Eur Spine J (2014) 23 (Suppl 1):S13–S19
DOI 10.1007/s00586-014-3187-0

ORIGINAL ARTICLE

Shared decision-making in back pain consultations: an illusion or reality?

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Received: 29 November 2013 / Revised: 8 January 2014 / Accepted: 9 January 2014 / Published online: 30 January 2014

Abstract
Purpose Amid a political agenda for patient-centred healthcare, shared decision-making is reported to substantially improve patient experience, adherence to treatment and health outcomes. However, observational studies have shown that shared decision-making is rarely implemented in practice. The purpose of this study was to measure the prevalence of shared decision-making in clinical encounters involving physiotherapists and patients with back pain.
Method Eighty outpatient encounters (comprising 40 h of data) were observed audio-recorded, transcribed verbatim and analysed using the 12-item OPTION scale. The higher the score, the greater is the shared decision-making competency of the clinicians.
Results The mean OPTION score was 24.0 % (range 10.4–43.8 %).
Conclusion Shared decision-making was under-developed in the observed back pain consultations. Clinicians' strong desire to treat acted as a barrier to shared decision-making and further work should focus on when and how it can be implemented.

Keywords Shared decision-making · Patient involvement · OPTION instrument · Communication · Patient-centred care · Back pain

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Introduction

As healthcare systems are put under increasing strain, the need to develop quality services which are equitable, timely, patient-centred, effective, safe and efficient is at the forefront of government policy [1]. Shared decision-making (SDM) is described as both a philosophy and a process, whereby clinicians engage patients as partners to make choices about care, based on clinical evidence and patients' informed preferences [2]. At present, a universally agreed definition of SDM is lacking: Indeed, a systematic review cited 161 definitions using 31 concepts (most commonly 'patient preferences' and 'options') [3]. This demonstrates that patients and clinicians widely attribute different meanings to SDM, limiting direct comparison between studies.

SDM is more than just a desirable approach. The principal components [4] (Table 1) are fundamental to

Table 1 The core components of shared decision-making [4]

Identifying and clarifying the issue
Identifying potential solutions
Discussing options and uncertainties
Providing information about the potential benefits, harms and uncertainties of each option
Checking that patients and professionals have a joint understanding
Gaining feedback and reactions
Agreeing a course of action
Implementing the chosen treatment
Arranging follow-up
Evaluating outcomes and assessing the next steps

professional and regulatory standards of conduct for clinicians. It may be applied to any setting where equipoise or multiple treatment options exist and where the 'right' decision depends upon balancing the benefits, risks and likely outcomes of treatment options against the preferences, needs and values of the individual [5]. Both patient and clinician must take an active role in decision-making (including deferral or doing nothing, where appropriate), by remaining informed, motivated and engaged in the process [6].

SDM is likely to promote patient autonomy and a two-way therapeutic relationship between the clinician and patient [7]. It can positively impact on patient experience, satisfaction and participation in care and was better than usual care in treating 405 patients newly diagnosed with depression [8]. However, this effect is not universal. In a study of 75 female patients facing decisions about cancer treatment, communicating uncertainty was negatively related to decision satisfaction [9]. Authors suggested that knowledge about uncertainty might add additional anxiety to individuals facing 'high stakes' decisions.

Furthermore, SDM was shown to increase confidence in decisions in which cardiology patients perceived they were involved, irrespective of their preferences for involvement [10]. Although the effect of SDM on clinical outcomes is far from conclusive, adherence has been shown to be greater where patients mutually agreed decisions with clinicians [11]. Finally, cost savings are implicated [12] and care providers more likely to be protected from litigation where SDM is used [13].

A recent systematic review across multiple clinicians demonstrated that whatever the clinical context, few health providers consistently implement SDM in practice [14], evidencing that creating real partnerships that respect patients' preferences remains a challenge. The extent to which SDM occurs in consultations involving people with back pain is unknown and to date, the majority of research focuses on physicians; therefore, how well it is implemented by physiotherapists in this setting is unclear. A Flemish study suggested SDM in physiotherapy is minimal [15]; however, the generalizability of this data to a UK population is unknown. Therefore, the research aim of this study was to identify the prevalence of SDM in physiotherapists treating back pain in a UK musculoskeletal outpatient setting.

Method

Setting

The study took place in a primary care service in Southern England. The organisation of care is such that, patients were referred to the outpatient physiotherapy service by their General Practitioner and allocated an individual 45-min consultation with a physiotherapist, with follow-up (30 min) appointments as necessary.

Participants

The patient sample comprised adults aged $\geq$18 years, referred with back pain, defined as pain in an area bounded by the 12th thoracic vertebra and ribs superiorly, gluteal folds inferiorly and contours of the trunk laterally. The duration of symptoms was unspecified. Patients with a history of recurrent back pain were included, provided that they had received no physiotherapy/acupuncture within the preceding 3 months in order to identify this episode of back pain as distinct.

The exclusion criteria were: 'red flags' suggesting possible serious spinal pathology (including infection, fracture, cauda equina, spinal cord lesion, tumour and neurological conditions), spinal surgery for this episode, another musculoskeletal disorder more troublesome than the back pain, consultations with other health care professionals (excluding the doctor) for this episode, having a known severe psychiatric or psychological disorder, and people who were unable to communicate in English without assistance.

All physiotherapists working in the setting, registered with the Health and Care Professions Council [16] (the UK professional body for physiotherapists and other healthcare professionals) and currently managing patients with back pain, were eligible.

Data collection

Purposive sampling was undertaken to ensure that, where possible, four gender combinations were included in data collection: male therapist and patient, male therapist/female patient; female therapist/male patient; female

Table 2 The OPTION scale scores

Item	Shared decision-making behaviour [19]	Mean score (min–max)	0 (%)	1 (%)	2 (%)	3 (%)	4 (%)
1	The clinician draws attention to an identified problem as one that requires a decision-making process	0.7 (0–3)	48.8	33.8	16.3	1.3	0.0
2	The clinician states that there is more than one way to deal with the identified problem	0.8 (0–3)	41.3	36.3	21.3	1.3	0.0
3	The clinician assesses patient's preferred approach to receiving information to assist decision-making	0.6 (0–3)	58.8	27.5	10.0	3.8	0.0
4	The clinician lists 'options', which can include the choice of 'no action'	1.4 (1–3)	0.0	73.8	25.0	1.3	3.8
5	The clinician explains the pros and cons of options to the patient	0.8 (0–3)	42.5	38.8	15.0	3.8	0.0
6	The clinician explores the patient's expectations (*or ideas*) about how the problem(s) are to be managed	1.0 (0–4)	41.3	27.5	22.5	6.3	2.5
7	The clinician explores the patient's concerns (*fears*) about how problem(s) are to be managed	0.3 (0–2)	77.5	17.5	5.0	0.0	0.0
8	The clinician checks that the patient has understood the information	1.3 (0–3)	17.5	36.3	43.8	2.5	0.0
9	The clinician offers the patient explicit opportunities to ask questions during decision-making process	1.2 (0–2)	18.8	46.3	35.0	0.0	0.0
10	The clinician elicits the patient's preferred level of involvement in decision-making	0.7 (0–3)	58.8	16.3	22.5	2.5	0.0
11	The clinician indicates the need for a decision-making (*or deferring*) stage	1.2 (0–3)	7.5	70.0	20.0	2.5	0.0
12	The clinician indicates the need to review the decision (*or deferment*)	1.7 (0–4)	5.0	42.5	31.3	18.8	2.5

0 The behaviour is not observed, *1* a minimal attempt is made to exhibit the behaviour, *2* the clinician asks the patient about their preferred way of receiving information to assist decision, *3* the behaviour is exhibited to a good standard, *4* the behaviour is observed and executed to a high standard

therapist and patient. Quota sampling was used to ensure that a maximum of four patients were recruited for each physiotherapist.

Previous work using video-recordings of physiotherapy treatments indicated that the presence of a camera reduced clinicians' empathic behaviours and non-clinical communication and patients were reluctant to undress [17]. Therefore, audio-recording encounters were considered less intrusive. A small, digital Edirol audio-recorder (model R-09HR, Roland Corporation, Japan) was placed in the treatment cubicle. The researcher sat discreetly out of the direct field of vision of either participant and took no active part in the consultation, recording field notes to identify the sequence of events during the encounter.

Outcome measurement

The prevalence of SDM was determined using the OPTION scale for observing patient involvement in decision-making [18]. Although initially devised by Elwyn et al. to rate the discursive content in general practice consultations, the scale contains generic phasing 'applicable to any clinical setting'. It measures the overall shared decision-making process and is unique in comparison with other instruments as it scores the clinician initiated behaviour from an observer's perspective. The revised instrument [19] rates 12 behavioural items (mirroring the core concepts of SDM fundamental to good clinical practice [4]) on an ordinal scale, ranging from zero—"the behaviour is not observed", to four—"the behaviour is observed and executed to a high standard" (Table 2). Scores are summated and scaled to give a percentage score. The higher the score, the greater is the shared decision-making competency attained, with 60 % generally accepted to correlate with the lowest meaningful competency level by the SDM community [19]. Reliability of the OPTION tool has been demonstrated, with the inter-rater intra-class correlation coefficient (0.62), kappa scores for inter-rater agreement (0.71), Cronbach's alpha (0.79) and intra-rater test–retest reliability (0.66), all above acceptable thresholds [19]. In a recent study (using a Dutch translation), the inter-rater intra-class correlation coefficient was reported to be high (0.87) among researchers when it was applied to a physiotherapy setting [15].

Data analysis

The audio-recorded observations were transcribed verbatim and analysed using OPTION by one researcher (LJ) to maintain intra-rater consistency, following a scoring exercise with the lead researcher (LR) using a training disc of audio-recordings [20]. Ambiguities were reviewed by both researchers.

Results

Participants

Sixteen physiotherapists agreed to take part and 12 successfully recruited patients. Their experience ranged from 6 months to 21 years (median 6 years) and their reported experience in a musculoskeletal speciality ranged from 8 days to 18 years (median 4 years). In the UK, allied health professionals are graded according to their theoretical knowledge and clinical experience, with a banding system (bands 1–9). Staff advance by applying for a post at a higher band, rather than through formal examinations. In this study, the staff comprised:

1. $n = 3$ (25 %) Band 5: the entry point for qualified physiotherapists with a bachelor degree. These posts are usually rotational (4 or 6-monthly) through different areas of physiotherapy.
2. $n = 5$ (42 %) Band 6: 'experienced or specialist' grade, with some clinical and theoretical experience in musculoskeletal, with 6 or 9-month rotations.
3. $n = 4$ (33 %) Band 7: 'advanced practitioner' grade, with a non-rotational post.

The reasons for the four staff who did not recruit to the study were: maternity ($n = 2$) and rotation of staff ($n = 2$). Forty-two patients were recruited to the study: 20 females (48 %) and 22 males (52 %). The mean age of those recruited was 47.8 years (range 20–81 years) and the median duration of their current episode of back pain was 28 weeks (range from 7 weeks to 9 years).

There were 42 initial and 38 follow-up appointments (and care episodes ranged from 1 to 6 appointments per patient), giving a total of 80 consultations. Initial consultations were allocated 45 min and the mean duration per consultation was 38 min and 46 s (38:46) (range 26:21–53:16). Follow-up consultations were allocated 30 min and the mean duration per consultation was 20 min and 06 s (20:06) (range 03:36–34:29). In total, 40 h of observational data were collected and analysed.

Main findings

The overall mean OPTION score was 24 % (range 10.4–43.8 %). Table 3 shows a comparison between the mean OPTION score for the initial and follow-up consultations, which was 23.6 % (range 10.4–43.8 %) and 24.5 % (range 10.4–41.7 %) respectively. This is comparable to the overall mean OPTION score.

Table 2 shows mean score for the individual scale items, including minimum and maximum ranges and score distributions. The modal score for 10 out of 12 items in the OPTION scale was one out of a possible four, which indicates the clinicians consistently demonstrated only a 'minimal' attempt to perform these behaviours. The exceptions were; "exploring the patient's concerns", which were consistently 'not observed' and, therefore, scored zero, and "expressing the need to review the decision" which scored two, indicating clinicians regularly achieved the 'baseline skill level'. No SDM behaviour was consistently performed to a 'good' or 'high' standard.

Providing patients with a list of options was the only behaviour that was exhibited by every clinician across all observed encounters ($n = 80$), but in nearly three-quarters (73.8 %) of consultations, this was a done to a 'perfunctory' level. In only 1.3 % of consultations, the option to defer treatment ($n = 2$) or take no action ($n = 1$) was provided: evidence that physiotherapists rarely considered doing nothing a viable option in this cohort of patients with back pain.

Other findings

Notably, in only 15 % of consultations information was provided about the benefits and risks of the treatment options, clinicians had given (42.5 % did not explain the risks and benefits; 38.8 % gave this information for one option). Moreover, in 57.5 % of consultations, clinicians failed to clarify the patient's preferred level of involvement in decision-making and only 10 % explicitly asked patients their preference for receiving information (58.8 % did not enquire as to this). Patients' views or expectations regarding problem management were not sought in 41.3 % of consultations and only 5 % explicitly asked patients to voice personal fears or concerns.

Discussion

Despite policy makers advocating clinicians place patient choice at the centre of decision-making, this study demonstrates that paternalism was evident and SDM was underdeveloped in these back pain consultations. This large data set (40 h of clinical encounters) was from a physiotherapy setting, involving novice staff and experts. As far as we are aware, this is the first UK physiotherapy study to report SDM. One issue with using the OPTION tool was that there was an under-reporting of SDM occurring during

Table 3 Comparison of mean OPTION scores between initial and follow-up consultations

Item	Shared decision-making behaviour [19]	Initial encounters mean score (min–max)	Follow-up encounters mean score (min–max)	Initial + follow-up mean score (min–max)
1	The clinician draws attention to an identified problem as one that requires a decision-making process	0.9 (0–3)	0.5 (0–2)	0.7 (0–3)
2	The clinician states that there is more than one way to deal with the identified problem	0.9 (0–2)	0.8 (0–3)	0.8 (0–3)
3	The clinician assesses patient's preferred approach to receiving information to assist decision-making	0.6 (0–3)	0.6 (0–3)	0.6 (0–3)
4	The clinician lists 'options', which can include the choice of 'no action'	1.3 (0–3)	1.2 (1–2)	1.4 (1–3)
5	The clinician explains the pros and cons of options to the patient	0.7 (0–3)	0.9 (0–3)	0.8 (0–3)
6	The clinician explores the patient's expectations (*or ideas*) about how the problem(s) are to be managed	1.3 (0–4)	0.7 (0–4)	1.0 (0–4)
7	The clinician explores the patient's concerns (*fears*) about how problem(s) are to be managed	0.2 (0–2)	0.3 (0–2)	0.3 (0–2)
8	The clinician checks that the patient has understood the information	1.1 (0–2)	1.5 (0–3)	1.3 (0–3)
9	The clinician offers the patient explicit opportunities to ask questions during decision-making process	1.1 (0–2)	1.2 (0–2)	1.2 (0–2)
10	The clinician elicits the patient's preferred level of involvement in decision-making	0.4 (0–2)	1.0 (0–3)	0.7 (0–3)
11	The clinician indicates the need for a decision-making (*or deferring*) stage	1.1 (0–3)	1.3 (0–3)	1.2 (0–3)
12	The clinician indicates the need to review the decision (*or deferment*)	1.7 (0–3)	1.7 (0–4)	1.7 (0–4)
Mean OPTION scores		23.6 (10.4–43.8 %)	24.5 (10.4–43.8 %)	24.0 (10.4–43.8 %)

interactions when patients voluntarily raised issues, for example, raising a fear about how a problem should be managed and openly talking about their ideas, without any prompting from the clinician, which should be considered when interpreting the data.

Nevertheless, the low levels of SDM found in this study concur with other clinical contexts and health care professions, including studies which have used the OPTION scale to measure patient involvement: In the only other physiotherapy study using the OPTION scale, Dierckx et al. [15] analysed 210 encounters from 13 self-employed clinicians (outside hospital or rehabilitation settings) and reported a mean score of 5.2 % (range 0–31 %), considerably lower than the mean of 24 % identified in this study.

More broadly, Couet et al. [14] conducted a systematic review of 2,489 consultations across 29 international studies, involving general practitioners, cardiologists, psychiatrists, oncologists, dieticians and nurses, treating a variety of medical conditions (most frequently cancer, diabetes and depression) and identified a mean OPTION score of 23 % (9–37 %), similar to the 24 % observed in this study.

In addition, there was no difference in the extent to which shared decision-making occurred in both the initial and follow-up consultations in this setting, despite the mean duration of initial consultations being almost half that of the initial consultations (38:46 versus 20:06 min, respectively).

Limitations

Although quota sampling was used to ensure optimal recruitment, these findings are from a single clinical setting. Furthermore, although the data were gained in a naturalistic setting, the presence of the lead researcher could have influenced communication and behaviour (in particular, the clinicians, although anecdotally this was reported to be minimal). In addition, using the OPTION scale does require decisions to be identified and evaluated; therefore, one researcher (LJ) undertook the scoring to enhance consistency.

The OPTION tool, whilst considered to have acceptable levels of reliability for use in research settings and in comparison with other such measures of patient involvement, is also reported to have construct validity [18]. It was devised as a tool for general practice and is, therefore, not specific to back pain. Nevertheless, its psychometric properties enabled it to be used to explore the finer detail of

back pain consultations in the current study and this is the first reported data for a back pain cohort (albeit in a physiotherapy setting). Scored by a researcher, OPTION provides an external view of decision-making but has no provision to account for participants' *perceptions* of the SDM that takes place, or the influence of non-verbal behaviours. In addition, the tool does not account for the frequency of SDM opportunities; therefore, a clinician may exhibit the behaviour once or many times during the consultation, but this would not be reflected in the scoring.

In considering the final OPTION score, it should also be borne in mind that if a patient independently elicits SDM behaviours, then the clinician would not necessarily need to, which could result in an apparent under-reporting of the clinician's behaviour. Therefore, the score should not be taken as characteristic of a clinician's ability. Despite these caveats, the data gained in the current study have important clinical implications.

Clinical implications

This study has relevance to all clinicians who are involved in assessing and treating patients with back pain. A key consideration is *how* to identify the patients who want to be involved in decision-making, and then determine how best to achieve this. It is erroneous to assume that patients are reluctant to become active partners in SDM; indeed, in the Flemish physiotherapy study, approximately one-third of clinicians assumed patients wished to delegate the decision-making process to the therapist; however, only one in six patients reported this preference [15]. The reasons for such assumptions are unclear and may include: clinicians' attitudes regarding patient characteristics (e.g. age, socio-economic status); the clinician's experience or gender; preference misdiagnosis; or time pressures. The duration of the encounter is likely to be of consequence, as in primary care, longer consultations with general practitioners have coincided with higher level of SDM measured with the OPTION scale [21].

Training to enhance SDM skill in clinicians may be effective [22]; however, there is paucity of practical guidance with respect to accomplishing SDM practice and evidence shows that without practical interventions, most clinicians do not consistently implement it [14]. Clinicians may wish to audio-record consultations with patients' permission and score these, using the OPTION scale which would enable the prevalence of SDM to be measured as a self-directed learning or professional development activity. If recording encounters are not feasible, peer-review (i.e. observation by a colleague) could be an alternative means of gaining feedback and an educational version of OPTION also exists [20] which is a useful tool for training. Furthermore, a recently devised model of "how to do SDM" highlights three simplified stages for clinicians to guide the transition from initial treatment preferences to informed decision-making, whilst providing decision support [23].

SDM is a pre-requisite for good clinical practice, promoting patient-centred practice, empowering patients and increasing their autonomy. It is important to remember that SDM does not just occur during the initial encounter—there is an ongoing need for clinicians to revisit patients' beliefs, knowledge and expectations throughout the care episode, to ensure that the management plan is congruent with the patient's changing ideas, thereby providing the highest chance of success [24]. At every stage, it is important to consider whether including "no treatment" is a valid option.

Future recommendations for research

Patient involvement in decision-making processes is at an early stage of development in physiotherapy consultations for back pain. Despite the possible benefits, there is little evidence to suggest that patients in this or other settings want to be involved in SDM. Once the extent to which patients want to engage with SDM is established, further research is warranted to determine how best this might be achieved.

Conclusion

In the current climate, it is vital that clinicians involve patients appropriately in decisions affecting their healthcare to maximise non-specific treatment effects, reduce the potential for complaints and litigation, and enhance patients' experiences. SDM was under-developed in this cohort of back pain consultations. The physiotherapists' strong desire to treat acted as a barrier to SDM and further work is needed to determine when and how to enable shared decisions to be made.

Acknowledgments The authors wish to acknowledge: the patients and staff in the former Southampton City Primary Care Trust. This work was conducted within the Southampton Musculoskeletal Research Unit. Arthritis Research UK for funding the fellowship of the lead researcher (LR).

Conflict of interest None.

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