Managing chronic conditions in a South African primary care context: exploring the applicability of Brief Motivational Interviewing

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Abstract

Background: Brief Motivational Interviewing (BMI) is an approach to motivating behaviour change in general health care settings. The relevance and applicability of BMI has not been fully assessed in low- or middle-income country settings. This study explored the application of BMI by general practitioners (GPs) in a public sector primary care setting in Cape Town, South Africa.

Methods: How BMI should be adapted and applied was explored by means of a cooperative inquiry group of GPs. This participatory action research involved four action-reflection cycles over a five-month period during which GPs were trained to use BMI skills in their practice and to document and reflect on their experience.

Results: GPs found the emphasis on self-evaluation, personal choice and control particularly useful. Skills in open questioning, exchanging information carefully, assessing ambivalence and readiness to change were also helpful. They had mixed experiences with skills for agenda setting and reducing resistance. The use of specific scaling questions and decision balance sheets were not useful.

Conclusions: BMI has great potential, as the skills learnt were mostly useful and the process had benefits for the participants. If the full potential of BMI is to be realised, the content will need to be adapted to local clinical conditions. BMI needs to be taught using a participatory educational style and its implementation must be accompanied by support from colleagues and management. Future research on this issue should evaluate the process of implementing BMI skills in different primary care settings and sustaining any positive changes that may occur.
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Introduction

The escalating impact of chronic conditions, such as diabetes, asthma, TB and HIV/AIDS, is challenging global health systems to change.[1] In order to meet these complex demands, health policy makers have been urged to reorganise and reorientate services to become more coordinated and integrated, with an emphasis on patient partnership and continuity of care.[2,3] Although a number of suitable intervention strategies have been broadly identified,[4] the practical implementation of these strategies is not self-evident.[5]

On a micro-level, patients and their families need information, motivation and preparation to manage their conditions themselves.[1] Communication around these issues typically involves discussions about behaviour change. Consultations that rely on direct persuasion are commonly counterproductive, resulting in patients arguing more and changing less.[6] A number of useful communication techniques have been identified, but the concept of patient partnership needs creative and skilful application, particularly in middle- or low-income countries, which are worst affected by chronic conditions.[1]

Innovative approaches to communication have developed around a collaborative style of consulting with patients, called Motivational Interviewing (MI). Grounded in a patient-centred approach, MI aims to elicit behaviour change by helping patients to explore and resolve the mixed feelings they have about change.[8] Using an MI style means skilfully tailoring interventions to an

Figure 1: A model of four stages of readiness for change adapted from the transtheoretical model[10]

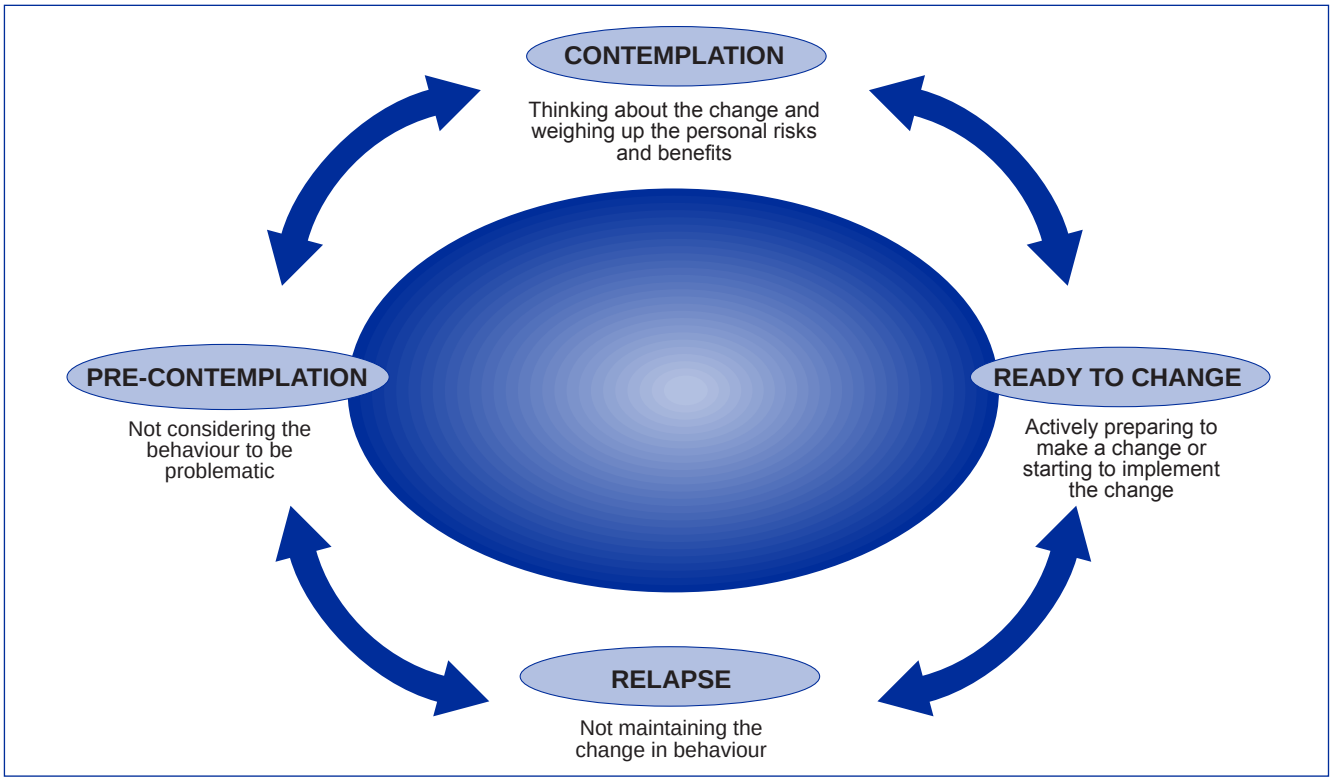

Figure 2: A BMI skill for exchanging information carefully with patients[12]

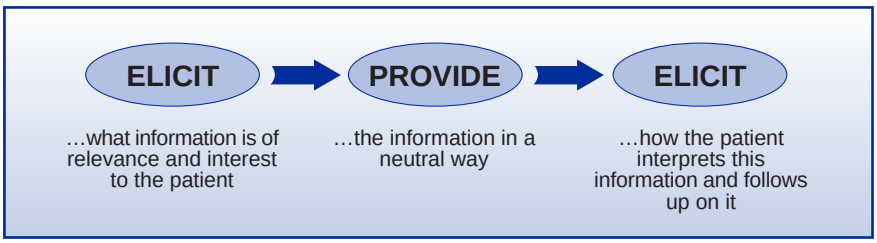

Table I: The spirit underlying motivational interviewing (adapted from Miller and Rollnick[14])

Collaboration	The relationship between the patient and the health worker is a partnership. The patient's point of view is valued and key decisions are negotiated. The health worker aims to generate a climate that is suitable for change.
Evocation	The knowledge, motivations and skills for change are believed to be within the patient. The health worker's approach to consultations is quiet and eliciting in order to draw out the patient's own views and values. Coercive and confrontational approaches tend to be counterproductive.
Autonomy	The patient's right and ability to make independent and informed decisions is encouraged. The health worker comes alongside the patient to play a supportive role, rather than dictate what the patient should do.

assessment of individual patients' readiness to change (see Figure 1).[9]

Brief Motivational Interviewing (BMI) is a particular adaptation of the MI style, designed with general health care settings in mind.[11,12] It consists of a set of quick concrete skills that can be used in single sessions, as brief as five minutes (Figure 2 provides an example).[12]

By trying to implement these skills with patients, health workers are meant to develop an attitude that is consistent with an MI style.[13] This attitude can be described as the spirit of MI (see Table I).

BMI could make a valuable contribution to consultations about behaviour change in South African health care settings. Health status is poor, relative to other middle-income countries.[15] Chronic conditions, poverty-related illnesses and injuries have combined to triple the burden of disease.[15] The HIV/AIDS epidemic in South Africa has highlighted the great importance of changing behaviours to improve people's health. GPs in the public health sector typically work in facilities that are under resourced and have to see high volumes of patients in short amounts of time with little continuity of care.[16] These circumstances make their work not only important, but also extremely demanding.

Although widely applied, almost all MI interventions have been developed and applied in developed country settings. Their applicability has not been extensively researched in developing countries, with only one series of field trials published to date.[17,18] The present paper is the first published attempt to apply BMI

Table II: Summary of the group meetings and BMI skills learnt

Session	Stage of readiness	BMI task	Key BMI skills
1	Introduction/assessing readiness to change	Negotiating where to start Exploring importance and confidence/stage of readiness	Setting the agenda Open-ended questions Scaling questions
2	Pre-contemplation	Exchanging information carefully Reducing resistance	Elicit-provide-elicit Emphasise personal choice and control Personalise risk factors
3	Contemplation	Facilitate examination of ambivalence	Open-ended questions Scaling questions Examining pros and cons
4	Ready to change	Help set goals and targets Build confidence Focus on practical aspects Identify difficult situations Identify supportive relationships	Decision balance sheet Brainstorm solutions Learn from own and others' past successes and failures
5	Relapse	Avoid guilt, blame and shame Reassure that relapse is common Consider the next step – reassess readiness	Take the opportunity to learn from the experience

skills in a primary care setting in a developing country such as South Africa.

Methods

Participatory action research was used to explore how the BMI skills should be adapted and applied by GPs in their primary care context.[19] General practitioners were invited to participate in a cooperative inquiry group (CIG) as part of a local continuing professional development programme.[20]

Interested GPs from the public sector were asked to commit themselves to explore the question, "How should the BMI skills be adapted and applied in our context?". This involved participating in four action-reflection cycles over a five-month period to explore this question in depth. The CIG was facilitated by BM, a family physician with previous training and experience in this methodology.[20] The BMI skills were taught by SA, a social worker who had previous experience of teaching BMI and who works in the area of substance abuse. Each action-reflection cycle consisted of the following steps:

1. Initial planning and training

The general practitioners were systematically trained in specific BMI skills using an approach that involved cognitive input, modelling of skills on video and practice in simulated role-plays. Each of the five group meetings focused on specific skills relevant to a different stage of the readiness to change model as summarised in Table II. At the end of each meeting, members were asked to plan ways in which they could use the skills in their own practice and were given a summary sheet of the skills to place as a desktop prompt in their consulting room.

2. Action

The general practitioners had a month in which to use the skills in their practice in any consultations involving behaviour change

3. Observation

The GPs were asked to make brief notes of what happened in consultations in which they used the BMI skills and to write short narrative accounts in a journal afterwards and to reflect on their own individual experience.

4. Reflection

At all the group meetings, each of the general practitioners was asked to report back on what had happened and then to reflect as a group on the learning that had taken place. A number of techniques were used to facilitate reflection, in particular the use of free attitude interviews, qualitative analysis of narrative reports, and nominal group technique (NGT).[21] All significant group discussions were recorded on audiotape.

At the end of the inquiry, each GP wrote a final document that summarised his or her personal journey and learning. A final consensus of the group's learning was constructed from these documents, together with the qualitative and quantitative data recorded at each of the group's meetings. The final consensus was constructed by the authors and validated by the whole group.

Results

A group of 10 GPs, consisting of nine females and one male, participated in the inquiry. The NGT resulted in group consensus on which skills were useful and not so useful, as well as a ranking of these skills from most important to least important (see Table III). This will be used as a framework for the results and illustrated by quotations from the written reports, recorded interviews and discussions (Table IV).

Emphasising the personal choice and control of patients over their own behaviour change helped the GPs to not carry so much responsibility for making change happen, reducing their frustration, blaming and judging of the patient (see Table IV, quotes 1 and 2).

Table III: Results of the nominal group technique

BMI skills reported to be helpful, ranked in order of importance (1=most helpful)	BMI skills reported to be unhelpful, ranked in order of importance (1=least helpful)
1. Emphasising personal choice and control 2. Exchanging information carefully 3. Examining pros and cons of behaviour change 4. Encouraging self-evaluation 5. Assessing readiness to change 6. Exploring importance and confidence as dimensions of readiness to change 7. Using open-ended questions 8. Being aware of resistance 9. Setting the agenda	1. Using scaling questions 2. Using the decision balance sheet 3. Reducing resistance 4. Setting the agenda

Table IV: Selected illustrative quotations from general practitioners' written reports, recorded interviews and discussions

No	Quotation
1	*"I don't feel it is my fault when people keep coming back with the same problem."*
2	*"I'm not so frustrated - all I can do is start the process."*
3	*"Not wasting time with interventions at the wrong stage can save you time finding where the person is and not just pushing and pushing…"*
4	*"I realised that many patients had contemplated change more often than I had thought."*
5	*"Previously I would have focused on smoking and missed the underlying stress."*
6	*"Normally I would say 'but that's easy to overcome'…I think it shocked him that I just listened. At the end I felt a greater rapport."*
7	*"For this guy saving his marriage and keeping his house was more important than taking his TB treatment."*
8	*"Open ended questions and setting the agenda created a respectful interaction."*
9	*"Patients avoid talking about the thing they must change so the interview becomes directionless. Works if the patient chooses the right topic."*
10	*"A different style from other doctors – I wonder what they say in the passages."*
11	*"The next doctor will say, 'What did this person do?'. "*
12	*"I find it difficult to think back to a time when diabetics and their diets and people with COPD and their smoking etc. were a concern. It feels in a way like we are in the middle of a war and normal concerns are being marginalised."*

Exchanging information carefully using the elicit-provide-elicit (Figure 2) model resulted in GPs tailoring the amount and type of information to the individual patient and with the patient appearing more open to receiving this information. The final eliciting of the patient's response was often missed out.

Facilitating the examination of the pros and cons of changing or not changing helped patients to achieve insight and make more conscious decisions about change. The GPs found this approach more respectful of the patient, as it acknowledged their own reasoning and choices. It also opened up the consultation and resulted in a more holistic understanding of the issues involved. Encouraging self-evaluation was also valued as a fundamental principle of BMI and the GPs realised that this was more empowering and motivating than simply listening to the doctor's evaluation and recommendations.

The concept that patients are at different stages in their readiness to change also enabled doctors to be more respectful and accepting of patients. In many cases, the GPs felt that this saved time in the consultation that would previously have been spent trying to motivate the patient to change when they were not at this stage (see Table IV, quote 3). Conversely, GPs were sometimes surprised when this assessment revealed that the patient was more ready to change than they assumed (Table IV, quote 4).

Exploring importance and confidence as key factors in a person's readiness to change also resulted in greater insight by both the GP and the patient and allowed them to focus on the most relevant area when motivating the patient. GPs found that the use of specific scaling questions to explore importance and confidence, as well as the written decision balance sheet, were difficult for patients with low levels of formal education and were therefore not useful. In addition, patients were often not used to a participatory consultation style.

Open-ended questions, such as "How do you feel about changing…?", were valued by the GPs and often led to a more holistic understanding of their patients' contexts. They also enabled the doctor to appreciate the complexity of behaviour change for impoverished patients who were grappling with other priorities (Table IV, quote 5).

Awareness of the need to "roll with resistance" rather than wrestling with it, helped to maintain good rapport and sometimes led to a deeper understanding of the reasons for resistance (Table IV, quotes 6 and 7).[22]

Perversely, some of the skills recommended for reducing resistance did not work well and some GPs found that they even increased resistance. For example, asking the question "How would you know if … were a problem for you?" did not work well.

Setting the agenda by openly negotiating which aspects of behaviour change to discuss with the patient helped to create an atmosphere of mutual respect (Table IV, quote 8).

Setting an agenda with the patient was also criticised by some GPs, as it could take too long, was not always relevant when there were not multiple issues and could allow the patient to choose the 'wrong' issues to discuss (Table IV, quote 9).

Other findings that emerged from the group's writing and discussions were that the BMI approach improved the quality of the doctor-patient relationship, but also made the doctors feel vulnerable because they were behaving very differently to their colleagues (Table IV, quotes 10 and 11).

The GPs also debated how a BMI intervention should be properly recorded in the medical records. They felt that time pressure, the high workload and poor continuity of care limited their application of the skills. These skills could also take too much time to implement and learn when working in this context. A few of the GPs found the skills hard to engage with when confronted with the daily crisis of the HIV/AIDS epidemic (Table IV, quote 12).

Discussion

The underlying question that this paper explores is how a 'first world' product could be applied in a particular 'third world' context of care for chronic conditions. This study offers new information not only about the applicability of BMI skills themselves, but also about the process of applying them in a primary care context in South Africa.

The data suggest that BMI does have great potential, as the skills were mostly useful and the process had benefits for GPs who were more comfortable and less frustrated with consultations involving behaviour change. They also gained access to a wider repertoire of tools and skills for consultations about behaviour change.

Although the GPs had a strong interest in improving this aspect of their work, there were many occasions when they showed ambivalence about applying the skills. Each GP adopted the skills differently and appeared to adapt the skills to fit their own values and consultation style. It was unclear whether this was a sign of good integration or erosion of the spirit behind MI. There was evidence that some of the skills, although patient-centred in design, were applied in a doctor-centred way. This may relate to how doctor- or patient-centred their orientation was at the start of the training.[23] Although trying new skills may be unsettling initially, the disruption may decrease as the new skills are integrated into the doctors' repertoire.

The use of the skills seemed to facilitate a more holistic approach to care. This, however, was not always of benefit to the GPs, because they were more exposed to patients' psychosocial issues, which left them feeling poorly equipped, uncomfortable and overwhelmed at times. There were also indications that there may be a link between the GP feeling responsible for making change happen and at the same time blaming or judging patients who failed to change.[24] Adopting a different stance that held the patient ultimately responsible also improved the doctor-patient relationship, as there was no longer a need to reject patients who failed to change.

Trying to change health workers' behaviour is as challenging as trying to change patients' behaviour. The study placed a high value on having an educational approach that was congruent with this spirit of MI. The CIG approach to training and assessment appeared to achieve this desired congruence with MI. However, appropriate local examples and teaching tools for chronic conditions such as HIV/AIDS and tuberculosis need to be developed for the South African context.

Applying these BMI skills may require a shift in thinking away from technical, outcome-oriented programmes that are centred on compliance and the need to control patient behaviour, towards a style- and process-oriented approach that is patient-centred. But how should an approach that is the latter be integrated into programmes that are the former? It is clear that the principles behind BMI may be incongruent with some health programmes. There were a number of other barriers to applying BMI skills in this context, including a lack of continuity of care, the challenges of working with patients who speak different languages and thus having to work through interpreters, and low levels of formal education amongst patients.

Conclusion

BMI shows great potential for GPs in this particular chronic care context, where most of the skills were useful and the process had benefits for them. If the full potential of BMI is to be realised, new examples and tools must be developed that are relevant to local priorities and settings. BMI needs to be taught using a congruent participatory educational style and its implementation must be accompanied by support from colleagues and management, an essential part of successful chronic care. Future research on this issue should initially focus on developing relevant examples and tools, evaluating their application in a wider variety of primary care contexts and assessing their effect on behaviour change.

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Competing interests

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REFERENCES

1. World Health Organization. Innovative care for chronic conditions: building blocks for action. Geneva: World Health Organization; 2002.
2. Epping-Jordan J, Bengoa R, Kawar R, Sabaté E. The challenge of chronic conditions: WHO responds. The sooner governments act, the better. *British Medical Journal* 2001;323:947-8.
3. Holman H, Lorig K. Patients as partners in managing chronic disease. Partnership is a prerequisite for effective and efficient health care. *British Medical Journal* 2000;320:526-7.
4. Weingarten SR, Henning MM, Badamgarav E *et al*. Interventions used in disease management programmes for patients with chronic illness – which ones work? Meta-analysis of published reports. *British Medical Journal* 2002;325:925-32.
5. Swartz L, Dick J. Managing chronic diseases in less developed countries: healthy teamworking and patient partnership are just as important as adequate funding. *British Medical Journal* 2002;325:914-5.
6. Rollnick SR, Kinnersley P, Stott NCH. Methods of helping patients with behaviour change. *British Medical Journal* 1993;307:188-90.
7. Clark NM, Gong M. Management of chronic disease by practitioners and patients: are we teaching the wrong things? *British Medical Journal* 2000;320:572-5.
8. Rollnick SR, Miller WR. What is motivational interviewing? *Behavioural & Cognitive Psychotherapy* 1995;23:325-34.
9. Hunt P, Pearson D. Motivating change. *Nursing Standard* 2001;16:45-52, 54-5.
10. DiClemente CC, Velasquez MM. Motivational interviewing and the stages of change. In: Miller WR, Rollnick SR, editors. Motivational interviewing: preparing people for change. New York: Guilford; 2002. p. 201-16.
11. Rollnick SR, Heather N, Bell A. Negotiating behaviour change in medical settings: the development of brief motivational interviewing. *Journal of Mental Health* 1992;1:25-37.
12. Rollnick SR, Mason P, Butler CC. Health behavior change: a guide for practitioners. Edinburgh: Churchill Livingstone; 1999.
13. Emmons KM, Rollnick SR. Motivational interviewing in health care settings: opportunities and limitations. *American Journal of Preventive Medicine* 2001;20:68-74.
14. Miller WR, Rollnick SR. What is motivational interviewing? In: Miller WR, Rollnick SR, editors. Motivational interviewing: preparing people for change. New York: Guilford; 2002. p. 33-42.
15. Bradshaw D, Masiteng K, Nannan N. Health status and determinants. In: Ntuli A, Crisp N, Clarke E, Barron P, editors. South African health review 2000. Durban, South Africa: Health Systems Trust; 2000. p. 89-124.
16. Van Rensburg D, Viljoen R, Heunis C, Janse van Rensburg E, Fourie A. Primary health care facilities survey. In: Ntuli A, Crisp N, Clarke E, Barron P, editors. South African health review 2000. Durban, South Africa: Health Systems Trust; 2000. p. 1-50.
17. Thevos AK, Quick RE, Yanduli V. Motivational Interviewing enhances the adoption of water disinfection practices in Zambia. *Health Promotion International* 2000;15:207-14.
18. Thevos AK, Kaona FAD, Siajunza MT, Quick RE. Adoption of safe water behaviors in Zambia: comparing educational and motivational approaches. *Education for Health* 2000;13:366-76.
19. Reason P. The co-operative inquiry group. In: Reason P, editor. Human inquiry in action. London: Sage; 1988. p. 18-39.
20. Mash B, Meulenberg-Buskens I. 'Holding it lightly': the co-operative inquiry group: a method for developing educational materials. *Medical Education* 2001;35:1108-14.
21. Lloyd-Jones G, Fowel S, Bligh J. The use of the nominal group technique as an evaluative tool in medical undergraduate education. *Medical Education* 1999;33:8-13.
22. Miller WR, Rollnick SR. Responding to resistance. In: Miller WR, Rollnick SR, editors. Motivational interviewing: preparing people for change. New York: Guilford; 2002. p. 98-110.
23. Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam SM, Inui TS. The practice orientations of physicians and patients: the effect of doctor-patient congruence on satisfaction. *Patient Education and Counseling* 2000;39:49-59.
24. Pill R, Rees ME, Stott NCH, Rollnick SR. Can nurses learn to let go? Issues arising from an intervention designed to improve patients' involvement in their own care. *Journal of Advanced Nursing* 1999;29:1492-9.