Author's response to reviews

Title: Quality of interaction between primary health-care providers and patients with type 2 diabetes in Oman: An observational study

Authors:

Nadia MN Abdulhadi (nadia.abdulhadi@ki.se)
Mohammed A Al-Shafee (shafee4@omantel.net.om)
Claes-Goran Ostenson (claes.ostensson@karolinska.se)
Asa Vernby (asa.vernby@ki.se)
Rolf A Wahlstrom (rolf.wahlstrom@ki.se)

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RESPONSE TO COMMENTS FROM REVIEWERS’
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RESPONSE TO THE COMMENTS FROM REVIEWER 1

The authors’ use of a single observer and lack of any systematic procedures to ensure interobserver reliability continue to be limitations of this study. They have acknowledged these limitations in their Discussion section, although how audiotapes were used is vague. It continues to be unclear why, if interactions were audiotaped, systematic ratings were not made by independent observers as a reliability check; it appears that all of the items covered in Tables 2 and 3 and many of the items covered in Table 1 involved verbal behavior and thus were amenable to coding from audiotapes.

In response to this comment we have conducted a reliability test performed by two independent examiners with experience in the field and with Arabic as their native language. We excluded some items which could not be observed by audiotapes like ‘eye to eye contact’, ‘gesture top continue’, ‘attention all times’ and performing physical examination. In total 16 aspects were rated for the doctors and 23 aspects for the nurses.

We randomly selected 33% (n=30) of the doctors’ consultations (5 from each health centre) and 20% (=17) of the nurses’ interactions.

The ratings were highly correlated using Spearman’s rank correlation procedure. The coefficient for rating of the doctors’ consultations was 0.81 between the Observer and Examiner 1 and 0.74 between the Observer and Examiner 2. The correlation between Examiner 1 and Examiner 2 was 0.78.

For rating of the nurses’ interactions the corresponding coefficients were 0.87 and 0.78 between the Observer and Examiner 1 and Examiner 2, respectively, while the inter-rater coefficient was 0.81.

We also compared the number of total ratings by the Observer that were higher, equal or lower than the mean of the two external examiners’ ratings. For the rating of the doctor’s consultations, the Observer had a lower score for 16 of the ratings and equal (=1) or higher (=13) for 14 of the ratings.

The same kind of comparisons for the nurses’ interactions showed that the Observer’s ratings were lower in 9 of the interactions and equal (=1) or higher (=7) in 8 of the interactions.
Our interpretations of these results are that the scorings of the Observer are at an acceptably accurate level and that the ratings are not systematically skewed. Therefore we have kept the Observers’ scorings in the presentation of results. It should be observed that a lower score in this study indicates a performance that is more in line with the recommendations in the guidelines.

We have included the following text in the Methods section, eighth paragraph, which now reads:

The consultations were recorded using audiotapes for corroboration of some of the verbal communication aspects of the observations. The audiotapes were used by Arabic-speaking members of the research team to confirm or challenge the ratings of the observer. The reliability of the observer’s scorings was checked by comparison with two independent examiners, who made their ratings after listening to 33% (n=30) of the audiotapes of the doctors’ consultations (five at each PHCC) and 20% (n=17) of the nurses’ interactions. Some aspects that could not be observed through listening to the audiotapes were excluded. We found an acceptably high correlation between the external examiners expressed by a Spearman’s rank correlation coefficient of 0.74-0.81 between the Observer and Examiner 1 and 2, respectively, for the doctors’ consultations. There was a similar level of correlation for ratings of the nurses’ interactions (0.78-0.87) between the Observer and Examiner 1 and 2, respectively. The correlation coefficients between Examiner 1 and Examiner 2 were 0.78 and 0.81, respectively. Furthermore, in about half of the cases (16 and 9, respectively) the total scores of the observations of doctors and nurses by the Observer were lower than that of the other two examiners, while it was equal (n=1 for both) or higher (n=13 and 7) for 14 and 8 of the observations, respectively.

In the Discussion, we rewrote parts of paragraph 13 as follows:

Furthermore, the audiotapes were used several times during the phase of data analysis by the Arabic speaking authors (including the observer) to confirm or revise the ratings. The additional reliability test by two independent examiners showed acceptably high levels of correlation and that the scorings by the observer were not systematically higher or lower than those of the independent examiners.
RESPONSE TO THE COMMENTS FROM REVIEWER 2

If we accept that the checklist used and the results gained from checking each item of this list are truly valid and useful for the Omani context I would like to invite the authors to draw upon some guidelines for change. Would the nurses benefit from communication skills training? Should visits to the nurse really be scheduled just before that to the physician: might a separate session increase the autonomy and responsibility of nurses and give a possibility to follow up clinical decisions? Should the number of patients seen per day be limited? Should the national guidelines be changed? How is it possible to adjust the model of patient-centred care to the Omani context? Is it a realistic possibility at all in the authors' view? In other words, the discussion should be expanded to cover some of these issues.

Response: Other researchers have concluded that the role of diabetes nurses varies within and between countries due to variations in health-care systems, accessibility of funds and the preference of individual clinicians. However, health education is probably the most important role of diabetes nurses in many health-care systems (Loveman E et al 2006). Ideally diabetes nurses can contribute to the team work by providing health education, and even assume some of the responsibilities of the physicians, if they are trained, if detailed management protocols are available and if they have enough time (Renders CM. et al 2001, Dudley JD 1980).

The health-care system in Oman has supported improvement in diabetes care through financial support, training of doctors and nurses with respect to diabetes management and by developing detailed guidelines for primary care facilities that clearly described the role of diabetes nurses including health education (MOH, Oman 2003). Despite all these, we found that the diabetes nurses limited themselves in a technical work and had no interactions with the patients. The reasons could be that in the studied health centres the diabetes nurses either shared the room with the doctors in three health centres or counseled the patients in the nurses’ offices. However, interruptions by other nurses and patients were higher in nurses’ offices than in doctors’ offices. We interpret
that the diabetes nurses will benefit from communication skills training if the structural condition is changed by providing special rooms for them during diabetes clinic days. Alongside the role of diabetes nurses in health education, they also provide counseling to the patients. It has been reviewed that the specialist diabetes nurse is in a unique position in that a relationship between patient and diabetes nurse could be maintained over a long period of time and can provide support for patients. Furthermore, it has been shown that patients often contact diabetes nurses in preference to their general practitioners and were generally satisfied with the level of care they received (Loveman E. et al 2003). From what was mentioned above according to the literature, we think that scheduled visits to the diabetes nurse and separate sessions with the patient could increase the autonomy and responsibility of the nurses and help in developing and strengthening the relationships with the patients in Oman. Continuous support of the nurses to sustain changes and ensure enthusiasm is recommended (Woodcock AJ et al 1999).

We have added comments related to these issues in the Discussion, third paragraph as follows:

The nurses to a great extent committed themselves to technical work and had quite limited interaction with the patients, contributing to the low scores. The reasons could partly be that in the studied health centres the diabetes nurses either shared the room with the doctors in three health centres or counselled the patients in the nurses’ offices. Interruptions by other nurses and patients occurred in both situations, but were more common in the nurses’ offices than in the doctors’ offices.

In this study, doctors and diabetes nurses interacted optimally with type 2 diabetic patients in only one health centre, which was the university health centre, where only 3-6 patients were listed for each diabetes clinic day on the appointment lists. We previously mentioned in the discussion that the number of patients cared for could be a reason for the optimal performance in this health centre. In this respect, the results of this study can serve as a point of departure for improving the work situation and organizational
efficiency of diabetes service in Oman through the policy makers in collaboration with the concerned staff by lowering the patient: doctor ratio.

We have referred to this in the Discussion, ninth and eleventh paragraph:

Providing special rooms for diabetes nurses in the PHCCs in Muscat may be helpful in ensuring privacy, contribute to increasing the autonomy and responsibilities of the diabetes nurses and allow interactive participation in teamwork through patients’ counselling and provision of health education. In addition, continuous support to the nurses to actively take part in changes and development of services is recommended (37).

and

Lowering the patient:doctor ratio is important for improving the organizational efficiency of the diabetes service (42) and can be implemented in Oman.

With regard to the point of changing the national guidelines, we already mentioned in the discussion, last paragraph that:

It is known from previous research that dissemination of guidelines alone is not enough to change provider behaviour permanently [49]. More interactive methods such as audit and feedback can be effective in improving professional practice [50, 51], and would be useful also in Oman.

In the same paragraph we have now added the following:

However, lack of compliance with guidelines may indicate short-comings in physician knowledge, implementation problems, lack of belief in guidelines, or problems in patient compliance (53). We suggest that attention and further exploration should be directed to all these areas before revision of the guidelines.

We have also added a comment on these issues in the conclusions:
Barriers to compliance with the guidelines need to be further explored. Improving the work situation mainly for the diabetes nurses and further improvement in the organizational efficiency of diabetes services such as lowering the number of patients in diabetes clinics, are suggested.

Patient-centred care and participation in medical encounters appears to be a cultural phenomenon and depends on a complex interplay of patient personal characteristics such as gender and education, physician’s communication style, and contextual factors (Krupat E. et al 2001, Street R L. et al 2005). Physicians could more effectively facilitate patient involvement by more frequently using partnership-building and supportive communication (Street RL. et al 2005). It has been argued that training of health-care providers to be more patient-centred may improve communication in consultation and increase patients’ satisfaction with their providers’ manner (Lewin SA 2001). We think it is a realistic possibility to adjust the model of patient-centred care to the Omani context by intervention at the level of the health-care providers to promote a patient-centred approach within clinical consultations, and at the level of the patients by providing structured and continuous health education, to improve their perceptions, motivations and self-management.

We have added the following in the Discussion, fourth paragraph:

It has been argued that training of health-care providers to be more patient-centred may improve communication in consultation and increase patients’ satisfaction with their providers’ manner (27). We consider it a realistic possibility to adjust the model of patient-centred care to the Omani context by intervention at the level of the health-care providers to promote patient-centred approach within clinical consultations, and by providing structured and continuous health education to the patients with diabetes to encourage them to participate in the medical dialogue