived importance of counselling and confidence in counselling were associated with GP-reported rate of health behaviour counselling but not the extent of training. Years in clinical practice, extent of training, and perceived importance of counselling were significantly associated with confidence in health behaviour counselling. One third of GPs reported difficulty counselling patients on behaviours that they struggled with themselves.

Introduction

Health behaviour counselling has been defined as spending any amount of time discussing, educating, assisting, advising, or providing resources to patients regarding health behaviours.[1] Thus, the term "health behaviour counselling" was chosen for the purpose of this study to describe the range of personal counselling and related behaviour-change activities that are effectively employed in primary care to help patients change health-related behaviours.

Health behaviour counselling in a primary care setting is very important as more people receive care at primary level than in any other clinical setting.[2] According to the current European definition of General Practice/Family Medicine, GPs provide "comprehensive and continuing care to every individual seeking medical care" and are "normally the point of first medical contact within the healthcare system, providing open and unlimited access to its users, dealing with all health problems."[3]

Patients have been reported to value the first contact and the coordinating role of primary care physicians.[4] It was found that 22.8% of the Maltese population consulted a family doctor or a public health centre doctor in the previous 4 weeks.[5] and that 76.3% encountered a family or health centre doctor in the previous year.[6] It has been estimated also that in Malta each patient sees a GP four times a year on average.[6]

Table 1: *Comparison of results of the Malta and Mayo Clinic studies*

	Malta	Mayo Clinic
No of participants (*n*)	208	100
Female (%)	30.3	59.6
Male (%)	40.4	69.7
Mean age (SD)	46.3 (11.64)	45.35 (9.06)
Years in clinical practice (SD)	20.7 (10.86)	16.46 (10.08)
Body mass index (SD)	25.96 (4.55)	26.00 (5.80)
Smoking status		
Current smoker %	10.6	2.0
Ex-smokers %	15.7	10.0
Never smoked %	73.7	88.0
Excercise frequency (Godin score (SD)) †	27.16 (25.10)	37.55 (24.59)
Healthy eating (re-calculated Scale 1 to 9 (SD))*	6.28* (0.96)	6.28 (1.54)
Self-reported rate of health behaviour		15.7 (10.0)
counselling (mean % of patients counselled (SD))	65.26 (22.88)	72.40 (25.07)
Extent of training in counselling (re-calculated Scale 1 to 9 (SD))*	2.74* (1.10)	5.17 (1.79)
Perceived importance of counselling (re-calculated Scale 1 to 9 (SD))*	4.77 *(0.48)	8.47 (1.01)
Confidence in counselling ability (re-calculated Scale 1 to 9 (SD))*	3.98* (0.64)	7.15 (1.26)

SD = Standard deviation

† *The Godin Score is an aggregate activity score derived from a leisure time exercise simple questionnaire to measure a person's leisure time exercise developed by Godin & Shepard, (1985). The more strenuous the exercise and the more frequent the exercise is carried out during a typical 7 day period (one week) the higher is the score in arbitrary units. One episode of strenuous exercise=9 units, moderate excercise=5 units and mild excercise=3 units. A person reporting high scores (>50) is likely to be thin and an effective exercise promotion programme will result in an increase in the activity score.*

Note: The variables marked with an asterisk (*) had a different Likert scale. In the local study the scale was from 0 to 5, where 5 = very much, whereas in the Mayo Clinic study the scale was from 0 to 9, where 9 = very much. The values were re-calculated to a scale of 1 to 9 to enable comparison with the original study.

Literature review

GPs are usually convinced that behaviour change counselling would be helpful, but they often report low self-efficacy about their ability to influence behaviour in the brief medical interview.[7]

Research shows that in general, doctors' personal behaviour can be related to clinical behaviours. In general, doctors who have poor health habits do not fully counsel patients about those habits. However, doctors attempting to improve poor habits counselled patients significantly more often than doctors who were not trying to change their own behaviour.[1]

In the EUROPREV study among Maltese GPs, in 2006 it was found that there were discrepancies between GPs' prevention and health promotion beliefs and their own personal behaviour. This mainly evident through their lack of exercise (63 per cent exercised rarely or not at all), infrequent cholesterol measuring and a BMI of 27 in males.[8]

Most of the programmes designed to train doctors to use a systemic approach in counselling are based on the trans-theoretical model proposed by Prochaska & DiClemente.[9] This model provided doctors with insights into the attitudes of their patients toward smoking and smoking cessation interventions but it needed to be learned and doctors must have some skills in motivational interviewing.[10]

Literature shows that numerous barriers to health behaviour change counselling continue to exist in present-day primary health care settings most of which are still focused on symptom-driven, acute illness care. These barriers include: a focus on more medically urgent issues, lack of time, inadequate doctor training, self-confidence, or re-imbursement, low patient demand, and lack of supportive resources.[11] According to a local study nearly half of the GPs in Malta found some or a lot of difficulty in carrying out preventive/health promotion activities.[8]

An American study showed that, although the vast majority of primary care physicians believed that they were in a unique position to educate patients about risk factors and to help them adhere to their regimens and therefore influence the behaviour of patients, the vast majority felt inadequate in doing so.[12] It has been shown that theory-based intensive counselling in an

Table 2: *Perceived impact of personal health behaviour on counselling attitudes and behaviours*

	True (%)	False (%)
1. I am most likely to counsel patients on the health behaviours that I successfully engage in myself	71 (69)	29 (31)
2. I feel most confident counselling patients on the health behaviours that I successfully engage in myself	83 (86)	17 (14)
3. I have trouble counselling patients on a health behaviour that I struggle with myself	32 (31)	68 (68)
4. I feel like my patients will respond negatively if I counsel them on a health behaviour that I struggle with myself	37 (18)	63 (81)

Note: Values in brackets represent the results from the original study for comparison

at-risk group in primary care had limited value in encouraging physical activity.[13]

Research on behavioural counselling interventions has grown steadily in recent years, but the systematic review of this research is complicated by wide variations in the organisation, content, and delivery of behavioural interventions. These differences in the structure and organisation of practice in various European countries are associated with a large variation in the degree of involvement of the GPs in preventive activities.[14]

Methodology

The same questionnaire entitled "Provider Health Behaviour Survey", used by the researchers at the Mayo Clinic, was utilised after slight adaptations. Approval from the original authors was obtained, and permission was also obtained from the Society of Teachers of Family Medicine, as publishers of the original study. The proposed questionnaire was tested with 10 GPs. At the end of the questionnaire the doctors were invited to make a comment on anything they want about this questionnaire. The survey was completely anonymous, and no attempt was made to identify responders.

All practicing GPs in the Special Register in Family Medicine were targeted to take part in this study. The addresses were obtained from the Medical Council to conform to the data protection act.

The data obtained from the questionnaires was coded and fed into the Statistical Package for Social Sciences (SPSS) statistical analysis programme, as soon as the questionnaires were returned and the data was subsequently analysed. The same methods of data analyses (univariate linear and multiple regression analyses) used in the original study were also used in the local study.

Research ethics approval for the local study was granted by the University of Malta Research Ethics Committee. By completing the questionnaire the participants gave their informed consent to take part in the study.

Results

Three hundred and twenty-six questionnaires were posted, and 29 were returned unanswered. So in effect the study population consisted of 297 GPs. Of these, 208 answered the questionnaire fully and 64 of them left a short comment. The response rate was 70%. Table 1 shows local participants' characteristics compared item-by-item with those from the Mayo Clinic study. Table 2 presents participants' responses (true or false) to statements about the perceived influence of their personal health behaviour on their counselling behaviour and attitudes.

Table 3 represents the results of the univariate linear regression analyses with self-reported rate of health behaviour counselling as the dependent variable. Perceived importance of counselling ($p<0.001$) and confidence ($p<0.001$) were associated with GP self-reported rate of health behaviour counselling. Table 4 represents the multiple regression analysis with self-reported rate of health behaviour counselling as the dependent variable. GP's extent of health behaviour counselling was not associated with self-reported rate of counselling ($p=0.02$).

Table 5 represents individual regression analysis, with confidence for health behaviour counselling as the dependent variable. Years in clinical practice ($p=0.01$), extent of training ($p=0.01$), and importance of counselling ($p<0.001$) were associated with confidence in counselling in a multiple regression model (Table 6).

From a list of 18 previously identified barriers[1] the local GPs selected all the listed barriers but with different frequencies. The barriers mentioned by the local GPs according to their frequencies are shown in Figure 1.

Discussion
Quantitative results

The comparative analyses with the US data were carried out in one analysis and they were not adjusted for differences in the study populations. In fact the study sample in the Mayo

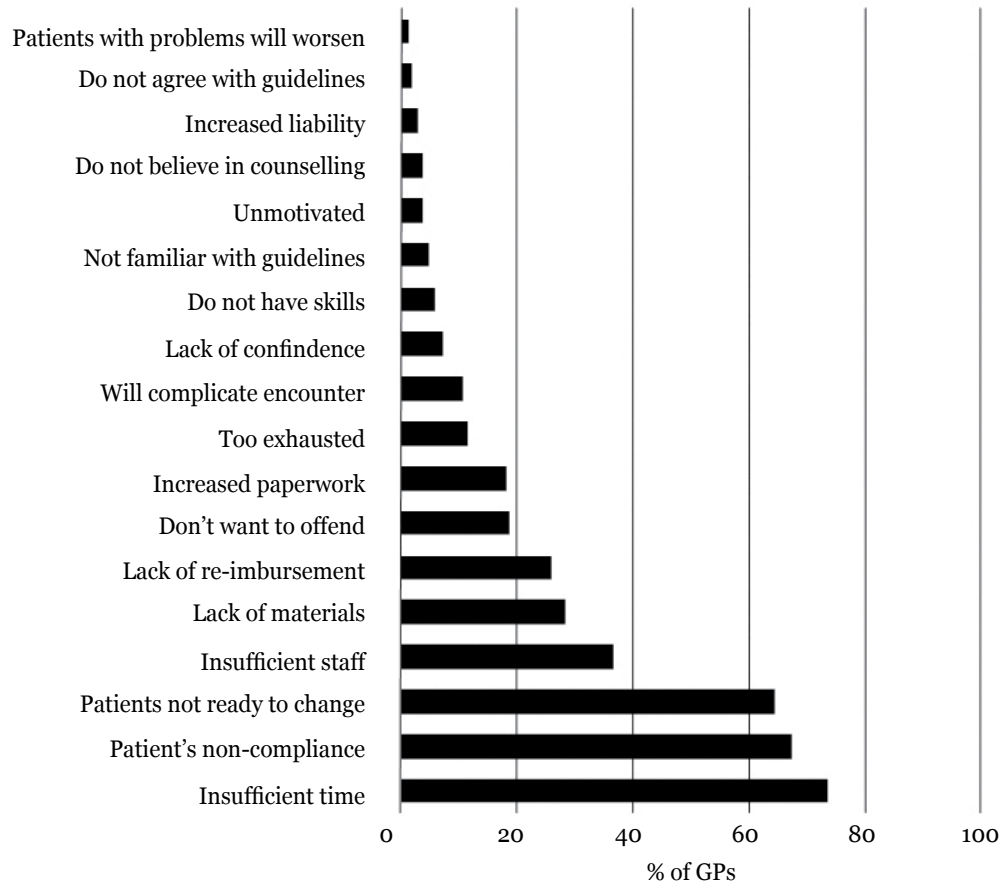**Figure 1:** *The GP's perceived barriers to counselling*

Horizontal bar chart of "% of GPs" (x-axis 0 to 100) against perceived barriers (top to bottom):

- Patients with problems will worsen
- Do not agree with guidelines
- Increased liability
- Do not believe in counselling
- Unmotivated
- Not familiar with guidelines
- Do not have skills
- Lack of confindence
- Will complicate encounter
- Too exhausted
- Increased paperwork
- Don't want to offend
- Lack of re-imbursement
- Lack of materials
- Insufficient staff
- Patients not ready to change
- Patient's non-compliance
- Insufficient time

Table 3: *Variables associated with GP self-reported rate of health behaviour counselling: summary of individual regression analyses.*

Variable	B		SE		β		t-test		*p* value
Gender	- 2.84	(16.66)	3.35	(4.90)	-0.06	(0.33)	-0.85	(3.40)	0.40 (0.01)
Age	0.07	(0.23)	0.14	(0.28)	0.04	(0.08)	0.53	(0.83)	0.59 (0.41)
Years in clinical practice	0.08	(-0.14)	0.15	(0.25)	0.04	(-0.06)	0.54	(-0.55)	0.59 (0.58)
Extent of training in counselling	1.32	(5.50)	0.88	(4.30)	0.10	(0.40)	1.50	(4.23)	0.13 (<.0.001)
Perceived importance of counselling	5.41	(4.04)	1.63	(2.76)	0.22	(0.16)	3.32	(1.63)	0.001 (0.11)
Confidence in counselling ability	4.99	(4.56)	1.20	(1.96)	0.28	(0.23)	4.16	(2.33)	<.0.001 (0.02)
Body mass index	-0.52	(-0.44)	0.35	(0.43)	-0.10	(-0.11)	-1.50	(1.02)	0.13 (0.31)
Exercise frequency	0.01	(0.20)	0.06	(0.10)	0.01	(0.19)	0.15	(1.94)	0.88 (0.06)
Healthy eating	1.28	(1.55)	0.94	(1.64)	0.09	(0.10)	1.36	(0.95)	0.18 (0.35)
Smoking status	-4.36	(-7.70)	5.16	(18.05)	-0.85	(-0.04)	-0.86	(-0.43)	0.40 (0.67)

B – unstandardised coefficient; SE – standard error; β - standardised coefficient.
The figures in the brackets are those of the original study for comparison

Table 4: *Variables associated with GP self-reported rate of health behaviour counselling: summary of multiple regression analysis (n=208)*

Variable	B		SE		β		t-test		*p* value
Extent of training in counselling	3.87	(4.54)	1.65	(1.30)	0.16	(0.32)	2.34	(3.50)	0.02 (0.01)
Confidence in counselling	4.20	(3.17)	1.24	(1.85)	0.23	(0.16)	3.40	(1.72)	0.001 (0.10)

B – unstandardiszed coefficient; SE – standard error; β - standardiszed coefficient.
The figures in the brackets are those of the original study for comparison

Clinic study consisted of providers in a suburban-urban location practicing in a large tertiary care medical centre, while the study population in this study consisted of Family Doctors practicing throughout the Maltese Islands. While the findings of the Mayo Clinic may not truly represent a typical primary care setting, the findings in this study gave a more realistic picture of a primary care setting.

The major determinants of counselling health behaviour were the GPs' personal lifestyles and attitudes and the extent of training. From the remarks written by the participants, it was evident that doctors who follow healthy lifestyles were more eager to counsel patients about health behaviour counselling.

This study showed that GP's extent of health behaviour training (*p*=0.13) was not associated with self-reported rate of counselling as shown in the multivariate regression analysis. This contrasts with the original study where it was found that the association was highly significant (*p*<0.001) in the linear regression analyses and remained significantly associated (*p*=0.01) with GP-reported rate of counselling within the multiple regression model. The lack of association between the extent of training in counselling and health behaviour counselling may be interpreted to be due to the complete absence of post-graduate training and guidelines in health behaviour counselling for Maltese GPs.

On the other hand, both the Mayo Clinic study and this study established the association between the extent of training (classes, conferences, CME) in health behaviour counselling and the confidence for giving health behaviour counselling. This association, although not so clear as in the original study, was somewhat strange considering that in Malta there was no training in counselling for doctors. Yet, GPs considered training to have been important for giving them confidence. This was shown from the statements made by the GPs where training in counselling was given importance. Another way of gaining confidence was by engaging and being successful themselves in healthy behaviours. In doing so they were fulfilling the saying: "practise what you preach" as was stated in the qualitative section. Also, it was evident that GPs who followed healthy lifestyles were more eager to counsel patients about health behaviour counselling.

In all the studies reviewed, including this study, the type of counselling, whether short sessions or extensive sessions, it was

Table 5: *GP variables associated with confidence for health behaviour counselling: summary of individual regression analyses*

Variable	B		SE		β		t-test		*p* value
Gender	-0.09	(30)	0.19	(0.26)	-0.03	0.12)	-0.48	(1.15)	0.63 (0.26)
Age	0.02	(0.03)	0.01	(0.01)	0.18	(0.25)	2.58	(2.50)	0.001 (0.01)
Years in clinical practice	0.02	(0.03)	0.01	(0.01)	0.20	(0.26)	3.0	(2.70)	0.003 (0.01)
Extent of training in counselling	0.12	(0.26)	0.05	(0.07)	0.18	(0.37)	2.55	(3.93)	0.012(<0.001)
Perceived importance of counselling	0.37	(0.48)	0.09	(0.12)	0.27	(0.38)	4.08	(4.08)	0.001 (0.001)
Body mass index	0.01	(0.01)	0.02	(0.02)	0.02	(0.01)	0.33	(0.11)	0.74 (0.91)
Exercise frequency	0.01	(0.01)	0.01	(0.01)	0.10	(0.16)	1.43	(1.63)	0.15 (0.11)
Healthy eating	-0.02	(0.02)	0.05	(0.08)	-0.01	(0.02)	-0.10	(0.20)	0.92 (0.85)
Smoking status	0.14	(0.87)	0.29	(0.90)	0.03	(0.10)	0.48	(0.96)	0.63 (0.34)

B – unstandardised coefficient; SE – standard error; β - standardised coefficient.
The figures in the brackets are those of the original study for comparison

Table 6: *Variables associated with GP confidence to counsel: summary of multiple regression analysis (n=208)*

Variable	B		SE		β		t-test		*p* value
Years in clinical practice	0.02	(0.03)	0.01	(0.01)	0.17	(0.26)	2.60	(3.05)	0.01 (.01)
Extent of training in counselling	0.12	(0.25)	0.05	(0.06)	0.17	(0.35)	2.60	(4.20)	0.01 (<0.001)
Perceived importance of counselling	0.34	(0.44)	0.09	(10)	0.26	(0.35)	3.93	(4.23)	0.001 (<0.001)

B – unstandardised coefficient; SE – standard error; β - standardised coefficient.
The figures in the brackets are those of the original study for comparison

shown that there was no single method which was good for all.[15] The type of counselling to be used depends on the type of health behaviour to be improved. For example, anti-smoking advice is not enough and it was shown that motivational interviewing is 5.2 times more effective.[10] Motivational interviewing needs training to be implemented, and the need for training in MI has been mentioned in the comments made by GPs.

Comments made by GPs

Most GPs considered health behaviour change counselling as an important part of their work and felt that they should always leave some time for counselling. Also a number of GPs considered themselves as "role models" to their patients, and believed that they should practice what they preach.

The GPs commented that lack of time was the major barrier to health behaviour counselling for them. Most of the doctors commented that although they can provide counselling, for such to be effective, they need to be trained in one of the health behaviour models and know how to apply methods of motivational interviewing.[10]

Doctors also stated that "patients' non-compliance" to the advice given by the doctor and "patients not ready to make health behaviour change" were important barriers to counselling in their experience.

Another barrier mentioned by the family doctors that did not feature in the literature review was lack of re-imbursement for health behaviour counselling. This can be interpreted either by the local doctors thinking that they are not paid enough if they include health behaviour counselling as part of the consultation, or that they need to be reimbursed extra for counselling if they consider that counselling is extra work and is not part of the consultation.

Training (as specified in the questionnaire) in health behaviour counselling was mentioned by GPs as a need for more effective counselling and for more confidence when giving counselling. This need for training was noted by both young GPs and established GPs. Despite lack of such training, the majority of GPs in this study felt that they were confident in their counselling abilities. This confidence may be interpreted as due to the perception that clinical experience can give them the confidence to give health behaviour counselling.

Limitations of the study

There are a number of limitations to this study that should be addressed in future research in this area. Self-reporting of personal health behaviour is subject to bias and it is at risk of socially desirable answers. Objective, validated measurement of health behaviour and counselling behaviour is preferable to the single self-reported items developed for use in this study.[1] Only the general confidence in abilities to deliver health behaviour change counselling was assessed and not the confidence for overcoming the specific barriers to counselling. Development and validation of measures that assess the various aspects of GP confidence to counsel patients on health behaviour change, incorporating the constructs consistent with Social Cognitive Theory and self-efficacy measurement would be important to further this line of research.[1]

Another limitation is that the regression analysis did not include the numerous environmental and systems-related barriers that could seriously undermine GPs confidence in their abilities to counsel patients and their rate of counselling.[1] For example, one of the barriers noted was the limited time available to the GP for giving health behaviour counselling. GPs may have felt that although they had the skills to deliver counselling, they didn't have the sufficient time to do so, thus limiting confidence in their abilities to deliver this counselling.

Factors which may have an effect on the doctor-patient relationship and follow-up of care include GPs' job satisfaction, amount of work-related stress and adequate time for counselling during the consultation. The questionnaire contained only simple questions regarding these issues and no further investigation was carried out to study how these factors can affect the doctor-patient relationship and the clinical out-come.

Future research

Additional research is needed to understand the relationship between doctor personal health behaviour, the perception of patient opinion regarding doctor's health behaviour, and how these issues interact and impact doctor-patient communication about health behaviour. Further research in this area is needed to determine if multi-disciplinary training could improve the rate or impact of health behaviour counselling in primary care.

Conclusions and recommendations

Perceived importance of counselling and confidence in counselling were associated with GP self-reported rate of health behaviour counselling. But extent of training in health behaviour counselling was not associated with GP self-reported rate of health behaviour counselling. This could be due to the lack of training for GPs in health behaviour counselling. Years in clinical practice, extent of training, and perceived importance of counselling were significantly associated with confidence in health behaviour counselling. One third of GPs reported difficulty counselling patients on behaviours that they struggled with themselves. Doctors should be trained in motivational interviewing and the trans-theoretical method, which are so important in helping patients recognise the need for a change in their health behaviours.

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