

Research Article

Open Access

Barriers to Addressing Psychological Problems in Diabetes: Perspectives of Diabetologists on Routine Diabetes Consultations in Denmark

CleaBruun Johansen^{1*}, Rikke Torenholt¹, Eva Hommel², Minna Wittrup², Bryan Cleal¹ and Ingrid Willaing¹ ¹Steno Health Promotion Center, Steno Diabetes Center, NielsSteensensVej 8, 2820 Gentofte, Denmark ²Steno Diabetes Care Center, Steno Diabetes Center, NielsSteensensVej 2, 2820 Gentofte, Denmark

Abstract

Background: Diabetes is associated with an increased risk of diabetes distress, depression, anxiety and eating disorders. Still, health professionals working with diabetes often fail to identify patients with serious psychological problems and to address psychological issues in general. Our aim was to explore diabetologist's perceived barriers to addressing psychological issues in diabetes consultations.

Methods: We conducted qualitative semi-structured individual interviews with 12 diabetologists working in specialist diabetes clinics in four different Danish hospitals. All interviews were transcribed verbatim and analysed by systematic meaning condensation.

Results: We identified three main categories of barriers: 1) the structural organisation of diabetes consultations, e.g. sparse consultation time, extensive screen work, and missing referral possibilities; 2) the relation between patients and physicians, e.g. the perception of patient attitudes or patient personality; and 3) the individual diabetologist, e.g. acquired and inherent skills, and the physicians perceived area of responsibility. Psychological aspects of diabetes were generally perceived as more important by younger diabetologists. More senior clinicians tended to regard psychological issues as of less importance and not within their core responsibility.

Conclusion: The structural organisation of consultations, especially time constraints, and the perceived area of responsibility were the most prominent barriers to addressing mental health problems in diabetes consultations. Our study provides explanations for the gap between the widespread knowledge among diabetologists of the importance of psychological issues and the frequent failure to address such issues, and thus provides a basis for the development of strategies to facilitate a change of practice.

Keywords: Diabetes; Psychological problems in diabetes; Diabetes distress; Diabetes consultations; Health communication; Diabetologists; Physicians

Background

Health professionals working with diabetes patients often fail to identify psychological problems and disorders. Approximately two out of three patients with serious psychological problems remain undiagnosed [1,2].

Undiagnosed and unaddressed psychological problems are clinically important, since people with diabetes struggle with psychological problems more often, and to a greater degree, than others. Compared with the general population, clinical depression and anxiety occur about twice as often among persons with both type 1 and type 2 diabetes [3-6], and the risk of eating disorders is also increased [7]. Furthermore, a large number of persons with diabetes suffer from diabetes distress, the semi-chronic stress condition resulting from the strains of living with diabetes [8-10].

Evidently, psychological problems have a disruptive impact on quality of life, and people with diabetes score lower on quality of life scales than people without a chronic illness [11]. Also, there is a significant association between psychological problems and poor diabetes outcomes [4,12-17]. Depression is, for example, associated with both 'non-adherence' [14] and risk of hyperglycaemia [16]. Diabetes distress is associated with patients' diabetes management even more so than depression [10].

Paradoxically, healthcare professionals working with diabetes are generally aware of this problem. For example, the majority of health professionals interviewed for the DAWN studies reported that many persons with diabetes had diabetes related psychological problems [6,18]. At the same time it was found that health professionals often lack critical resources for addressing psychosocial problems, particularly skill, time and adequate referral sources [6,18]. The first of the two DAWN studies concluded that psychological factors constitute a 'key barrier' to better diabetes processes [6]. Furthermore, the psychological consequences of diabetes have been recognised in a number of international guidelines [19]. It seems, therefore, that there is a considerable gap between clinician awareness and clinical practice.

Hospital-based diabetologists represent a particularly important group of healthcare professionals when it comes to dealing with psychological problems of people with diabetes. Physicians play a normative role for patients [20], and diabetes patients enrolled in hospitalcare more often have complications that increase the risk of psychological problems [21]. It thus seems particularly important to understand why diabetologists fail to identify psychological problems.

We are not aware of previous in-depth qualitative investigations into hospital-based diabetologist's perceptions of the barriers to addressing psychological aspects of living with diabetes. A clarification of these barriers is important as it will provide a tentative explanation for the

*Corresponding author: CleaBruun Johansen, Steno Health Promotion Center, Steno Diabetes Center, NielsSteensensVej 8, 2820 Gentofte, Denmark, Tel: +4522504606; E-mail: cbuj@steno.dk

Received March 19, 2014; Accepted April 14, 2014; Published April 21, 2014

Citation: Johansen C, Torenholt R, Homme E, Wittrup M, Cleal B, et al. (2014) Barriers to Addressing Psychological Problems in Diabetes: Perspectives of Diabetologists on Routine Diabetes Consultations in Denmark. J Psychol Psychother 4: 141. doi: 10.4172/2161-0487.1000141

Copyright: © 2014 Johansen C, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

gap between knowledge and practice in this field. New insights can also guide the planning and development of interventions to amend this gap. Therefore, our aim with this study was to explore diabetologist's perceptions of the barriers to addressing the psychological problems of their patients.

Materials and Methods

Individual qualitative interviews were conducted to capture the perceptions and experiences of the participants [22]: diabetologists and physicians in training to become diabetologists. This method was considered particularly suitable for obtaining an in-depth understanding of the underlying mechanisms in diabetes consultations.

We used criterion sampling [23] to include diabetologists, and physicians in training to become diabetologists, recruited from four different hospital-based diabetes clinics in Denmark (Bispebjerg Hospital, Odense University Hospital, Steno Diabetes Centre and Rigs hospitalet). Sampling criteria were: a) physicians working in a hospital; b) physicians with regular consultations with patients with diabetes; and c) diabetologists or physicians training to become diabetologists. Recruitment of participants lasted until saturation was reached on main themes. The sample consisted of nine endocrinologists (six men and two women) and four physicians in specialist training (all women).

Data were obtained from semi-structured in-depth interviews of 50-60 minutes duration conducted in Danish by the first author. The participants were interviewed at their workplace and interviews were audio-taped. The interview guide was developed on the basis of a literature survey, pilot observations of consultations at Steno Diabetes Center and discussions with two experienced diabetologists (MW and EH). The main themes of the interview guide were the individual diabetologist's perception of:

- the role of psychological issues in diabetes consultations,
- responsibility regarding psychological problems and,
- barriers to addressing psychological issues

The themes were pursued flexibly, sensitive to the personal approach of the individual diabetologist. All 12 diabetologists that we approached for this study consented, and all provided full interviews.

Interviews were transcribed verbatim in Danish and analysed according to the method of Systematic Text Condensation (STC) inspired by Georgi [24,25] and modified by Malterud [26]. The procedure consisted of the following steps: 1) reading all the material to get an overall impression and identify preliminary themes; 2) identifying, classifying and sorting of meaning units related to previously identified themes and labelling of code groups; 3) systematic abstraction of meaning units within the thematic codes; and 4) re-conceptualization of data and development of concepts and descriptions. Throughout the entire process of analysis our main focus was to identify barriers to addressing psychological issues in consultations.

Citations are marked with numbers for the different interviewees to protect their anonymity. Citations were translated from Danish into English by the first author and checked by a native English speaker.

Results

Participants reported numerous barriers to addressing psychological issues in their diabetes consultations. The different types of barriers fell in three broad categories: I) the structural organisation of diabetes consultations, such as sparse consultation time, extensive screen work, and missing referral possibilities; II) the relation between patients and physicians, such as the perception of patient attitudes, patient personality, and levels of physician/patient intimacy; III) the individual diabetologist, such as acquired and inherent skills, personal feelings and energy level, and the physician's perceived area of responsibility.

I. Barriers related to the structural organisation of diabetes consultations

Pivotal time pressure

Time pressure was the most consistently mentioned barrier:

"... If I concern myself more with psychological issues, my schedule will be ruined." (9)

The experience of running behind schedule often led to downgrading psychological topics, even when problems were acknowledged:

"... I don't have unlimited time, so you have to make an assessment of who to focus on. Patients say it a lot themselves too, so somesay, 'well, I feel good', and one cansense that, actually,, they're not feeling well, but they say they are, that's what they want to convey, and so I don't say anything." (4)

Limited consultation time often increased a feeling of conflicting agendas as depicted by several participants. One diabetologist explained it thus:

"...if you could control itcompletely, then there would be sufficient time, but then the patient has their own agenda andfeels that now it's my "15-minutes of fame", so it's difficult to set your own agenda completely, so I'd say there's no open time as such." (1)

Several participants felt dissatisfied by constantly having to cut down on patients' agendas and articulated a desire for more time:

"I would always like more time, then I might start out asking 'how are you in general' right? 'How are you, how are things at home?' get a feeling if something's not going well. And then I would like to be able to say, if I sensed a problem of some kind, or something made it difficult to reach our goals, then I would like to have some kind of a permanent team to follow this up." (7)

Some diabetologists felt less frustrated by time pressure than their colleagues.

"I think, on average, it works reasonably well. You can't solve all the problems, but perhaps you couldn't do that even if you had half an hour." (2)

The diabetologists feeling least restricted by time were those who, due to high rank, had more flexibility:

"Sometimes I have patients whom I see often and schedule a time for them where I wouldn't normally have patients. I take out half an hour of my schedule and go down to talk to them." (6)

The computer screen takes up time

Several participants experienced screen work as time consuming and a barrier to good communication:

"The screen takes up time, that's just a fact." (4)

"... if communication with patients should be optimised then I would rather not have to write notes, update medicine, update allergies, do the

crossing and the approvals, pushF8, pushF10 and all that. I would rather get rid of all that." (3)

Some diabetologists also felt that extensive screen work resulted in less patient intimacy:

"I look at the screen a lot; key in data and so forth, and the patient sits alongside, so you have to be really attentive to look the patient in the eyes." (5)

Missing referral possibilities and follow-up

In one specialist clinic it was possible for participants to refer patients to a psychotherapist:

"So if I have a patient where I can see, that I will probably never getdiabetes treatment under control before addressing fundamental psychological problems; problems with parents, relationships or whatever, then I can refer to someone who can help me out, our psychologist." (6)

Participants from the remaining hospitals could, to varying degrees, make referrals to nurses. Several participants mentioned that the general lack of follow-up offers could keep physicians from addressing psychological issues:

"...it takes no time to ask a question and to get a quick answer, but you can't really ask people a question, examine their soul, and then have nothing to follow up with, that would seem inadequate somehow." (1)

Several participants reported that they would appreciate more referral possibilities:

"Maybe (I would refer more patients), if I knew of a psychologist centre, for example, that specialized in psychological problems in diabetes, or chronic patients in general, that would be great." (9)

Some, however, could do without referral possibilities to a psychologist:

"...I don't always have the impression that sessions with a psychologist are useful. I'm thinking; 'what good will it do, nothing happens anyway."" (10)

II. Barriers related to the relation between patients and physician

Perceived patient attitudes

Perceived patient attitudes were also mentioned as potential barriers. This primarily concerned the way patients seemed to deal with their diabetes. One participant explained that patients can appear very despondent:

"What one sees in patients who are severely affected is that they're resigned, and even if you're sitting as a physician trying to tell them that is a good idea to lower their blood sugar, they seem pretty indifferent - or it seems as if they're a bit apathetic and resigned." (3)

Some participants felt that patients do not always have an insight into their own problems, which makes the conversation difficult:

"It's not certain that everyone will be aware if they have an eating disorder, you can't be certain of an accurate answer. You can't simply ask whether a patient has an eating disorder – well, you can" but you can't be certain the answer's correct." (1)

Patient's wishes and personality

Another participant reported that patients differ and not all patients want closer contact with the physician:

"...they [patients] need to be treated differently; one asks us to become familiar, whereas the other tries to push us away." (5)

Page 3 of 6

Another participant put it like this:

"...some [patients] are incredibly annoying; I can't be doing with them." (4)

Knowing your patients

Many participants stressed that it is easier to talk to patients that you know well. Knowing patients too well could, however, also represent a challenge:

"...if I know them too well – that can be a disadvantage – because then I don't like it when I have to say something unpleasant." (10)

III. Barriers related to the individual diabetologist

Acquired and inherent skills

The lack of education within the field of psychology was stressed as a reason for not exploring psychological issues in depth:

"We don't really have the necessary qualifications to undertake some kind of psychotherapy." (6)

"I think most doctors also have areas they find difficult, so I think many barriers experienced by doctors concern not wanting to ask painful questions..." (7)

Several participants reported that experience was an asset. As expressed by one participant:

"...it becomes easier the longer you've been in this business." (6)

Another put it like this:

"I would say I have been talking to patients for many years, (...)I can spot, I sense when things are not just so- 'here I am doing well and there are no problems', and I can catch it, and I think I can get patients to open up to me." (10)

Personality and gut feelings were often referred to as the means for knowing when (and how) to address psychological issues:

"I think about what my gut tells me. If I sense that there's something I need to go into, if they look at you a certain way, kind of 'you can ask me about that'ish." (4)

Another participant explained:

"I think it's something you have to be born with (....) I think it's really difficult to acquire the ability to relate to another person, because that is what it is, you sit opposite another person. You have to establish a relation." (6)

Personal feelings and lack of energy

Participants referred to 'energy level' and 'personal well-being' as key facilitators or barriers to addressing psychological issues. The following sequences illustrate this:

"...sometimes there is also the individual fear – how to put it? - you think, 'phew, do I have the energy?' I have to admit that." (7)

"If there's something that I recognize, some psychological reactions that I recognize from myself, feelings I might have, then maybe I don't really want to ask. I think I sometimes experience some clear resistance from myself." (3)

"I try to be very professional when I go to work, but I am a thoughtful

person and sometimes I do take situations (from outside) with me to work. If you had a bad night watch, then you're more focused on things that are audited, because they're easier to relate to..." (5)

Perceived area of responsibility

A number of diabetologists felt that psychological problems did not belong in the diabetes consultation. When asked who should identify psychological problems, one diabetologist reported:

"Not me, just because they happen to come and talk about diabetes, I can't see it should be me." (10)

Another diabetologist expressed a similar viewpoint:

"... you have to interrupt them fairly quickly, otherwise they say everything, also that they have back pain, and it's not what it's about here." (1)

Some diabetologists regarded identification of psychological problems as a physician responsibility, but felt that physicians were not the best suited for solving these problems:

"I think we're good at diagnosis, we're good at seeing problems, but I'm not sure that we're the best at talking to patients and following up on [psychological] problems." (7)

Even if data revealed a number of approaches, many participants reported that medical issues were their prime responsibility. Several participants used terms such as 'soft topics' about psychological issues. One diabetologist used the term luxury in relation to issues regarding the psyche:

"I wouldn't call it luxury, but a little bit of luxury, everything has to work of course." (10)

Several participants reported that taking care of psychological issues was often done by nurses:

"...our main task is to regulate their blood sugar and thus postpone complications - it's probably my main job, but in general I think that with diabetic patients it's also our responsibility that they feel comfortable and can live with diabetes, but here it's more a task for the nurses." (3)

Several participants suggested that it mainly makes sense to address psychological issues, if the physician has an interest in the topic:

"When physicians have it [psychology] as a special area of interest it will of course make a difference [whether or not to address psychological issues]. There I also think it's important to connect these physicians with the patients whohave problems in that direction (...) But I mean, if you don't have it as a special area of interest as a physician, then I don't think it addsmuch to the professional standards." (1)

Others articulated a somewhat broader perception of responsibility:

"I see it as my main job to make sure that they get a good life with diabetes so that they don't feel hindered in doing what they want, while not developing complications. That is the short answer, and that includes both physical and mental well-being." (2)

Discussion

Our study provides a range of explanations as to why psychological aspects of living with diabetes are frequently overlooked in diabetes consultations. Participating diabetologists were aware that psychological aspects play a role for people living with diabetes, though they disagreed on its how important this role was. The apparent awareness was not easily transformed into practical clinical implications. The most pervasive felt barrier was the day-to-day reality of extensive time pressure and documentation requirements. Also, psychological aspects of diabetes were in some cases downplayed by diabetologists - who, though aware of the evidence, nonetheless concluded that it did not resonate with their clinical experience.

Study strengths and limitations

This is, to our knowledge, the first study concentrating on diabetologist's perceptions regarding the barriers to addressing the psychological problems of their patients. The interviewees were geographically dispersed, both genders were equally represented and the level of experience varied. All invited diabetologists provided full interviews, and the interview guide was based on several pilot observations, experienced diabetologist's perspectives and a literature review. Data analyses followed a well-tested structured method.

Limitations include our sample size and that subject selection was based on a convenience principle. However, participants demonstrated no atypical traits and our impression was that we reached saturation for all main issues within this sample. The healthcare system, the curriculum for medical doctors, clinical guidelines and referral options may be different in other countries. It is therefore possible that other themes and issues would emerge if a similar study was conducted in countries with different medical practices. However, our results are coherent with our literature review also based on studies from other national contexts. A possible explanation for this is that the barriers identified relate to aspects of medicine and clinical practice that are typical to many clinical settings.

Other studies

Our findings were consistent with findings from the DAWN studies [6,18] as health care professionals expressed awareness of the frequent existence of psychological problems. Our findings correspond, moreover, with studies of barriers to addressing psychological issues in other medical areas. A study of barriers to the provision of evidence-based psychosocial care in oncology underlines that there is a lack of referral systems, that clinicians sometimes find psychosocial problems secondary to medical issues and that it can be stressful for clinicians to deal with psychosocial problems [27]. A study of healthcare professionals' perception of barriers and facilitators to addressing perinatal depression identified barriers on patient, provider and system level [28].

Mechanisms and barriers

Time pressure was the most clearly articulated barrier in our study. Even if the individual diabetologist chose to address psychological problems, the time to do so had to be taken from other clinically and administratively relevant issues. Additional time and adequate referral possibilities were seldom allotted by the hospital administration. This represents a dilemma for some diabetologists, often resolved by focusing on instrumental diabetes care as the guidelines prescribe. Generally, participants articulated strongly felt obligations to address glycaemic control and to meet the standards and quality requirements of diabetes care.

This conforms to Yudkin et al. [29] point, that the treatment of diabetes is largely controlled by surrogate markers e.g. HbA1c, instead of revolving around objectives of importance for patients, such as vision impairment or quality of life. According to Yudkin et al. [29] surrogate markers are expected to function as substitutes for clinical endpoints and to predict the clinical outcome. However, this is less true than often

assumed, for example, with the relationship between lowered blood sugar levels and complications [29]. Our results clearly show how the restricted consultation time pushed individual diabetologists into an even more blinkered focus on surrogate markers than they might otherwise wish.

Furthermore, as explained by Anderson and Funnel, healthcare professionals often view patients' diabetes self-management behaviour and blood sugar control as an indication of their own professional effectiveness [30]. This also appeared to be the case in our study. So while issues such as glycaemic control and blood pressure were core parts of professional expertise, psychological issues were associated with a more diffuse and private sphere. Terms such as 'soft' and 'a little bit of a luxury' were used to characterise psychological issues and the required instrument for being able to address these issues was the 'personality' of the diabetologist. Matters of the psyche were thus ascribed to a different realm than instrumental diabetes care and it was in tune with being a professional diabetologist to be uninterested in psychological aspects of living with diabetes.

Even if HbA1c and other biological assessments played a key structuring role for all participants, they still organised their clinical reality differently and used different explanations for their choices. Our results point towards a pattern where experienced diabetologists more often excluded psychology from the realm of their responsibility. Younger diabetologists were more inclined to include psychology, and confront the time barrier more often. We thus anticipate a slow, but continuous, shift towards a more integrated understanding of diabetes care by diabetologists, though it seems that the threshold for a dramatic change in clinical practice is far from attained.

Demarcations between professions may, however, serve to uphold the dichotomy between instrumental diabetes care and psychological aspects of diabetes. The role of nurses in connection with solving psychological problems of patients was mentioned. However, there seems to be no exact delineation of assignments in relation to tackling psychological problems. Faced with a heavy workload and time pressure, the obvious solution is to negate psychological issues during the consultations and assign them as nursing tasks, thus reproducing traditional assumptions of psychological issues and medical issues as belonging to different professional responsibilities - rather than perceiving the problems as essentially concerning the common objective of a better life with diabetes.

The primary barrier to addressing psychological issues in diabetes consultations seemed to derive from the healthcare system. Even if psychological problems are frequent among people with diabetes and are directly associated to intervention adherence and improved survival, with few exceptions the healthcare system provides no structured frame for addressing or identifying psychological problems in diabetes consultations. Furthermore, no standard guidelines or core courses on psychological issues exist for Danish diabetologists.

Implications and Conclusion

Whether, and how, to address psychological problems of patients with diabetes is left to the discretion of the individual diabetologist. Integrating psychological issues into diabetes consultations, and diabetes care generally, can only be accomplished if diabetologists perceive psychological issues to be of clinical relevance and manageable within the context of consultations. One approach to this would be to integrate diabetes psychology into the formal curriculum and training of diabetologists. This would create a heightened awareness and provide diabetologists with concrete skills to approach the problems.

Another way to enhance awareness, as well as clinical manageability, would be to standardise dialogue on psychological issues through clinical guidelines, which usually improve clinical practice [31,32]. A concrete standardised procedure could consist in a systematic implementation of screening instruments or dialogue tools for facilitating dialogue on psychological issues. Adaptability to the medical consultation would be an essential prerequisite, with regards to time, to the communicative style in consultations and to the actual possibilities for the diabetologists to respond to patient needs.

Our study has implications for further research and practice. It underlines the importance of identifying efficient and clinically manageable ways to address psychological issues in diabetes consultations. Some important questions are thus raised: 1) whether the implementation of guidelines on psychological issues and problems related to diabetes is a necessity to promote the discussion of psychological health in diabetes consultations; 2) whether more consultation time is a prerogative for addressing psychological health; 3) whether psychological problems "belong to" one specific group of health professionals; 4) to what extent and what kinds of referral possibilities are needed to enhance the psychological well-being for people living with diabetes?

Answering these questions will hopefully provide the knowledge base for a constructive incorporation of psychological issues in routine diabetes consultations in hospitals.

Acknowledgement

We thank Susanne Mittag for transcribing all interviews and providing useful comments.

Contributions

C.B.J. wrote the protocol, conducted preliminary observations, developed the interview guide, performed the interviews, analysed the transcripts and wrote the first manuscript draft. R.T. co-wrote the protocol, conducted preliminary observations, developed the interview guide, contributed to analysis and reviewed and edited the manuscript. E.H. and M.W. contributed to analysis and reviewed and edited the protocol, the interview guide and the manuscript. B.C. contributed to analysis and reviewed and edited the protocol, the interview guide, analysed transcripts and reviewed the study, reviewed the protocol, the interview guide, analysed transcripts and reviewed and edited the manuscript. All authors accepted the final version of the manuscript.

Duality of interest

Steno Diabetes Center employed C.B.J, R.T., E.H., M.W., B.C. and I.W. Steno Diabetes Center is an independent academic institution owned by Novo Nordisk and financed partly by Novo Nordisk, partly by the Novo Nordisk Foundation and partly by the Capital Region of Denmark.

References

- Hermanns N, Kulzer B, Krichbaum M, Kubiak T, Haak T (2006) How to screen for depression and emotional problems in patients with diabetes: comparison of screening characteristics of depression questionnaires, measurement of diabetes-specific emotional problems and standard clinical assessment. Diabetologia 49: 469-477.
- Pouwer F, Beekman AT, Lubach C, Snoek FJ (2006) Nurses' recognition and registration of depression, anxiety and diabetes-specific emotional problems in outpatients with diabetes mellitus. Patient EducCouns 60: 235-240.
- Anderson RJ, Freedland KE, Clouse RE, Lustman PJ (2001) The prevalence of comorbid depression in adults with diabetes: a meta-analysis. Diabetes Care 24: 1069-1078.
- Das-Munshi J, Stewart R, Ismail K, Bebbington PE, Jenkins R, et al. (2007) Diabetes, common mental disorders, and disability: findings from the UK National Psychiatric Morbidity Survey. Psychosom Med 69: 543-550.
- 5. Grigsby AB, Anderson RJ, Freedland KE, Clouse RE, Lustman PJ (2002)

Prevalence of anxiety in adults with diabetes: a systematic review. J Psychosom Res 53: 1053-1060.

- Peyrot M, Rubin RR, Lauritzen T, Snoek FJ, Matthews DR, et al. (2005) Psychosocial problems and barriers to improved diabetes management: results of the Cross-National Diabetes Attitudes, Wishes and Needs (DAWN) Study. Diabet Med 22: 1379-1385.
- Mannucci E, Rotella F, Ricca V, Moretti S, Placidi GF, et al. (2005) Eating disorders in patients with type 1 diabetes: a meta-analysis. J Endocrinol Invest 28: 417-419.
- Fisher L, Glasgow RE, Mullan JT, Skaff MM, Polonsky WH (2008) Development of a brief diabetes distress screening instrument. Ann Fam Med 6: 246-252.
- Fisher L, Mullan JT, Arean P, Glasgow RE, Hessler D, et al. (2010) Diabetes distress but not clinical depression or depressive symptoms is associated with glycemic control in both cross-sectional and longitudinal analyses. Diabetes Care 33: 23-28.
- Polonsky WH, Fisher L, Earles J, Dudl RJ, Lees J, et al. (2005) Assessing psychosocial distress in diabetes: development of the diabetes distress scale. Diabetes Care 28: 626-631.
- Nicolucci A, Kovacs Burns K, Holt RI, Comaschi M, Hermanns N, et al. (2013) Diabetes Attitudes, Wishes and Needs second study (DAWN2™): Crossnational benchmarking of diabetes-related psychosocial outcomes for people with diabetes. Diabet Med 30:767-777.
- Anderson RJ, Grigsby AB, Freedland KE, de Groot M, McGill JB, et al. (2002) Anxiety and poor glycemic control: a meta-analytic review of the literature. Int J Psychiatry Med 32: 235-247.
- Chida Y, Hamer M (2008) An association of adverse psychosocial factors with diabetes mellitus: a meta-analytic review of longitudinal cohort studies. Diabetologia 51: 2168-2178.
- Ciechanowski PS, Katon WJ, Russo JE (2000) Depression and diabetes: impact of depressive symptoms on adherence, function, and costs. Arch Intern Med 160: 3278-3285.
- DiMatteo MR, Lepper HS, Croghan TW (2000) Depression is a risk factor for noncompliance with medical treatment: meta-analysis of the effects of anxiety and depression on patient adherence. Arch Intern Med 160: 2101-2107.
- Katon WJ, Rutter C, Simon G, Lin EH, Ludman E, et al. (2005) The association of comorbid depression with mortality in patients with type 2 diabetes. Diabetes Care 28: 2668-2672.
- 17. Lustman PJ, Clouse RE (2005) Depression in diabetic patients: the relationship between mood and glycemic control. J Diabetes Complications 19: 113-122.

- 18. Holt RI, Nicolucci A, Kovacs Burns K, Escalante M, Forbes A, et al. (2013) Diabetes Attitudes, Wishes and Needs second study (DAWN2â,¢): crossnational comparisons on barriers and resources for optimal care--healthcare professional perspective. Diabet Med 30: 789-798.
- Barnard KD, Peyrot M, Holt RI (2012) Psychosocial support for people with diabetes: past, present and future. Diabet Med 29: 1358-1360.
- 20. Treadway K (2005) Notes to the class--first day. N Engl J Med 352: 1943-1944.
- 21. de Groot M, Anderson R, Freedland KE, Clouse RE, Lustman PJ (2001) Association of depression and diabetes complications: a meta-analysis. Psychosom Med 63: 619-630.
- Malterud K (2003) KvalitativeMetoderimedicinskforskning. Universitetsforlaget, Oslo.
- 23. Patton MQ (2002) Qualitative Research and Evaluation Methods. Sage Publications, Thousand oaks, CA.
- 24. Giorgi A (1985) Sketch of a psychological phenomenological method. In: Phenomenology and psychological research: essays. Duquesne University Press, Pittsburgh, PA.
- Giorgi A (2009) The descriptive phenomenological method in psychology: a modified Husserlian approach. Duquesne University Press, Pittsburgh, PA.
- Malterud K (2012) Systematic text condensation: a strategy for qualitative analysis. Scand J Public Health 40: 795-805.
- Schofield P, Carey M, Bonevski B, Sanson-Fisher R (2006) Barriers to the provision of evidence-based psychosocial care in oncology. Psychooncology 15: 863-872.
- Byatt N, Biebel K, Lundquist RS, Tiffany A. Moore Simas, GiftyDebordes-Jackson, et al. (2012) Patient, provider, and system-level barriers and facilitators to addressing perinatal depression. J Reprod Infant Psychol 30: 436-449.
- Yudkin JS, Lipska KJ, Montori VM (2011) The idolatry of the surrogate. BMJ 343: d7995.
- Anderson RM, Funnell MM (2000) Compliance and adherence are dysfunctional concepts in diabetes care. Diabetes Educ 26: 597-604.
- Grimshaw JM, Russell IT (1993) Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. Lancet 342: 1317-1322.
- 32. Grimshaw JM, Thomas RE, MacLennan G, Fraser C, Ramsay CR, et al. (2004) Effectiveness and efficiency of guideline dissemination and implementation strategies. Health Technol Assess 8: iii-iv, 1-72.

Page 6 of 6