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**Greater professional empathy leads to higher agreement about decisions made in the consultation.**

**Key words**

Empathy, recall, agreement, decisions, outcomes, dietician

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**Objective:**

To examine the relationship between professional expression of empathy and agreement about decisions made in the consultation.

**Method:**

Consultations between 86 individuals with diabetes and four dieticians were audio-recorded. Immediately following consultations patients and dieticians independently reported decisions made in a booklet. Audio-recordings were coded directly for empathy using an amended version of the empathic communication coding system (ECCS).

**Results:**

Empathy correlated significantly with patient and professional agreement about decisions made in the consultation ( $\tau = .283, p = .0005$ ). Multiple regression analysis indicates that for each dietician the greater the empathy the higher the level of agreement about decisions ( $p < .0005$ ). Professional empathic response to patients statements of challenge was a significant factor in increasing agreement about decisions ( $p = .008$ ).

**Conclusion:**

Results support the hypothesis that greater professional empathy will result in greater agreement about decisions made in consultations.

**Practice Implications:**

Findings have implications for empathy training and provide guidance on the communication skills needed to support expression of empathy. Patient and

professional agreement about decisions made provides a simple marker of effectiveness and highlights the importance of empathy as a seminal component of professional communication skills during a patient consultation.

## 1. Introduction

Clinical empathy is defined as “*The ability to identify an individual’s unique situation (perspective, opinions, ideas, feelings), to communicate that understanding back to the individual and to act on that understanding in a helpful way.*” [1p.S10]. The demonstration of empathy therefore relies on the professional’s communication skills [2-4], in particular the ability to pick up on patient cues and respond to these **accurately**, a process referred to as empathic communication [3].

Empathy is a core element of patient-centred communication [2,5-8]. It has been shown to enhance outcomes [9-11], increase patient satisfaction [12-15], improve patients symptoms [8], reduce anxiety [16], enhance patient enablement [17], reduce time and expense [10,18] and improve compliance [15,19]. Furthermore patients are reported as wanting professionals to be empathic as well as knowledgeable and proficient [20,21].

When professionals respond empathically to patient cues this may encourage patients to contribute more to setting and developing their own goals [22]. Involvement in the decision making process may help to reduce misunderstanding resulting in more favourable outcomes [10,23,24], as both parties would be clearer on the course of action that the patient is planning to take [10, 23-27]. Effective empathic communication may therefore result in self-management education that better meets the patients needs, and as such leads to greater recall of information and decisions made [3]. Greater agreement about decisions may provide an early indicator of potential health improvement through patient enablement defined as “*the degree to which, having seen the professional, patients feel able to: understand their problem(s)/illness; cope with the problem(s)/illness; and keep themselves healthy*”

[17p.6 ], Agreement about decisions may provide a proximal marker of long term behaviour change [28].

It is therefore hypothesised that greater empathy will result in greater patient and professional agreement about decisions made in the consultation.

There is an extensive and growing literature in medicine, nursing and psychological therapy that examines the role of empathy in patient consultations [11,16,18,21,29-38]. Although empathy is recognised as a common factor in dietetic consultations [39-42], there is limited research on the presence of empathy in consultations or regarding the best methods for educating student dietitians to improve empathic communication [29,43]. **This work may help to inform curriculum training for dietitians by identifying the empathic communication skills needed to respond to patient cues.**

The aim of this study is to examine the presence of empathy in the dietetic consultation and explore its relationship concerning agreement about decisions. An observational approach is adopted to explore the dynamics of empathic communication by facilitating examination of patient cues, professional response to these and the subsequent impact of empathy on decisions and agreement about decisions.

**This study will use the empathic communication coding system (ECCS) to code verbal cues and responses, as has been previously used to explore empathy in dietetic consultations [43]. The ECCS has six hierarchical categories for coding empathic responses [44]. Level 1 requires visual input to support coding of the verbal response. As this study will code from audio-recordings, level 1 cannot be used; the verbal response was replaced with a similar negative listening response**

“implicit recognition.” To ensure that the minimal level of patient engagement was captured through audio-recordings “minimal encouragers”, currently found in the ECCS coding under acknowledgement level 3 [6,44], was moved to a level 2. Previous studies have proposed splitting of minimal encouragers from level 3 [43]. Coding for minimal encouragers at level 2 takes into consideration that acknowledgment through empathy is more than a “yes,” “no” or “mmm” response. Behavioural empathy is about demonstrating listening through verbal responses which illustrate the listeners attempts at understanding what has been said. *“It sounds as if things have been tough over the last few weeks”* or *“when you say it was hard to manage, could you explain that a bit more”* (“acknowledgement” and “acknowledgement with pursuit”) demonstrate through reflection and questioning that the professional is listening to what the patient has said and is trying to understand [43,45]. Coded responses for empathy therefore reflect positive engagement and are coded at levels 3-6. Negative empathic responses remain coded at levels 1-2 and denial at 0 (amendments summarised in Table1).

**Table 1: Summary of changes made to coding system levels**

Level	Category description Revised coding level
6	Statement of shared feeling or experience
5	Confirmation
4	Acknowledgement with pursuit
3	Acknowledgement
2	Minimal encouragers <i>(aahh... .. mm...yes.... type response does not convey understanding)</i>
1	Implicit recognition of patient perspective <i>(does not acknowledge central issues -focus on peripheral aspect and changes topic)</i>
0	Denial of patient perspective

Coding system levels adapted from Bylund and Makoul [44p.129].

**These minor revisions maintain the three key levels of the ECCS; “Explicit Recognition and Elaboration of Individual Perspectivity; Implicit Recognition of Individual Perspectivity; and Denial of Individual Perspectivity” as defined by Bylund & Makoul [6p.210].**

## **2. Methods**

### **2.1 Ethics Statement**

The observational study of dietetic consultations was approved by National Health Service (NHS), Research Ethics Committee (ref 08/HO/05/1) and Research and Development departments of each of the participating Trusts.

### **2.2 Recruitment**

#### **Dieticians**

Service leads in five diabetes centres in the South West of England were contacted regarding their willingness to participate in the study. Three centres were willing to participate and **signed consent was** obtained from four diabetes specialist dieticians providing outpatient care to individuals with diabetes. The remaining two services were unable to participate as a result of staffing issues at the time of the study.

#### **Patients**

Study information packs were sent to patients one week prior to their clinic attendance. The study information stressed that whilst participation would not impact on the consultation undertaken, the consultation would be audio-recorded. During scheduled attendance at their clinic appointment, each potential participant was asked



by the researcher about their willingness to participate. Patients were reminded that they could withdraw their consent at any time during the consultation upon which the audio-recording would be erased. Those agreeing, and who meet the inclusion criteria, signed a consent form before entering the clinic room.

### **2.2.1 Inclusion criteria**

Potential participants were people with Type 1 or Type 2 diabetes attending scheduled out-patient appointments at one of the diabetes centres taking part in the study.

Participants were excluded from taking part if they were not fluent in English, were under the age of 16, had learning difficulties, were currently experiencing mental health issues or had a history of drug or alcohol abuse. **Consultations were single observations only.**

**Data collection took place over a 12 month period (4 months in each Trust) and included morning and afternoon clinics.**

### **2.3 Procedure**

Following the consultation both the dietician and patient were presented with a booklet that asked them to independently write down any decisions that had been made. The booklets were completed in separate rooms, with the dietician using the clinic room and the patient an available side room before leaving the clinic. Following completion all booklets were collected by the researcher and assigned an ID code to enable patient and dietician booklets to be matched with the audio-recorded consultation.

### **2.4 Measures**

### **2.4.1 Agreement about decisions**

**Booklets contained the open question “*Please could you write down any decisions that were made in the consultation today?*” Decisions recorded in dietician and patient booklets were matched providing a record of the number of decisions that both parties recalled being made in the consultation. The matching process was repeated three times until no further discrepancies arose.**

### **2.4.2 Analysis of Empathy**

Audio-recordings were coded for empathy using an amended form of the ECCS. Listening to the audio-recordings while coding allowed tonal qualities of voice to aid interpretation. Coding occurred in two stages. The first stage coded the empathic opportunities presented by the patient. These are clear and direct statements made by the patient of emotion (describing how they were feeling: “*I hate having to eat breakfast*”), challenge (recounting experience of a problem: “*I am not sure that this is working?*”) and progress (positive developments in the patient’s condition and ability to cope: “*Changing my bedtime snack has been great, I have not had a hypo’ overnight and I feel so much better in the morning*”). Further descriptions of empathic opportunity statements can be found in [6]. The second stage coded the dieticians response to the empathic opportunity statements into one of six hierarchical categories (Table 1).

Consultations were coded by the first author with reliability checks by a second coder. Inter-coder reliability for empathic opportunity statements was acceptable ( $K = 0.75$ ), as was inter-coder reliability for dieticians empathic responses ( $K = 0.76$ ) [46].

## **2.5 Statistical analysis**

Data was entered and analysed statistically using SPSS v.21.0 for windows (SPSS Inc., Chicago, IL, USA). Correlations were conducted using Kendall's coefficient to test for associations between number and type of empathic opportunities/empathic responses and number of decisions recalled and agreement about decisions. One-way ANOVA explored differences in mean level of empathy and agreement about decisions. Hierarchical multiple linear regression was performed to test for differences within each of the dietician's consultations. **Dummy variables were entered into the regression to allow differences to be explored. Dietician 4 was used as the standard that dietician 1, 2, and 3 were compared against [47].** The dependent variable used for the regression was agreement about decisions. All tests were two-tailed, unless otherwise stated the level of probability significance was  $p < .05$ .

### **3. Results**

#### **Dieticians**

Diabetes specialist dieticians taking part in this study were all female, and all had worked as dieticians for 10-11 years before specialising in diabetes. The number of years working in diabetes ranged from 2 to 15 years.

#### **Recruitment and patients**

**Information packs were sent to 157 patients (47cancelled/failed to attend).** Of the 110 patients attending clinics, 14 patients did not meet the inclusion criteria, and four patients refused to take part. This gave an 84% study recruitment rate among attending patients (92/110).

Three audio- recordings were discarded due to poor recording quality, and a further three were not included in the data analysis, as patients failed to complete the booklet adequately. This left 86 paired data sets with complete audio-recordings for analysis. Sixty five per cent of patients had Type 2 diabetes, 37% were female, mean age was 54 years (SD 1.57). The average duration of diabetes was 11.39 years (SD 1.38). Appointments with the dieticians included both new (65%) and follow-up visits (35%).

**Patients included in the study did not differ significantly from patients not taking part across any of the demographic characteristics considered.**

The mean length of consultations was 32:01 minutes (SD13.40; range 13.42 to 101.41). New appointments had a mean length of 36:24 minutes (SD 14.15) and follow-up appointments a mean length of 24:13 minutes (SD 6.91).

### 3.1 Empathy

Empathic opportunities occurred in all of the dietetic consultations. The mean number of empathic **opportunities** was 9.97 (SD 5.27) with a range of 0-32 per consultation. The majority of the empathic **opportunity** statements made were challenge (54%), followed by progress (29%) then emotion (17%).

Dieticians responses to **empathic opportunities** are summarised in Table 2.

**Table 2: Dietitians responses to empathic opportunities**

Level	Empathy description	<i>n</i> (N=853)	Percentage
6	Shared feeling or experience	0	0
5	Confirmation	53	6.2%
4	Acknowledgement with pursuit	195	22.9%
3	Acknowledgement	235	27.5%

2	Minimal encouragers	252	29.5%
1	Implicit	96	11.3%
0	Denial	22	2.6%

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Dieticians in this study did not respond to empathic opportunities raised by patients by sharing feelings or experiences, therefore no codes were allocated to level six. Dieticians mainly responded to empathic opportunities with “minimal encouragers”, “acknowledgement” and “acknowledgement with pursuit”.

The mean level of empathy (empathic response) was computed for each empathic **opportunity** statement by taking the sum of empathic responses and dividing by the number of empathic **opportunity** statements per consultation [6]. The level of empathy was found to vary according to the type of empathic **opportunity** statement. The highest level of empathy was recorded for statements of challenge 2.84 (SD 0.90), with a mean level of empathy of 2.77 (SD 0.57).

### 3.2 Agreement about decisions

The mean level of agreement about decisions per consultation was 1.65 (SD 1.03) range 0-5 decisions per consultation.

### 3.3. Empathy and agreement about decisions

Correlations using a one-tailed test explored the relationship between empathy and agreement about decisions. There was a significant correlation between empathy and agreement about decisions ( $\tau = .283, p = .0005$ ).

One-way ANOVA indicates significant differences between dietitians on mean agreement about decisions ( $F(3,82) = 5.310, p = .002$ ), and mean level of empathy ( $F(3,82) = 4.351, p = .007$ ) Mean values reported in Table 3.

**Table 3: Dietitians mean scores (SD) for agreement about decisions and empathy**

	Dietitian 1 ( $n = 22$ )	Dietitian 2 ( $n = 26$ )	Dietitian 3 ( $n = 23$ )	Dietitian 4 ( $n = 15$ )
Agreement about decisions	1.00 (0.93)	1.65 (0.85)	2.09 (1.12)	1.93 (0.80)
Level of empathy	2.49 (0.77)	2.74 (0.47)	3.07 (0.41)	2.80 (0.39)

### 3.3.1 Impact of empathic opportunity statements and empathic responses on number of decisions and agreement about decisions

Correlations were conducted to explore relationships between empathic **opportunity statements** /empathic **responses** and number of decisions and agreement about decisions.

High levels of empathy in response to patient statements of challenge were found to correlate significantly with agreement about decisions ( $\tau = .221, p = .008$ ).

The number of patient decisions correlated with dietitians level of empathy ( $\tau = .216, p = .008$ ), and in particular dietitians empathic response to patient statements of challenge ( $\tau = .210, p = .011$ ).

The number of dietitian decisions correlated to level of empathy ( $\tau = .228, p = .005$ ), and in particular empathic response to patient statements of emotion ( $\tau = .231, p = .008$ ) and challenge ( $\tau = .180, p = .028$ ).

### 3.3.2 Relationship between empathy, agreement and different dietitians

**Hierarchical multiple linear regression** analysis was conducted to determine the differences within each of the dietitian's consultations for empathic responses and

agreement about decisions. Dummy variables were created for dietician 1, 2 and 3 allowing the independent variable of dietician to be entered as a dichotomous variable in the regression equation [48]. Product variables (dietician x empathy) were incorporated into the model to allow for the possibility of slope differences between the dieticians [48]. A hierarchical method was used as follows; block 1 dummy variables for dieticians were entered, followed by block 2, the mean empathic response to statements of challenge (as this had a significant correlation with agreement about decisions), followed by block 3 product variables (dietician x empathy). **Block 4 included demographic variables that correlated with agreement about decisions.** The dependent variable used for this regression was agreement about decisions. A significant model emerged:  $F(6, 85) = 8.515, p < .0005$ . This model explains 34.7% of the variance (Adjusted  $R^2 = .347$ ). Table 4 gives information for the predictor variables that were included in the final model.

**Table 4: Hierarchical multiple linear regression model of influence of individual dietitians on level of empathic response to statements of challenge and impact on level of agreement about decisions**

Variables	Agreement about decisions			
	B	SE B	$\beta$	P - value
Block 1 Dietitian 1	-0.76	0.29	-0.32	$p = .010^{**}$
Dietitian 2	-0.25	0.29	-0.11	$p = .401$
Dietitian 3	-0.03	0.28	-0.02	$p = .904$
Block 2 Mean empathic response to statements of challenge	0.42	0.11	0.36	$p < .001^{**}$
Presence of complications	0.73	0.20	0.35	$p < .001^{**}$
Length of consultation	0.15	0.01	0.20	$p = .039^{**}$
SE indicates standard error	Adjusted $R^2$ for block 1			= 0.132
* $p < 0.05$	Adjusted $R^2$ for block 2 (empathy)			= 0.217
** $p < 0.01$	Adjusted $R^2$ for presence of complications			= 0.319
	Adjusted $R^2$ for length of consultation			= 0.347

Data for block 1 and block 2 were added to the model using the enter method. Block 3 product variables were not included in the final model as they did not improve the adjusted  $R^2$  value. Demographic data was added using the stepwise method to produce the final model.

The product variables (dietician x empathy), did not lead to a significant improvement in R square and was not therefore included in the final model (see Table 4) since the relationship between empathy and agreement about decisions did not vary across

dieticians. Within each dietetic consultation where there was greater empathy there was greater agreement about decisions.

## **4. Discussion and Conclusion**

### **4.1 Discussion**

Higher levels of patient and professional agreement about decisions may provide an early indicator of potential health improvement through patient enablement [17]. This study found that greater empathy in the consultation resulted in higher agreement about decisions, supporting the study hypothesis and strengthening trends seen in earlier work [43]. It has been suggested that patient adherence may be mediated by recall [49-50] as well as memory of advice [50] and that agreeing with recommendations through improved collaboration [51] can promote adherence and goal attainment [52]. Greater empathy in the consultation may therefore result in a more collaborative approach to working with individuals, resulting in greater recall.

In this study, empathic responses to statements of challenge were found to be a strong predictor of agreement and resulted in both parties reporting and agreeing on more decisions. Higher levels of empathy were demonstrated by dieticians acknowledging issues raised or acknowledging then exploring these issues further. The skills of “acknowledgement” and “acknowledgement with pursuit” have been demonstrated to increase in physicians following empathy training [30]. This suggests that it is possible to develop skills in this area with the potential to increase agreement about decisions.

Acknowledgement of challenges raised by patients may help to reduce patient frustrations and anxiety, thereby assisting the process of recall [53]. In addition



acknowledgement and exploration of challenges raised indicates professional interest and suggest attempts at trying to understand patient concerns. Consequently patient recall and agreement may indicate that patients concerns are being addressed and responded to appropriately hence patient recall aided by personally relevant decisions being made [27,54-55]. Equally dieticians recall may be aided by the prominence of these decisions due to the nature of the challenges raised and explored with patients. Dieticians responses to challenges as issues are explored during the consultation may in turn lead to further challenges and may account for the high frequency of statements of challenge found in consultations.

Although a variety of empathic opportunities were identified in dietetic consultations statements of challenge were the most prominent (54%) with statements of emotion occurring less frequently (17%), a pattern reflected in other studies [22-23,43, 56]. Emotional problems, although frequent in patients, are seldom raised directly or spontaneously in consultations [56]. In this study dieticians mainly responded to statements of emotion by using “minimal encouragers” as implicit recognition of the patient perspective. Whilst expression of emotions by patients resulted in dieticians recalling more decisions the opposite was true for patients. The cause for the greater number of decisions recalled by dieticians is unknown and was not explored in this study, however nurses have been found to adopt a problem solving approach to emotions raised by patients [57]. It is possible that dieticians in this study have taken a similar problem solving approach to emotional issues.

Egan [2] states that “*feelings, emotions and moods are important but they are not everything*” and goes on to suggest that feelings emotions and moods should be linked to experiences and behaviours that give rise to them. This suggests that “acknowledgement” and “acknowledgement with pursuit” may be useful responses to

emotions raised. However in consultations between cancer patients and nurses implicit recognition of emotions was found to impact on recall, while acknowledgement of emotions did not [22]. Jansen et al [22] suggest a curvilinear relationship between emotional communication and outcomes of communication and state that exploration of emotions may increase anxiety and stress in patients impacting negatively on recall. Whether this holds true for consultations in other clinical settings such as diabetes remains to be seen and requires further exploration. In this study this effect was not seen and may reflect the small pool of professionals studied (N=4) and the low frequency of emotional statements recorded restricting power to detect relationships between these variables. Studies with a larger pool of patients and professionals are required to test whether a curvilinear relationship exists. In addition physician training has demonstrated improvement in acknowledgement of patients expression of emotions [30] indicating that these skills can be taught. It has yet to be seen whether use of these skills in response to emotional statements will increase patient recall and agreement about decisions in consultations to people with diabetes.

The mean number of empathic opportunities recorded in dietetic consultations was approximately four times greater than that reported by others exploring physician and GP consultations [44]. This may reflect longer dietetic consulting times, as this will create more empathic opportunities from patients [56]. In addition patients attending appointments to see a dietician are likely to be arriving with a number of dietary queries. Dietary management is a core component of diabetes self-care, but individual dietary decisions are influenced by multiple factors outside of the condition (such as social, cultural, emotional, religious, economic, and personal preference) on a daily basis. Decisions to alter foods eaten may therefore be accompanied by a range of

competing demands with the potential to create emotional and or challenging responses from individuals. Diet is therefore a complicated area of behaviour change and one that is known to be hard for patients to work with in the long term [58-61]. Patients may therefore be arriving with a greater number of issues/queries regarding dietary management, resulting in a greater number of empathic opportunities being raised, than when visiting the GP/physician. Equally failure to deal adequately with empathic opportunities may result in the same issue being raised again [23] and could be a further cause for the longer consultations [10] and greater number of empathic opportunities.

**The presence of complications in people with diabetes accounted for 10% of the variance on agreement about decisions. Individuals with complications may have more issues to discuss, resulting in a greater number of empathic opportunities potentially creating longer consultations [62-63]. In addition issues discussed may be more pertinent to individuals [64-65], which may result in greater engagement [66], and lead to increased agreement about decisions as seen in this study. Data on agreement about decisions from other studies focusing on nurses/physicians obtained similar agreement levels to those obtained in this study [51,67], suggesting that findings from this study relating to agreement can be generalised.**

By exploring observed empathy this study has been able to identify components of empathic communication that could be addressed in order to improve patient outcomes. In this study empathy accounted for 21.7% of the variance on agreement about decisions. This figure is unsurprising, reflecting the complexity of communication skills needed for effective communication. These communication skills are often interconnected and it can be difficult to isolate single components

[28,68-69]. However by focusing on the core skill of empathy this study has been able to ascertain the role of empathy on the proximal outcome marker of agreement about decisions. Greater empathy in the consultation is one way that communication can positively influence health outcomes [68]. Neumann et al [68] describe an affective-orientated effect; the patient feels listened to and a cognitive/action orientated effect means the professional has a better understanding of the patient, leading to enhanced communication which leads to improved outcomes. In this study empathic communication led to greater recall of decisions. Greater agreement about decisions has the potential to be a marker for the success of the consultation leading to improved patient outcomes [51].

Limitations of this study relate to the small sample of dieticians. This may have created a cluster effect making the results unrepresentative of practice across the profession. In addition observational bias may have distorted behaviour of participants. However the hierarchical regression model clearly illustrated that greater empathy resulted in higher levels of agreement about decisions. The use of video-recordings rather than audio-recordings for analysis would have additionally allowed the inclusion of coding for non-verbal communication behaviours. Although non-verbal communication is an important contributor to the communication process it is likely that professionals who miss the obvious verbal cues are less likely to respond to and pick up on the more subtle cues of non-verbal communication [39]. Studies involving wider groups of professionals are needed to explore the presence of empathy in more detail, to ascertain whether a curvilinear relationship does exist between responses to emotional statements and recall in consultations other than oncology. **The movement of “minimal encouragers” from level 3 to level 2 in the empathic coding categories resulted in lower mean empathy scores [6,43] and**

**may have impacted on the significance of findings. Further work is needed to validate changes made to the coding tool for audio-recording analysis.** In addition qualitative analysis would provide further insight into the sequential effect of empathic responses and empathic opportunities in the conversation flow and the overall impact on agreement about decisions and longer term health outcomes.

## **4.2 Conclusion**

Empathic opportunities occur frequently in dietetic consultations. Greater levels of professional empathy resulted in a greater number of decisions being recalled by both parties and greater agreement about decisions. Empathic responses to statements of challenge were found to be predictive of agreement about decisions. Further exploration of emotional statements is required to determine how best to respond in this clinical setting in order to determine impact on decisions recalled and agreement about decisions. Further studies adopting qualitative and quantitative methodologies are also required to explore the relationship between empathy and agreement about decisions, to establish their impact on long-term patient outcomes [68].

## **4.3 Practice Implications**

Developing professional empathy may be one of the mechanisms through which improvement in long-term patient outcomes occurs. Previous literature indicates that training in communication skills is effective in improving professionals ability to respond to patient cues [30]. Therefore, to be effective in improving outcomes, communication skills training needs to address the issue of professional responses of “acknowledgement”, “acknowledgement with pursuit” and “confirmation” to challenges raised by patients. Agreement about decisions can act as a simple marker

of the empathic communication skills used by professionals in the consultation, and could be used to indicate the need for further training in this area.

### **Conflicts of Interest**

All authors declare that they have no conflict of interest regarding this manuscript.

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## References

- [1] Mercer SW, Reynolds WJ. Empathy and quality of care. *Br J Gen Pract* 2002;52:S9–13.
- [2] Egan G. Seventh edition: *The Skilled Helper: A Problem-Management and Opportunity - Development Approach to Helping*. Brooks/Cole, 2002. p.102.
- [3] Norfolk T, Birdi K, Walsh D. The role of empathy in establishing rapport in the consultation: A new model. *Med Educ* 2007;41:690-7.
- [4] Ong L M, Visser M R, Lammes FB, de Haes JC. Doctor–patient communication and cancer patients’ quality of life and satisfaction. *Patient Educ Couns* 2000;41:145-56.
- [5] Epstein RM, Franks P, Fiscella K, Shields CG, Meldrum SM, Kravitz RL, Duberstein PR. Measuring Patient-centred communication in patient–physician consultations: Theoretical and practical issues, *Soc Sci Med* 2005;61:1516-28.
- [6] Bylund CL, Makoul G. Empathic communication and gender in the physician-patient encounter. *Patient Educ Couns* 2002;48:207-16.
- [7] Rogers CR. *A Way of Being*. Boston: Houghton Mifflin Company, 1980.
- [8] Stewart MA. Effective physician-patient communication and health outcomes: A review. *Can Med Assoc J* 1995;152:1423-33
- [9] Larson EB, Yao X. Clinical Empathy as Emotional Labor in the Patient-Physician Relationship. *J Am Med Assoc* 2005;293:1100-6.
- [10] Levinson W, Gorawara-Bhat R, Lamb J. A study of patient clues and physician responses in primary care and surgical settings. *J Am Med Assoc* 2000;284:1021-7.
- [11] Riess H, Kelley JM, Bailey RW, Dunn EJ, Phillips M. Empathy Training for Resident Physicians: A Randomized Controlled Trial of a Neuroscience-Informed Curriculum. *J Gen Intern Med* 2012;27:1280-6.
- [12] Kim SS, Kaplowitz S, Johnston MV. The effects of physician empathy on patient satisfaction and compliance. *Eval Health Prof* 2004; 27:237-51.
- [13] Neumann M, Wirtz M, Bollschweiler E, Mercer SW, Warm M, Wolf J, Pfaff H. Determinants and patient-reported long-term outcomes of physician empathy in oncology: A structural equation modelling approach. *Patient Educ Couns* 2007;69:63-75.
- [14] Stewart M A. What is a successful doctor patient interview? a study of interactions and outcomes. *Soc Sci Med* 1984;19:167-75.
- [15] Zachariae R, Pedersen CG, Jensen AB, Ehrnrooth E, Rossen PB, von der MH. Association of perceived physician communication style with patient satisfaction,

distress, cancer-related self-efficacy, and perceived control over the disease. *Brit J Cancer* 2003;88:658-65.

[16] Verheul W, Sanders A, Bensing J. The effects of physicians' affect-oriented communication style and raising expectations on analogue patients' anxiety, affect and expectancies. *Patient Educ Couns* 2010;80:300-6.

[17] Mercer SW, Neumann M, Wirtz M, Fitzpatrick B, Vojt G. General practitioner empathy, patient enablement, and patient-reported outcomes in primary care in an area of high socio-economic deprivation in Scotland- a pilot prospective study using structural equation modelling. *Patient Educ Couns* 2008;73:240-5.

[18] Bellet PS, Maloney MJ. The importance of empathy as an interviewing skill in medicine. *J Am Med Assoc* 1991;266:1831-2.

[19] Epstein RM, Hadee T, Carroll J, Meldrum SC, Lardner J, Shields CG. "Could this Be Something Serious?" Reassurance, Uncertainty, and Empathy in Response to Patients' Expressions of Worry. *J Gen Intern Med* 2007;22:1731-9.

[20] Hancock REE, Bonner G, Hollingdale R, Madden AM. 'If you listen to me properly, I feel good': a qualitative examination of patient experiences of dietetic consultations. *J Hum Nutr Diet* 2012;25:275-84.

[21] Spiro H. What is empathy and can it be taught? *Ann Intern Med* 1992;116:843-6.

[22] Jansen J, Weert JCM, de Groot J, van Dulmen S, Heeren TJ, Bensing JM. Emotional and informational patient cues: The impact of nurses' responses on recall. *Pat Educ Couns* 2010;79:218-24.

[23] Butow PN, Brown RF, Cogar S, Tattersall MHN, Dunn SM. Oncologists reaction to cancer patients' verbal cues. *Psycho-Oncol* 2002;11:47-58.

[24] Salmon P, Dowrick CF, Ring A, Humphris GM. Voiced but unheard agendas: Qualitative analysis of the psychosocial cues that patients with unexplained symptoms present to general practitioners. *Br J Gen Pract* 2004;54:171-6.

[25] Ammerman AS, Lindquist CH, Lohr KN, Hersey J. The Efficacy of Behavioural Interventions to Modify Dietary Fat and Fruit and Vegetable Intake: A Review of the Evidence. *Prev Med* 2002;35:25-41.

[26] Bensing J. Bridging the gap. The separate worlds of evidence-based medicine and patient-centred medicine. *Patient Educ Couns* 2000;39:17-25.

[27] Michie S, Miles J, Weinman J. Patient -centredness in chronic illness: What is it and does it matter? *Patient Educ Couns* 2003;51:197-206.

[28] Street RLJr, Makoul G, Arora NK, Epstein RM. How does communication heal? Pathways linking clinician-patient communication to health outcomes. *Patient Educ Couns* 2009;74:295-301.



- [29] Spraggins EF, Fox EA, Carey JC. Empathy in clinical dieticians and dietetic interns. *J Am Diet Assoc* 1990;90:244-9.
- [30] Bonvicini KA, Perlin MJ, Bylund CL, Carroll G, Rouse RA, Glodstein MG. Impact of communication training on physician expression of empathy in patient encounters. *Patient Educ Couns* 2009;75:3-10.
- [31] Brunero S, Lamont S, Coates M. A review of empathy education in nursing. *Nurs Inq* 2010;17:65-74.
- [32] Hemmerdinger JM, Stoddart SD, Lilford RJ. A systematic review of tests of empathy in medicine. *BMC Med Educ* 2007;2:24.
- [33] Hope-Stone LD, Mills BJ. Developing empathy to improve patient care: a pilot study of cancer nurses. *Int J Palliat Nurs* 2001;7:1465-50.
- [34] Stepien K A, Baernstein A. Educating for Empathy. *J Gen Intern Med* 2006;21:524-30.
- [35] Yu J, Kirk M. Measurement of empathy in nursing research: Systematic review. *J Adv Nurs* 2008;64:440-54.
- [36] Elliott R, Bohart AC, Watson JC, Greenberg, Leslie S. Empathy. *Psychotherapy* 2011;48(1):43-9.
- [37] Clark AJ. Empathy: An Integral Model in the Counseling Process. *J Couns Dev* 2010;88(3):348-56.
- [38] Schnur JB, Montgomery GH. A systematic review of therapeutic alliance, group cohesion, empathy, and goal consensus/collaboration in psychotherapeutic interventions in cancer: Uncommon factors? *Clin Psychol Rev* 2010;30(2):238-47.
- [398] Cant RP, Aroni RA. Exploring dieticians' verbal and nonverbal communication skills for effective dietician-patient communication. *J Hum Nutr Diet* 2008; 2:502-11.
- [40] Isselmann C, Deubner LS, Hartman M. A nutrition counseling workshop: Integrating counseling psychology into nutrition practice. *J Am Diet Assoc* 1993;93:324-6.
- [41] Maclellan DL. Dietician's Opinions and Experiences of Client -Centred Nutrition Counselling. *Can J Diet Prac Res* 2006;67:1119-24.
- [42] Pearson D, Rapoport L. Fourth edition: Changing health behaviour In: Thomas B, Bishop J, editors. *Manual of Dietetic Practice*. Chichester: Wiley, 2007.
- [43] Goodchild CE, Skinner TC, Parkin T. The value of empathy in dietetic consultations. A pilot study to investigate its effect on satisfaction, autonomy and agreement. *J Hum Nutr Diet* 2005;18:181-5.

- [44] Bylund CL, Makoul G. Examining empathy in medical encounters: an observational study using the empathic communication coding system. *Health Commun* 2005; 18:123-40.
- [45] Gable J. Second edition: *Counselling Skills for Dieticians*. Blackwell Publishing, 2007.
- [46] Bakeman R, Gottman, JM. Second edition: *Observing Interaction: An Introduction to Sequential Analysis*. Cambridge: Cambridge University Press, 1997;71-4.
- [47] Field A. 4<sup>th</sup> Edition. *Discovering Statistics using IBM SPSS Statistics*. Sage, 2013:321-3
- [48] Calder J, Sapsford R. *Multivariate Analysis* In: Sapsford R, Jupp V, editors. *Data Collection and Analysis*. London: Sage, 1996;268-74.
- [49] Bartlett EE, Grayson M, Barker R, Levine DM, Golden A, Libber S. The effects of physician communication skills on patient satisfaction; recall, and adherence. *J Chron Dis* 1984;37:755-64.
- [50] McCann S, Weinman J. Encouraging patient participation in general practice consultations: Effect on consultation length and content, patient satisfaction and health. *Psychol Health* 1996;11:857-69.
- [51] Heisler M, Vijan S, Anderson RM, Ubel PA, Bernstein SJ, Hofer TP. When do patients and their physicians agree on diabetes treatment goals and strategies, and what difference does it make? *J Gen Intern Med* 2003;18:893-902.
- [52] Bogardus ST, Bradley EH, Williams CS, Maciejewski PK, Gallo W T, Inouye SK. Achieving Goals in Geriatric Assessment: Role of Caregiver Agreement and Adherence to Recommendations. *J Am Geriatr Soc* 2004;52:99-105.
- [53] Weston WW, Brown JB, Stewart MA. Patient-Centred Interviewing Part I: Understanding Patient's Experiences. *Can Fam Physician* 1989; 35:147-51.
- [54] Shultz JA, Sprague MA, Branen LJ, Lambeth S. A comparison of views of individuals with type 2 diabetes mellitus and diabetes educators about barriers to diet and exercise. *J Health Commun* 2001;6:99-115.
- [55] Thorne S, Paterson B, Russell C. The Structure of Everyday Self-care Decision Making in Chronic Illness. *Qual Health Res* 2003;13:1337-52.
- [56] Zimmermann C, Del Piccolo L, Finset A. Cues and Concerns by Patients in Medical Consultations: A Literature Review. *Psychol Bull* 2007;133:438-63.
- [57] Hsu I, Saha S, Korthuis PT, Sharp V, Cohn J, Moore, RD, Beach, MC. Providing support to patients in emotional encounters: A new perspective on missed empathic opportunities. *Pat Educ Couns* 2012;88:436-42.

- [58] Peyrot M, Rubin RR, Lauritzen T, Snoek FJ, Matthews DR, Skovlund SE. Psychosocial problems and barriers to improved diabetes management: results of the Cross-National Diabetes Attitudes, Wishes and Needs (DAWN) Study. *Diabet Med* 2005;22:1379-85.
- [59] Travis T. Patient Perceptions of Factors That Affect Adherence to Dietary Regimens for Diabetes Mellitus. *The Diabetes Educator* 1997;23:152-6.
- [60] Webb K L, Dobson AJ, O'Connell DL, Tupling HE, Harris GW, Moxon JA, Sulway MJ, Leeder SR. Dietary compliance among insulin-dependent diabetics. *J Chron Dis* 1984;37:633-43.
- [61] Williamson AR, Hunt AE, Pope JF, Tolman NM. Recommendations of dieticians for overcoming barriers to dietary adherence in individuals with diabetes. *Diabetes Educ* 2000;26:272-9.
- [62] Albright TL, Parchman M, Burge SK, RRNeST Investigators. Predictors of self care behavior in adults with type 2 diabetes: an RRNeST study *Fam Med* 2001;35:354-60.
- [63] Shah J H, Murata GH, Duckworth WC, Hoffman RM, Wendel CS. Factors Affecting Compliance in Type 2 Diabetic Patients: Experience from the Diabetes Outcomes in Veterans Study (DOVES). *Int J Diab Dev Ctries* 2003;23:75-82.
- [64] Bogardus ST, Bradley EH, Williams CS, Maciejewski PK, van Doorn C, Inouye S K. Goals for the Care of Frail Older Adults: Do Caregivers and Clinicians Agree? *Am J Med* 2001;110:97-102.
- [65] Kravitz R L, Hays RD, Sherbourne CD, DiMatteo R, Rogers WH, Ordway L, Greenfield S. Recall of Recommendations and Adherence to Advice Among Patients with Chronic Medical Conditions. *Arch Int Med* 1993;153:1869-78.
- [66] Flocke S A, Stange K C. Direct observation and patient recall of health behavior advice. *Prev Med* 2004;38:343-9.
- [67] Parkin T, Skinner TC. Discrepancies between patient and professionals recall of an outpatient consultation. *Diabetic Med* 2003;20:909-14.
- [68] Neumann M, Bensing J, Mercer S, Ernstmann N, Ommena O, Pfaff H. Analyzing the “nature” and “specific effectiveness” of clinical empathy: A theoretical overview and contribution towards a theory-based research agenda. *Patient Educ Couns* 2009;74:339-46.
- [69] Smith A, Juraskova I, Butow P, Miguel C, Lopez A, Chang S, Brown R, Bernhard J. Sharing vs. caring-The relative impact of sharing decisions versus managing emotions on patient outcomes. *Patient Educ Couns* 2011;82:233-9.