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SHORT REPORT

General practitioners' perceptions of and involvement in health behaviour change: can computer-tailored interventions help?

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Aim: To explore GPs' perceptions of their role in primary prevention, barriers experienced and willingness to accommodate an automated, computer-tailored intervention. **Background:** General practice is an attractive setting for primary prevention of chronic disease. Due to constraints in time and knowledge it is underutilised. **Methods:** Telephone interviews of 13 GPs in Brisbane, Australia, whose patients were previously involved in a lifestyle change research project. Qualitative responses were grouped into themes. **Findings:** GPs perceived their role in lifestyle change as 'educators', 'supporters' and 'prompters'. Smoking and physical activity were addressed more often than alcohol and salt intake. Longer lifestyle-focussed consultations and computer-generated reminders were suggested to overcome barriers. A computer-tailored approach was appreciated due to its minimal impact on practice routine. GPs understand their role in primary prevention but need help to overcome barriers. GP initiated consultations focusing on lifestyle and prevention along with computer support systems could improve capability for prevention in general practice.

Key words: behavioural change; chronic disease; general practice; lifestyle; primary care

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Introduction

Lifestyle choices greatly influence a person's immediate and future health. Lifestyle risk factors contribute to 80% of cardiovascular disease, 90% of type two diabetes and 30% of all cancers (World Health Organization, 2002). General practice provides an attractive setting for lifestyle interventions due to the accessibility, continuity and comprehensiveness of the care provided (Fleming and Godwin, 2008).

Despite strong support for the efficacy of general practice-based health behaviour change interventions, the actual implementation of such interventions remains limited (Klumbiene *et al.*, 2006; Denney-Wilson *et al.*, 2010; Noordman *et al.*, 2010; Harris *et al.*, 2013). Well-recognised barriers include lack of time to engage patients in lifestyle modifications (Ampt *et al.*, 2009; Laws *et al.*, 2009),

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lack of knowledge and training in behaviour change and variable belief in the effectiveness of available strategies (Crosson *et al*., 2010; Lambe and Collins, 2010; Eisner *et al*., 2011). Research indicates that automated and computerised versions of interventions may increase their use (Gribben *et al*., 2000; Carlfjord *et al*., 2009). The '10 Small Steps' project (10SS; Parekh *et al.*, 2012a; 2012b) was designed to overcome many of these identified barriers. The project involved 20 General Practitioners (GPs) in south-east Queensland, Australia, who partnered with researchers to invite patients to complete a lifestyle assessment questionnaire, from which computer-tailored feedback was generated. Individualised feedback and helpful information was provided on physical activity, smoking, alcohol, diet and sun exposure if the patient's lifestyle did not meet current national guidelines on any of these behaviours (Parekh *et al.*, 2012a; 2012b). The intervention operated almost independently of the GPs who were only required to approve communication material, allow use of their electronic letterhead and discuss any questions the patients had regarding the feedback. This minimised the GP's workload but harnessed their authority with patients.

The 10SS intervention was shown to significantly improve a number of health behaviours, demonstrated by improvements in lifestyle scores and individual lifestyle behaviours at three (Parekh *et al.*, 2012a; 2012b) and 12 months (Parekh *et al*., 2014) relative to baseline scores. There have been other successful GP-based 'external' interventions including information technology-based diabetes and weight control projects (Kirk *et al*., 2003, Costa *et al*., 2009) and advice provided by practice nurses (Driehuis *et al*., 2012). Though effective, such interventions are still rarely encountered in the general practice setting. Although researchers might be convinced of the efficacy and ease of implementing computer-tailored interventions in general practice, less is known about GPs' views and beliefs on these matters. This study therefore had two aims: to explore GPs' perceptions and practices of lifestyle modification with their patients; and to seek their views on computer-tailored interventions, based on prior participation in the 10SS project. This information is important for developing lifestyle interventions that are applicable to the general practice setting.

Methods

A semi-structured telephone interview containing open and closed questions was used to elicit the views of GPs who participated in the 10SS project (Parekh *et al.*, 2012a; 2012b). The interviews were conducted between January and March 2012, with approval from the Behavioural and Social Sciences Ethical Review committee of the University of Queensland. The initial 20 GPs who participated in the 10SS project were invited to participate in a telephone interview by letter and follow-up phone call.

The interview questions aimed to elicit GP's beliefs on their role in lifestyle modification and who shared (or might share) this role; their views on the efficacy of GP-based lifestyle interventions; the extent to which they routinely advised and provided resources on specific risk behaviours (alcohol, smoking, diet, salt intake, physical activity); and barriers to providing such advice. The interview also invited feedback on their perception of the 10SS intervention in routine practice.

Data analysis was performed manually. Interview notes were read multiple times and responses were categorised according to the *a priori* categories of: role of GP; topics of lifestyle modification; enabling factors and barriers; perceptions of the 10SS computer-tailored intervention; and other responses relevant to the research questions. Two research team members independently reviewed the data and applied the coding structure; with any discrepancies resolved through discussion.

Results

Two of the original 20 GPs had retired or moved interstate and five declined to participate, leaving 13 participants (response rate of 72%).

What do GPs think about lifestyle intervention?

All GPs viewed their role as 'educator' through providing advice and other resources. Others also identified a 'supporter' role ($n = 8$; 61%); to encourage, support and motivate their patients to live healthily; and a 'prompter' role ($n = 7$; 53%) that involved reminding patients to adhere to healthy lifestyles through regular monitoring, follow-up and open communication.

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Seven GPs (53%) believed the efficacy of such advice was patient dependent and increased with patient motivation and a good doctor–patient relationship. Six GPs (46%) appeared pessimistic and believed that they played only 'a small part' in healthy behaviour change. Even the more optimistic GPs qualified their statements with the need to be 'realistic' as to what their advice could actually achieve.

What lifestyle advice do GPs provide?

Smoking and physical activity were almost universally addressed. Some GPs ($n = 5$, 38%) made smoking and physical activity their first priority due to the plethora of health problems associated with these health behaviours. Alcohol and diet were less consistently addressed and salt intake was rarely addressed. Three GPs addressed salt intake only in the context of a past history of hypertension or hypercholesterolaemia.

One in three GPs stated the reason for the consultation determined the potential for topics to be discussed. Lifestyle advice was given opportunistically by GPs who used the presenting complaint to trigger discussion about health behaviours. Other prompts arose from associated medical conditions or the health of family or friends.

What stops GPs from providing lifestyle advice?

Barriers to promoting healthy lifestyles were reported at the patient, GP and system levels. The former category included the patient's agenda and whether the reason for the consultation led readily to discussion of lifestyle-related issues. The patient's readiness to change and other psychological factors were also identified as influencing their willingness to discuss lifestyle change. Barriers specific to particular lifestyle behaviours were also reported. Barriers to discussing alcohol use with patients arose from social norms about alcohol use, unreliability of reporting by patients and the stigma associated with having a 'drinking problem'. GPs were less likely to discuss salt intake because they did not see it as an important health risk, whereas a lack of educational resources on this issue was also cited as a barrier.

As expected, most GPs ($n = 9$, 69%) identified time as a limiting factor in the provision of lifestyle advice to patients. Solutions suggested by GPs were: longer consultations ($n = 6$; 46%); health behaviour change focused consultations (5, 38%); computer-based reminders (2, 15%); and the use of allied health personnel (1, 7%). GPs suggested flagging lifestyle issues raised during a consultation and addressing them by offering the patient a follow-up consultation and organising future prompts and reminders. Computer-based methods were specifically mentioned for these purposes.

What did GPs think of the 10SS project?

As the 10SS project was completed two years before the interviews and GPs had only a minor role in the implementation of the project, many GPs found it difficult to remember specific details. GPs recalled only a small number of patients mentioning the project to them at the time but the feedback was positive. GPs believed the project had improved their patients' knowledge and acted as a trigger for discussion. Some noted that patients were more receptive if the GP claimed ownership of the project.

All GPs agreed the project placed no additional load on their practice and the majority indicated they would consider use of a similar intervention in the future. They believed the intervention was a useful intermediary and valuable resource that increased patient awareness about health behaviours.

Discussion

This study provides insight into GPs' perspectives on lifestyle modification activities. Similar to observations by Jallinoja *et al.* (2007), GPs in our study regarded their role as one of providing information, support and motivation. Limited consultation times, patient-directed agendas, the patient's state of behavioural change, a reluctance to address specific issues (Passey *et al.*, 2012), and a certain degree of pessimism regarding the extent of behaviour change possible, combine to produce an opportunistic and rather *ad hoc* approach that prioritises a small number of target behaviours. Limited successes can undermine GPs' beliefs in the efficacy of advice and create a further barrier as GPs reduce their efforts to avoid damaging the doctor–patient relationship (McEwan *et al.*, 2005). GPs in this study acknowledged their lack of conviction as a barrier, especially in regard to salt intake.

Our results identified a preference to discuss physical activity and smoking over salt and alcohol intake. This is consistent with other studies that show the discussion of alcohol to be difficult for a variety of reasons, such as under-reporting and associated stigma (Aira *et al.*, 2003, Johansson *et al.*, 2005). In contrast, Denney-Wilson *et al.* (2010) found that alcohol and smoking were more often addressed by GPs than diet and physical activity. Less is known about reluctance to address high salt intake. Some GPs in this study did not discuss salt intake with patients due to a perception it was not an important risk factor. Yet high salt intake has a consistent association with age-related hypertension and the average Australian consumption is twice the recommended daily intake (National Heart Foundation, 2007).

Our findings highlight the patient's consultation agenda as a potential barrier to GP engagement in behaviour change, particularly if that agenda lacks triggers to address lifestyle factors. By mentioning lifestyle-related health issues, patients seem to give GPs 'permission' to broach lifestyle topics. This 'disease-', rather than 'prevention-' focussed approach may explain why smoking and physical activity, with their high associated burden of disease, are among the most widely addressed lifestyle behaviours.

GPs in this study suggested strategies to assist them in instigating lifestyle change with their patients, including longer consultation times, computer-based reminders and lifestyle-specific appointments. This could occur if health checks were reframed to focus on health behaviour change rather than examination and investigations. An opportunity for lifestyle-focussed consultations already exists in Australia in the form of health assessment items funded by Medicare, Australia's national health insurance scheme, though these are currently limited to specific target groups (Department of Health and Ageing, 2012).

Practical computer-based lifestyle interventions such as 10SS, can assist busy GPs to provide lifestyle advice to patients by acting as a consultation trigger, reminder and efficient assessment tool. All of these features have been suggested by GPs as ways in which to assist them with behaviour change in their patients. This study indicated that GPs viewed 10SS favourably as it was easily implemented, added no load to their practice and patient feedback was positive. The intervention approaches evaluated by 10SS could be feasibly translated and delivered on a large scale, outside the research setting, to support GPs' healthy behaviour promotion efforts. For example, GP waiting rooms could be equipped with tablets that include the computer-tailored programme. While patients wait to see their GP they could complete the brief assessment questionnaire, which is then printed. Reading the personalised advice before seeing their GP, would facilitate endorsement of the feedback without a significant impact on the GP's workload. Our findings are based on a small sample of GPs who had previously participated in the 10SS project and may therefore have a particular interest in health behaviour change. The duration of time between the 10SS project and the interview meant GP recollection of specific details was somewhat limited. The interviews were not audio recorded but instead responses were recorded by contemporaneous note taking. While the brevity of responses produced less detailed information, a shorter interview is likely to have enhanced the response rate. Despite these limitations, our study provides insights into the barriers to providing lifestyle advice in general practice and highlights key issues relevant to developing health behaviour interventions in this setting.

Conclusion

GPs are expected to use a multitude of interventions, some of which have been designed by other professional groups. It is important to incorporate the opinions of GPs when designing interventions so they match the context of their intended use. GPs understand the importance of lifestyle behaviour change and their role in educating patients to lead healthier lifestyles but require assistance in this difficult task. In Australia, health promotion is delivered opportunistically in general practice. System, patient and GP factors need to be addressed to enable a more comprehensive approach.

Computer-tailored interventions that place minimal disruption on routine care and GP initiated consultations for behaviour change, offer promising strategies for the large-scale implementation of prevention activities through the general practice setting.

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Conflicts of Interest

None.

Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the Behavioural and Social Sciences Ethical Review committee of the University of Queensland, the Australian National Statement on the Ethical Conduct in Research Involving Humans (2007 – including 2014 update) and with the Helsinki Declaration of 1975, as revised in 2008.

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