The 10th Scientific Meeting of the PSAD Study Group

PSAD
PsychoSocial Aspects of Diabetes

Wuerzburg, Germany, 22 – 24 April 2005

- Abstract booklet -

Title: Recognition and registration of depression and diabetes-specific emotional problems by diabetes nurse specialists working in an outpatient diabetes clinic

Authors: Pouwer F., Beekman A.T.F., Lubach C., Snoek F.J.

Institute: Diabetes Research Group, EMGO Institute VU University Medical Center

Aims: Nurses are often able to spend more time with patients than doctors do, and they may thus play an essential role in detection and discussion of emotional problems of patients. We have studied how often emotional problems were recognized and registered by diabetes nurses.

Methods and Patients: We studied medical charts and questionnaire data of 112 diabetes patients. The Hospital Anxiety and Depression Scale and the Problem Areas in Diabetes Survey were used to measure anxiety, depression and diabetes-specific emotional distress.

Results: In patients with moderate to severe levels of anxiety or depression, the presence of an emotional problem was recorded in the medical chart in 20-25% of the cases. The registration-rate of diabetes-specific emotional distress ranged from 0% (treatment-related problems) to 29% (diabetes-related emotional problems).

Conclusions/discussion: Registration rates of emotional problems in outpatients with diabetes appeared to be low. Future studies should investigate whether recognition and subsequent treatment of emotional problems in diabetes patients can be facilitated by utilizing validated, standardized self-report questionnaires.

Title: Positive and negative expactations of type 1 diabetes patients towards insulin pump therapy

Authors: Kubiak T. [1], Scholze A. [2], Kulzer B. [3], Hermanns N. [3], Haak T. [3]

Institute: [1] Institute of Psychology, University of Greifswald, Germany; [2] Institute of Psychology, University of Bamberg, Germany; [3] Research Institute of the Diabetes-Academy Mergentheim, Mergentheim, Germany

Aims: Continuous subcutaneous insulin infusion (CSII) is one of the most physiological forms of insulin therapy. It has the potential to improve overall glycemic control as well as reduce blood glucose excursions. On the other hand, several studies report a high rate of CSII discontinuation not explicable by medical causes. Furthermore, the indication for CSII and obvious medical advantages may not necessarily be sufficient for a patient to start CSII treatment. Thus, a significant contribution of psychological factors and patient expectations to the individual treatment decision seems likely. Aims of this study were the development and initial empirical validation of a standardised questionnaire for the assessment of patients' positive and negative expectations towards CSII treatment..

Methods and Patients: The questionnaire was developed on the basis of patient and expert interviews and consists of 75 items that are summarised in two scales (expected advantages vs. disadvantages of CSII treatment). For initial validation, a sample of N=201 type 1 diabetes patients was studied who completed the questionnaire: (1) N=73 patient with injection treatment and interest in CSII (age: 44.2±14.0 yrs; gender male: 39.7%; duration of disease: 13.0±12.0 yrs.; HbA1C: 8.0±2.1%); (2) N=41 patients with intensified injections regimen without interest in CSII (age: 33.3±12.9 yrs.; gender male: 58.5%; duration of disease: 11.6±8.4 yrs.; HbA1C: 7.9±2.2%); (3) N=87 CSII patients (age: 35.3±14.5 years; gender male: 52.8%; duration of disease: 16.4±11.7 years ; HbA1C: 7.7±1.8%).

Results: The psychometrics of the instrument were good (Cronbach's α= .80, α=.95; Spearman Brown r=.83, r=.87). As expected, perceived disadvantages in the group without interest in CSII were greater than in the two other groups (with interest, with CSII, p<.05). Qualitative analysis revealed the most frequently stated disadvantages in the CSII group and the group with CSII interest being of a more "technical" nature (e.g. technical problems with the catheters, more frequent blood glucose measurements) than in the group with no CSII interest, where "psychological" issues appeared to be more dominant (e.g. feeling to be ill more seriously if under CSII).

Discussion: With the developed questionnaire a psychometrically sound instrument for assessing expectations towards CSII is available for clinical practice. One has to keep a possible selection bias in mind, though, as an inpatient sample was studied. Furthermore, to study validity and the expectations' impact on self-care behaviour, a longitudinal study is necessary.

Title: The network of psychological variables in patients with diabetes and their importance for quality of life and metabolic control

Authors: Rose M., Fliege H., Hildebrandt M., Schirop T., Klapp B.F.

Institute: Clinic for Internal Medicine, Department of Psychosomatics, Charité University Medicine in Berlin, Germany

Aims: The primary goals in treating patients with diabetes mellitus are maintaining blood sugar levels as close to the norm as possible and making a relatively normal quality of life achievable. Both of these goals are influenced by a multitude of somatic and psychological factors that should be seen as building a complex network. We examined whether or not a statistical model can be construed that can depict the relative significance of each factor for achieving these treatment goals.

Methods and Patients: 625 patients from 32 different treatment facilities were examined (224 type1, 401 type2) using HbA1c values (HPLC), number of secondary illnesses, and standardized questionnaires with respect to health-related quality of life (WHOQOL-Bref), coping behavior (FKV), diabetes-specific knowledge (DWT), doctor-patient relationship (MISS), and personality characteristics (GTS, SWOP). The analyses were carried out by means of a structural equation model (SEM).

Results: The model proved to be valid (χ^2=88.5, df=76, p=.16), showing a sound fit (AGFI=.94, RMSEA=.02). It explained 62% of the variance of the quality of life and 5% of the HbA1c values. Persons characterized by strong beliefs in their self-efficacy and an optimistic outlook on life were more likely to be satisfied with their doctor-patient relationships. They demonstrated more active coping behavior and proved to have a higher quality of life. Active coping behavior was the only psychological variable significant for the HbA1c values.

Conclusions: It was possible to illustrate the various factors involved and their mutual dependency and significance for the treatment goals. Belief in self-efficacy and active coping behavior appear to have the greatest relevance for achieving the primary treatment goals.

Title: The development of a resource pack to assist practice nurses in promoting uptake and maintenance of dietary self-care behaviours

Authors: Povey R.

Institute: Staffordshire University

Aims: This project was divided into three studies with the ultimate aim of producing a resource for nurses working with people with type 2 diabetes in the primary care sector.

Methods and Patients: Study 1 consisted of a comprehensive survey of 127 people with type 2 diabetes to examine the extent to which different beliefs were associated with healthy eating behaviour. The questionnaire was based around the theoretical framework of the Theory of Planned Behaviour. Study 2 consisted of three focus groups: two focus groups comprised three practice nurses each, and the other consisted of three diabetes specialist nurses and one diabetes specialist dietician. A structured interview schedule was specifically designed to identify (i) perceptions of existing problems associated with patients' attitudes towards dietary self-care and (ii) techniques already used by the interviewees to deal with such problems. Finally, Study 3 consisted of an evaluation of the Resource Pack. The resource was evaluated by 3 diabetes specialist nurses, 3 dietitians, one consultant diabetologist, one professor in health psychology, one podiatrist, and 5 practice nurses.

Results: Findings from Studies 1 and 2 were used to inform the development and structure of the Resource Pack. The Resource Pack was divided into seven chapters. These were: Dietary Guidelines; Your Role as a Nurse; Motivating Change; Perceptions and Misperceptions of Dietary Advice; Putting the Message Across; Taking the First Steps; and Making and Maintaining the Changes. Quotes from the focus groups in Study 2, and patients' comments from Study 1 were used to illustrate key points throughout. Results from Study 3 indicated that health professionals were generally very positive about the Resource Pack, considering it to be valuable (mean score: 9.1/10) and acceptable to practitioners (8.8/10), and fairly easy to implement (7.5/10).

Conclusion/Diskussion: Results from studies 1 and 2 were successfully used in the development of a Resource Pack for practitioners working with type 2 diabetes. The results from the initial evaluation of the resource were positive, although consideration must now be given to the way in which it is introduced to health professionals, and implemented in practice.

Title: Coping strategies in men and women with type 2 diabetes in Swedish primary care.

Authors: Gåfvels C., Wändell P.E.

Institute: Center of Family Medicine, Karolinska Institute, Huddinge, Sweden.

Aims: Earlier studies have shown gender differences in the experience of and complications related to diabetes. Based on these findings we studied coping strategies in men and women with type 2 diabetes in relation to demographic, medical, socio-economic and psychosocial situation.

Methods: Altogether 232 (121 men, 111 women) Swedish-born type 2 diabetic patients aged 35-64 years at four primary health centres in Stockholm County were studied. Coping strategies were assessed by the General Coping Questionnaire (GCQ), socio-economic and medical data were taken from a questionnaire and medical records.

Results: Gender differences for the coping-scales "Resignation", "Protest" and "Isolation" were found, with higher scores for women. Medical and social factors associated with coping strategies were HbA1c, BMI, diabetes duration, psychiatric disorder, educational level and disability pension.

Conclusions: Differences in coping strategies connected to gender were detected. Some of these were associated with metabolic control. Thus, coping strategies and gender are important factors to pay attention to in the care of diabetic patients.

Title: The effectiveness of brochure information on symptoms and risk factors for type 2 diabetes in encouraging increased risk perception and screening behaviou in high risk groups

Authors: Kritz M., Clark M.

Institute: Department of Psychology, University of Surrey, Guildford, UK

Aims: To investigate whether brochure information on symptoms and risk factors for diabetes is effective in encouraging increased risk perception and screening behavior in high-risk groups.

Methods and Patiens: 113 patients recruited in a G.P. surgery in Austria, aged 45-89 years, not known to have diabetes, were randomly assigned to an intervention or control group. All participants completed a questionnaire on diabetes-related risk factors, previous medical advice on diabetes risk, perception of personal control, risk and seriousness of the illness. The intervention group then received the Diabetes UK "Are YOU at risk?" Brochure followed by further questions regarding their risk perception of diabetes. Both groups were asked about intention to screen and subsequent behavior was recorded.

Results: Risk of developing diabetes was generally underestimated in the whole sample. Previous medical advice on risk but not actual risk status predicted perceived risk of diabetes. The intervention group was more likely to subsequently screen for diabetes, than the control group. Retired, females were more likely to translate expressed screening intention into subsequent behavior than employed males. Members of the high-risk group were more likely to change risk perception and the definition of their risk compared to members of the low-risk group. However, an overall underestimation of risk remained in all groups.

Conclusion/discussion: These results will be discussed in light of the importance of psychological and behavioural factors in the primary prevention of diabetes in individuals at high risk, together with the implications for practice and future research.

Title: Relationships of comparative risk perceptions, health behaviors and outcomes in the diabetes prevention program

Authors: Walker E.A., Schechter C.B., for the Diabetes Prevention Program Research Group

Institute: The Diabetes Research and Training Center, Albert Einstein College of Medicine, Bronx, New York, USA

Aims: To measure comparative risk perceptions for developing diabetes in a subsample of Diabetes Prevention Program (DPP) participants and to describe the association of these measures with health behaviors and outcomes measured for the DPP study.

Methods: As an ancillary study of DPP, the Risk Perception Survey for Developing Diabetes (RPS-DD) was completed by 517 DPP participants (mean age 50 yrs, 73% women, 57% white, mean BMI 33.6) during scheduled visits from 4 DPP clinical centers. There were three administrations of the RPS-DD, each about one year apart. The 1st administration was on average 14 mos. post randomization. The RPS-DD has a 32-item composite scale (Cronbach's α=.84), with 5 subscales. We analyzed these data with main study data including: demographics, adherence to treatment, depression and anxiety, and the main study outcome of developing type 2 diabetes. Data were analyzed for both linear and quadratic associations so that U-shaped relationships could be detected.

Results: Age, gender and race/ethnicity were associated ($p \leq 0.0005$) with selected risk perception subscales at 1st administration. Using generalized estimating equations (GEE) for repeated measures, the subscale for *Optimistic Bias* was associated at $p=0.01$ with DPP medication adherence of $\geq 80\%$ of prescribed dose. *Composite Risk* scores at 1st administration only were associated ($p=0.04$) with the total calories dietary measure at 12 mos. The *Comparative Disease Risk* subscale at 1st administration had an adjusted hazard ratio of 1.55 (CI 1.04-2.31, $p=0.03$) for incidence rate of diabetes. This same subscale measured over time had an adjusted odds ratio of 2.05 (CI 1.29-3.2, $p=0.002$) for the DPP primary outcome of developing diabetes. We found a significant U-shaped, non-linear relationship between the *Composite Risk* score and the diabetes outcome. There were many significant direct relationships between comparative risk perceptions and DPP measures of depression and anxiety; inverse significant relationships were found with social support and SF-36 measures.

Conclusion/Discussion: The DPP provided a rich opportunity to assess comparative risk perceptions and their relationship to DPP measures of health behaviors and outcomes. It appears that a modest level of perceived risk gives the greatest benefit in preventing diabetes. Further exploration is needed of this U-shaped relationship between risk perceptions and study outcome of development of diabetes in order to translate the findings for use in primary prevention programs.

Title: Initial reaction to type 1 diabetes diagnosis predicts metabolic control in the 3-year follow-up. Results of the German Multicenter Diabetes Cohort Study (GMDC-Study)

Authors: Petrak F. [1], Herpertz S. [1], Kulzer B. [2], Rose M. [3]

Institute: [1] Department of Psychosomatic Medicine, Ruhr-University Bochum, Germany, [2] Diabetes Center Mergentheim (DZM), Bad Mergentheim, Germany [3] Department of Psychosomatic Medicine, Charité University Berlin, Germany and Health Assessment Lab, Boston, USA

Aims: The primary aim of the current analyses was to identify predictors of the prospective quality of life and metabolic control at the time of the diagnosis in adults with type 1 diabetes.

Methods and Patients: The presented results are part of the German Multicenter Diabetes Cohort-Study (GMDC-Study) which is designed as a prospective longitudinal cohort study of adults with a new onset of type 1 diabetes. 313 newly diagnosed adults with type 1 diabetes were consecutively included in 12 different clinics in Germany. Follow-up measurements were performed one, two and three years after diagnosis. Among others we measured a set of psychosocial variables (e.g. coping styles, locus of control, social support) at the time of diagnosis to predict HbA1c at the three year follow-up using structural equation models.

Results: Complete data for all four measurements could be obtained from 85.3% (N = 267) of the patients. A continuous deterioration ob metabolic control could be observed as longer the diabetes lasted. To tests the predictive value of different interacting psychosocial variables structural equation models (SEM) have been applied (AMOS and MPlus). The tested models showed a satisfactory to good fit (RMSEA 0.04-0.07; CFI .92-.98). A "doctor-oriented" coping style at the time of the diagnosis was related to better metabolic control after three years (ß =.18, p<,05) as well as to higher physical and mental health related quality of life (HRQoL) after two and three years (ß =.19-.34, p<,05). Further results regarding other tested variables will be presented.

Conclusion/discussion: A continuous influence of the initial coping reaction to diabetes on subsequent quality of metabolic control could be observed. This relationship seems to be active even for the time span of three years. These preliminary results let us assume that the patient's first reaction to diagnosis could help to predict metabolic control and to identify patients at risk.

Title: The Warwick diabetes care user group. A case study in consumer involvement in research

Authors: Hearnshaw H. [1], Sturt J. [1], Lindemeyer A. [1], Ormerod R. [2]

Institute: [1] Warwick Diabetes Care, University of Warwick, [2] Lay Chair of Warwick Diabetes Care User Group

Introduction: Consumer involvement in health care is clear UK government policy, but is not yet widely practised. Four levels of involvement have been suggested: as a study participant, as a consultant to a study, as an advisor and as co-producer of research. The facilitators include: at least two consumers in a team of researchers, specific and timely induction or training for both consumers and researchers. The barriers include: researchers not knowing how to locate consumers, unfamiliarity of consumers with the language and culture of research processes, availability at mutually convenient times. However, there is so far, little evidence of the effectiveness of consumer involvement on the quality of research.

Method: At Warwick Diabetes Care (WDC), the research programme focuses on psychosocial aspects of living with diabetes. The research team members followed the policy of involving consumers by creating the WDC User Group in July 2001. The User Group has 50 members who receive a newsletter, of which 30 are also consulted by email or letter, and 15 who are further involved by attending meetings. Meetings are held every 2 months. Members formulated the role of the group. They comment on research documents such as proposals, protocols, questionnaires, patient information leaflets or consent forms. They share in data analysis and interpretation, and advise on dissemination, especially in writing papers for publication. We used the minutes of meetings and project documents to assess the effectiveness of the User Group against 8 principles and 16 indicators, developed from a published Delphi data collection of experts. Examples of changes made as a result of consumer consultation will be presented.

Conclusion: We have gathered evidence of effectiveness of consumer involvement on our research, and on its relevance to consumers. There has also been great development of the skills of the members of the User Group.

However, although rewarding, involving consumers is challenging and not always easy for either consumers or researchers, though it certainly clarifies for the researchers their accountability for their research activities and use of resources.

Title: Serumcortisol and daily cortisol levels in saliva do not correlate with HbA1c levels of healthy persons

Authors: Braun A. [1], Sämann A. [1], Hunger-Dathe W. [1], Hahn H.[2], Seidel A. [2], Hoßfeld C. [2], Urban S. [2], Müller U.A. [1]

Insitute: [1] University of Jena Medical School, Dept. of Internal Medicine III, Jena, Germany; [2] University of Jena, Company doctors outpatient department, Jena, Germany

Aim: In the Norfolk cohort of the European Prospective Investigation into Cancer and Nutrition (EPIC-Norfolk) EPIC-Norfolk HbA1c was an independent risk factor for cardiovascular mortality in people with diabetes and healthy people. It was the aim of this study to show that there is a direct association of cortisol and HbA1c levels in healthy people and a direct association of cortisol levels and levels of stress at work.

Methods: Analysis of HbA1c, sober serum cortisol (Normal Range: 7.00–9.00 o` clock 119–618 nmol/l), daily cortisol levels in saliva and HbA1c of 116 healthy people in the company doctors outpatient department of the University of Jena. For the assessment of stress at work we used the TICS-K, BMS and SV120 questionnaires.

Results: Provisional results of 116 people: Age 35 (18-64) years, sex 67% female, BMI 23,5 (16,3-35,1) kg/m^2, HbA1c 5.3 %, SD 0,35, sober serum cortisol 360,5 nmol/l (SD 143,8), Cortisol daily levels in saliva: 7.00 o` clock 18,2 nmol/l (SD 10,1), 12.00 o` clock 7,4 nmol/l (SD 5,3), 18.00 o` clock 5,0 nmol/l (SD 6,5), 24.00 o` clock 3,2 nmol/l (SD 4,2). Neither correlation r (bivariate correlation analysis according to Pearson) of HbA1c and sober serum cortisol nor correlation of HbA1c and cortisol daily levels were significant. Group comparison: (Mann-Whitney-Test) HbA1c > 5,25 % (n=56) vs. HbA1c <5,25 % (n=60): There were no significant differences in sober serum cortisol and cortisol daily levels. Regarding stress levels at work, there were neither significant correlations of score in BMS, TICS-K, SV120 to cortisol levels nor HbA1c.

Conclusions: There is neither a direct association of cortisol and Hba1c levels nor of stress at work and HbA1c/ cortisol levels in the prevalent analysis of healthy people.

Title: Can depression simply be screened by the PAID?

Authors: Hermanns N., Kulzer B., Kubiak T., Krichbaum M., Haak T.

Institute: Research Institute of the Diabetes Academy Mergentheim

Introduction: The PAID questionnaire is an internationally used inventory to identify emotional problems in patients with diabetes. Depression is a very common mood disorder in diabetes. Thus we investigated if the PAID questionnaire could be used as a screening instrument to identify subclinical as well as clinical forms of depression in diabetes.

Methods: In an inpatient setting 398 diabetic patients (36% type 1 diabetes, 40.9% female, HbA1c = 8.5±1.6%) completed a German version of the PAID. To identify patients with elevated depressive symptoms these patients additionally completed German versions of the CES-D and the BDI. Patients had an elevated score in the CES-D or BDI were invited to a standardized diagnostic interview (CIDI). Depression was diagnosed according to the ICD-10 criteria. ROC-characteristics curves where used to determine the screening ability of the PAID for subclinical (elevated score in CES-D or BDI) as well as clinical depression (fulfilling criteria for depression according to ICD-10) in diabetes.

Results: Subclinical depression (elevated score in CES-D and/or BDI) was present in 33.7 % of the patients. 50 patients (12.6%) fulfilled the criteria for a clinical depression according to ICD-10. Die mean PAID score was 29.0 ±17.8. Correlation between PAID and CESD (r=.59) and BDI (r=.59) were high. The ROC area under the curve for PAID was .853 for subclinical depression as well as for clinical depression.. According to the ROC characteristics a cut off of 30 seemed to be appropriate to identify subclinical depression, resulting in a sensitivity of .81 and a specificity of .74. For clinical depression a cut-off score of 35 resulted in a sensitivity of .82 and a specificity of .73.

Conclusion: The screening abilities of the PAID to identify subclinical as well as clinical depression in diabetes was highly statisfactory in our sample. Thus the PAID could be used as a screener for depressive symptoms as well as clinical depression in diabetes. It is well known that diabetic specific factors like late complications and A1c are associated with depressive symptoms. Since the PAID measures emotional reactions to diabetes specific problems, the PAID seems also be appropriate to identify possible diabetes-specific emotional problem areas, which could be addressed by interventions aiming at a reduction of depressive symptoms.

Title: Predictors of depressive symptoms in adolescents with type 1 diabetes

Authors: Law G.U., Nouwen A., Gibbins H., McGovern S.

Institute: University of Birmingham

Aims: Prevalence of depressive symptoms is elevated in adolescents with diabetes, however, little is known about the underlying psychological mechanisms. The aim of this study was to examine predictors of depressive symptoms in adolescents.

Methods: 136 adolescents (60 girls), aged 12-18 (mean age 14 years, SD = 1.8) with type 1 diabetes were recruited through diabetes clinics in the UK and completed self-report measures of illness beliefs, dietary self-efficacy, dietary self-care, social self-efficacy, social support (family / friends), diabetes distress and depressive symptoms.

Results: Multiple regression analyses showed that depressive symptoms were predicted significantly by BMI, diabetes distress, and social self-efficacy. Path analyses showed that the link between diabetes distress and depressive symptoms was partially mediated by social self-efficacy.

Conclusion/Discussion: It can be concluded that diabetes specific distress in adolescents is linked to depressive symptoms. However, the level of depression was negatively associated with perceived ability to get support from friends and family. These results seem to suggest that interventions aimed at reducing diabetes related distress should also focus on helping teenagers obtain support from family and friends.

Title: Predicting outcomes in the Dose Adjustment For Normal Eating (DAFNE) Trial.

Authors: Speight J [1] and the DAFNE Study Group (S Amiel [2], S Beveridge [3], C Bradley [1], C Gianfrancesco [3], S Heller [3], P James [4], N McKeown [2], L Oliver [4], H Reid [2], S Roberts [4], S Robson [4], J Rollingson [4], V Scott [3], C Taylor [3], G Thompson [4], E Turner [2], F Wright [4])

Institute: [1] Royal Holloway University of London; [2] King's College Hospital, London; [3] Northern General Hospital, Sheffield; [4] Northumbria Healthcare Trust, North Tyneside.

Background: In the UK, DAFNE training in flexible intensive insulin therapy significantly reduced the negative impact of diabetes on quality of life (QoL) and improved blood glucose (BG) control without significantly increasing severe hypoglycaemia or body mass index (BMI). Analyses were conducted to predict who would benefit most from the generally highly successful DAFNE training and who might experience undesirable effects (e.g. weight gain).

Methods: Multiple regression was used to predict change in outcomes (6-months post-DAFNE) using baseline data: demographic, biomedical, ADDQoL (measure of the impact of diabetes on QoL), extended DTSQ (Diabetes Treatment Satisfaction Questionnaire), and other psychological measures including diabetes-specific well-being and locus of control.

Findings: Greatest improvement in ADDQoL scores was achieved by those reporting less dietary freedom and less treatment satisfaction at baseline ($R^2=0.21$). BG improvement was predicted by higher baseline BG, lower perceived frequency of hypoglycaemia, greater expectations of DAFNE, and greater BMI ($R^2=0.30$). Increase in BMI was predicted by less dietary freedom, DAFNE training centre, and less 'satisfaction with insulin' at baseline ($R^2=0.23$).

Conclusions/Discussion: DAFNE has important benefits to offer. Lifting dietary restrictions had substantial benefits for QoL. BG improvement was predicted by baseline BG but also by expectations (perhaps reflecting greater optimism or determination). Prediction of weight gain was more complex. The influence of training centre will have involved implicit messages conveyed by Educators before and during DAFNE. While DAFNE was successful overall, outcomes are likely to be maximised for individuals if their expectations and personal goals are considered by DAFNE Educators.

Title: Pattern interruption in disease prevention through grounded theories?

Authors: Zoffmann V.

Institute: Institute of Public Health, Department of Nursing Science, University of Aarhus, Denmark

Aims: The aim of this paper is to present findings from a qualitative study of difficult diabetes care and to discuss the implications of the findings in disease prevention.

Methods and Patients: Grounded Theory was used in the analysis of six data sources from problem solving in patient-nurse dyads: two conversations between the parties, a discussion between the nurse and another team member (doctor, dietician or another nurse), semi-structured interviews with the patient and the nurse after discharge and finally an interview with the patient half a year later.

Eleven patient-nurse dyads were studied. Eight of the patients were aged 18-42 years with Type 1 diabetes for 2 – 25 years. Three were aged 49-63 years and had been suffering from Type 2 diabetes for 1-4 years. All patients (seven female and four male) had high HbA1c (8.4 - 18.00). Eight nurses with 1-17 years of experience in diabetes care participated as "contact nurses", responsible for the care of the patients.

Results: Three interrelated theories were developed: (1) An overall life-disease conflict <u>in</u> and <u>between</u> patients and professionals tended to keep life and disease apart. (2) Three relation-ships constituted different ways of framing the relational potential for change. (3) A model of person-specific communication and reflection showed paths and barriers to accomplish shared decision-making.

Conclusions/Discussion: The theories provided an interpretive explanation why the potential for change in difficult diabetes care was poorly exploited. They specified barriers to overcome and paths to keep to if difficult problems should be successfully solved. In difficult diabetes care these theories have proven valuable as a basis for developing a successful intervention (Zoffmann 2004). Due to their nature, I assume the theories have general implications in patient-provider interaction, especially in accomplishing behavior change and disease prevention.

Grounded theories developed in difficult diabetes care are considered valuable as a basis for innovation in disease prevention.

Title: Perspectives of Health Care Providers toward Diabetes Prevention in the International DAWN Study.

Authors: Peyrot M. (1), Skovlund S. (2)

Institute: (1) Loyola College, (2) Novo Nordisk

Aims: To assess health care providers' endorsement of population-based primary diabetes prevention in an international context.

Methods: The DAWN study is a cross-sectional survey of respondents in 13 countries from Australia, Asia, Europe and North America. This analysis examines 3,827 diabetes care providers (2,070 primary care and 635 diabetes specialist physicians and 523 primary care and 599 diabetes specialist nurses). The survey includes measures of provider characteristics and diabetes-related attitudes/beliefs. The prevention measure is a four-item scale scored 0-100. Multivariate analysis is used to identify significant ($P < .05$) correlates of diabetes prevention endorsement.

Results: Endorsement of population-based diabetes prevention is high (mean = 80.7) and significantly higher among diabetes specialists and women. There are significant differences among countries (unadjusted means range from 67.3 to 91.8), with Scandinavian counties and The Netherlands lowest and Spain and Poland highest. The effects of gender, practice duration, and profession (physician/nurse) differ significantly across countries. Effects of country and respondent characteristics are significantly mediated by diabetes-related attitudes/beliefs. Endorsement is significantly higher among those who believe that diabetes care is costly and diabetes is increasing rapidly and those who highly rate their countries' chronic care system. Higher endorsement is significantly associated with beliefs that diabetes should be given a higher priority by the health care system and that policy makers should understand diabetes better.

Conclusions: Primary prevention of diabetes is strongly endorsed by health care professionals who treat diabetes. Endorsement varies substantially across countries, and there is substantial variation within countries. Endorsement is stronger among those more involved in diabetes care and those who perceive diabetes as a more significant problem.

Title: Suicidal ideation and depression among patients with diabetes mellitus

Authors: Dernovšek M.Z., Marušič A., Kozel D.

Institute: Institute of Public Healt of Republic of Slovenia

Objectives: The objective of the proposed research was to define the prevalence of depression and suicidal ideation among individuals with diabetes and to study them both in the context of diabetes related problems and sociodemographic variables.

Methods: Data were collected from 420 individuals with diabetes mellitus (Type 1 and Type 2). The following questionnaires were mailed to each participant: The Center for Epidemiologic Studies Depression Scale, The Problem Areas in Diabetes Scale and Questionnaire of Suicidal Thinking (includes sociodemographic variables).

Results: The prevalence of depressive symptomatology was 38% and the prevalence of suicidal ideation 31%. More than 15% of those patients have at least once seriously thought about suicide. A significant association was found between depressive symptomatology and suicidal ideation ($r = 0.41$, $p < .001$). Both depression and suicidal ideation are significantly associated with diabetes related problems respectively.

Conclusion: The findings so far indicate that there is a severe problem of comorbid depression and possibly related suicidal ideation among diabetes patients. Furthermore, depression may negatively influence patients' adherence to diabetes therapy and consecutively emerge in diaetes related problems. Suicidal thinking may well be the consequence of sinergetic mechanism of comorbid depression and diabetes related problems. Thus it is necessary further to study the suicidal behaviour among patients with diabetes and likewise among patients with chronic diseases in general. Those patients may be at high risk for suicidal behaviour.

Title: Effectiveness of a psychoeducational intervention to increase treatment acceptance and improve depressive symptoms in patients with diabetes

Authors: Pibernik-Okanovic M., Begic D., Novak B., Szabo S., Metelko Z.

Institute: Vuk Vrhovac University Clinic

Background and rationale: Depression in diabetic patients is generally characterized by suboptimal recognition and inconsistent treatment. A treatment model that is incorporated into diabetes care and uses psychoeducation on depression in addition to regular screening procedure may improve patients' outcomes.

Aims: To determine the effects of psychoeducation on depression on the course of depressive symptoms and diabetes-related outcomes in a one-year follow-up.

Design / Methods: A randomized controlled trial comparing depressed diabetic patients receiving a three-session psychoeducation on depression with those receiving usual care.

Diabetic patients coming to their regular medical check-ups are screened for depression by their diabetologists using the 6-item Prime-MD Depression Scale. Positively screened patients are referred to a psychologist for psychosocial history and collection of data on their current emotional state. A structured clinical interview for DSM-IV Axis I disorders is used to determine the severity of depression. Depressed patients are randomly assigned to either psychoeducational intervention or standard care. Both groups are followed for one year with reassessments of depression, diabetes-related emotional problems, diabetes self-care and health-related quality of life after 6 and 12 months.

Intervention: A three-session psychoeducation on depression comprising information about a) the symptoms and the course of depression, particularly in relation to diabetes; b) treatments of depression and c) self-help in dealing with the disease, is delivered. Educational information is provided interactively in small groups of patients. Clinically depressed patients considered to need treatment are encouraged to accept it according to their preferences. The group work is supported by booklets with information about depression, associations between depression and diabetes, and depression treatment.

Control subjects are only generally informed about the diagnosis and treatment possibilities.

Main outcomes measure will include depressive symptoms at 6- and 12-month follow-up periods, depression therapy, subjective function (SF-12), diabetes-related emotional problems (PAID) and glycemic control.

Questions for the PSAD group participants: (1) Is it justified to treat clinically and subclinically depressed patients in the same way? (2) 2. May individual counselling be supposed to be more acceptable than the group work?

Title: Psychodiabetic kit and ist application in the management of patients with diabetes or at risk for diabetes

Author: Kokoszka A.

Institute: II Department of Psychiatry, Medical University of Warsaw, Poland

Aims: (1) Presentation of Psychodiabetic Kit, i.e., the set of brief and simple diagnostic tools for general practitioners that would aid psychotherapeutic diagnosis of the main psychological problems of patients with diabetes and at risk for diabetes, and that would underlay psychotherapeutic interventions within regular visit, according to the Practical Schema of Psychotherapeutic Management during the Regular Medical Visit.

(2) Consideration of need of the elaboration of its versions in other languages.

(3) Video presentation of the illustration of the practical application of the Psychodiabetic Kit.

Design / Methods: The Brief Method of Evaluating Coping with Disease has good psychometric characteristics in Polish. However, the reliability of its English translation (trough the procedure of back-translation) is very low.

Planned Analysis: Elaborations of valid and reliable versions of the Brief Method of Evaluating the Feeling of an Influence on the Course of Disease and of the Brief Method of Evaluating Coping with Disease are not acceptable.

Expected outcomes: Elaboration of the simple method of improvement of diagnostic and psychotherapeutic resources of the general practitioners in management with diabetes and with patients at risk for diabetes.

Problems / Questions: (maximum of three) that you hope to be answered by the group discussions: (1) Usefulness of Psychodiabetic Kit in other countries, than Poland (2) The way of translation or development of English versions of Psychodiabetic Kit.

Title: Monitoring health related quality of life in adolescents with type 1 diabetes prior to periodic outpatient consultation

Authors: de Wit M, Delemarre-van der Waal HA, Gemke RJBJ, Snoek FJ

Institute: VU University Medical Center Amsterdam

Aims: Adolescents with type 1 diabetes as a group display the worst glycaemic control when compared to other age-groups, due to a complex interaction of biological, behavioural and social factors. This appears to be more prominent in adolescent girls, where glycaemic control is complicated by eating disorders in 10 to 40 % of the teenage girls with diabetes. Depression has found to be 2 to 3-fold more prevalent in adolescent diabetes patients compared to healthy peers. The prevalence of poor metabolic control and the psychological co-morbidity underscores the necessity to improve treatment outcomes, with an approach addressing both metabolic and psychosocial issues.
In a prospective multi-centre study, the effects of an office-based, computerised Health-Related Quality of Life (HRQoL) assessment in adolescent type 1 diabetes patients (13 –18 years), prior to their periodic outpatient consultation are studied. The outcomes of the assessment are discussed during consultation, as a means of tailoring care to the (changing) psychosocial needs of the adolescent with diabetes. It is hypothesized that implementing this procedure will help to improve psychosocial and clinical outcomes, and satisfaction with care.

Design: The study is carried out in 4 paediatric diabetes outpatient clinics (n=120). At baseline, medical and psychosocial assessments are scheduled in participating patients and their parent(s). After randomisation, two centres in the control condition continue to deliver care-as-usual (3-monthly outpatient consultations). In the two centres randomised to the experimental condition, three successive HRQoL assessments are carried out prior to the 3-monthly consultation and outcomes are discussed during consultation. After 12 months, centres cross over to the other study arm, and patients are followed up for another 12 months. In total, the study has a duration of 24 months per patient. The impact of 3 successive HRQoL assessments (3, 6, 9 months) on the primary outcome measures - psychosocial adaptation, satisfaction with care and glycaemic control - is determined at 12 and 24 months. Besides the baseline assessment, information is obtained in both conditions, concerning duration of consultations, topics discussed and actions undertaken (e.g. changes in regimen, referrals), in order to help to understand what mediates changes.

Planned analysis: Main and interaction effects of the monitoring intervention over time across the different centres are tested, as well as within-centre changes, where patients serve as their own controls. A 'study-effect' during initial control condition, and a 'carry-over' effect following crossing over from the experimental to the control condition are tested. Patient- and parent related variables (e.g. gender, SES, psychosocial status at baseline) that predict differences in changes in diabetes outcomes over time in response to the intervention will be identified.

Expected outcomes: Compared to care-as-usual, 3 successive assessments of HRQoL in adolescents with type 1 diabetes prior to their periodic outpatient consultation with the paediatrician will show significant better results at 12 months follow-up, with respect to psychosocial adaptation to diabetes (coping), satisfaction with care and glycaemic control.

Problems / Questions: (1)Will the peadiatricians accept and adapt to this new procedure? (2) Will a pilot of the computerised HRQoL assessment provide enough information on upcoming problems?

Title: The development and evaluation of alternative methods of data collection in South Asian people with Type 2 diabetes; a work in progress.

Authors: Lloyd C.

Institute: The Open University

Background and rationale: The prevalence of diabetes is increasing and is of particular concern in people of South Asian origin. However there is a need for greater understanding of cultural differences if we are to optimise health outcomes in this population. This study aims to develop and evaluate alternative methods of data collection in South Asian people with Type 2 diabetes, using two monitoring tools for clinical self-management and self-assessment.

Aims: This study will a) engage in a qualitative assessment of the cultural adaptation of the two questionnaires so that accurate and culturally sensitive translations can be developed, and b) identify the most appropriate method of instrument administration and data collection in groups whose first language is not English, or where a written language may not exist, and where levels of literacy are an influential factor when self-report instruments are used.

Planned Design: Focus groups will be used as the setting for developing culturally sensitive questionnaires and for evaluating alternative modes of data collection so that gold standard methods for each language group (Urdu, Mirpuri, Bengali, Sylheti) can be ascertained. The findings from this study will be used for a wider evaluation and validation of the two question-naires in a larger population.

The cultural equivalency of questionnaire translations will be examined, and data collection methods for administering the DMSES and the RDKS with four minority ethnic population groups will be developed. An action research approach will be utilised, using focus groups of people with Type 2 diabetes from South Asian backgrounds. The two questionnaires will be translated and back translated into Urdu, Mirpuri, Bengali and Sylheti prior to the focus group meetings. Mirpuri and Sylheti are only spoken and not written and so will be recorded translations. The first two focus group meetings will be concerned with the various aspects of cultural equivalence and the last two focus groups with alternative modes of data collection.

Questions for the Study Group: (1) Are there specific cultural equivalency criteria that the group would recommend? (2) Who are the appropriate participants for this study? (3) Is it possible to compare alternative methods of data collection when some languages are only spoken and not written?

Title: Adherence to medication in patients with type 2 diabetes

Authors: Clark M., [1] Avery L., [2]

Institute: [1] Department of Psychology, University of Surrey, Guildford, UK; [2] Diabetes Centre, St Richards Hospital, Chichester, UK

Aims: To explore the reasons for non-adherence to prescribed regimens in patients with type 2 diabetes, using both quantitative and qualitative methodologies which may inform the development of future intervention studies. This design has advantages over previous studies enabling both the assessment of patients' cognitive representations of their medication and illness, as well as providing insight into the complex lay beliefs about medication that people hold which may elucidate the patterns and predictors of non-adherence in patients with type 2 diabetes.

Design / Methods: This cross-sectional study employs both quantitative and qualitative methodologies. Adults aged between 35-70 years of age, with a definite diagnosis of type 2 diabetes and treated exclusively with OHA prescriptions for more than 1 year are being recruited at diabetes outpatient clinics, GP practices in the community and Diabetes Centres. Participants will complete questionnaires assessing personal models of diabetes, beliefs about medicines, satisfaction with treatment, problem-areas in diabetes, self-efficacy for medication taking, knowledge about prescriptions and a subjective measure of adherence. In addition, A random sample of 10 participants from each quartile of the distribution on the self-report measure of adherence will be given semi-structured interviews. The format for these interviews will be developed based on past research, focus groups, pilot studies and on the findings of the questionnaire study to help us to understand the relationships we have discovered in the questionnaire study (for example, differences in beliefs about the short-term versus long-term benefits of medication).

Results: Preliminary results from a pilot study consisting of data from 20 questionnaires and 6 patient interviews will be presented and discussed in light of naturalistic studies which suggest that in everyday diabetes care, adherence to medication in individuals with type 2 diabetes is poor.

Problems / Questions: (1) Measurement and (2) Interventions to improve adherence, can they be developed?

Title: The experience of diabetes: How does it affect self-care behaviour?

Authors: Katherine Stothard

Institute: Open University

Background and rationale: Finding out about the psychological factors that are most important in diabetes is vital in order to be able to develop effective interventions for the promotion of optimal self-care behaviours. The way that people perceive their condition and the self-efficacy they hold about their ability to carry out the necessary self-care behaviours have been shown to be important dimensions in diabetes self-management.

Aims: A study has been designed to investigate the interaction between psychosocial factors such as illness perceptions and self-efficacy with self-care and metabolic control. This study will make comparisons between the personal experiences of people with type 1 and type 2 diabetes, with the intention of identifying which psychological factors are most relevant for indicating lack of performance of self-care behaviours.

Planned Design: This study is in two stages and uses a multimethod approach. Stage one uses a quantitative methodology and involves a sample from an urban diabetes outpatient clinic completing a range of questionnaires including the IPQ-R, a self-efficacy measure and the Summary of Diabetes Self-Care Activities Measure. Stage two of the study consists of qualitative semi-structured interviews based on the results of stage one with a purposively selected sub-set of the population. The interviews will focus around peoples's illness perceptions and self-efficacy within their everyday experiences of living with diabetes.

Planned analysis: Stage one will be analysed using SPSS including descriptive statistics, correlation coefficients and multiple regression analysis. Stage two will be analysed using an Interpretative Phenomenological approach, looking for themes, commonalities and differences with the assistance of N6 software.

Expected outcomes: There are numerous differences between type 1 and type 2 diabetes, such as age of diagnosis and onset of complications. It is predicted that these differences will result in markedly different experiences and therefore different psychological effects will have different impacts on self-care and metabolic control.

Questions for the Study Group: (1) Are their particular aspects of self-efficacy and illness representations that can be addressed most appropriately through semi-structured interviews? (2) How important is it to collect data away from the stressful environment of the diabetes clinic or can valid data be collected in these conditions? (3) What advice do you have for obtaining useful, inspirational and valuable data from the interview stage?

Title: Adherence to lifestyle modification in overweight and obese people: Are the irrational beliefs an important piece in the puzzle?

Authors: Bogatean M., Miclea S., Hancu N.

Institute: Centre of Diabetes, Nutrition and Metabolic Diseases, Cluj-Napoca, ROMANIA.

Aims: (1) To study the role of irrational beliefs on adherence to lifestyle modification interventions. (2) To test the effects on treatment adherence and on subsequently weight loss of an intervention based on modifications of these particular cognitive aspects.

Design / Methods: Overweight and obese (BMI> 25) outpatients from the Clinical Centre of Diabetes, Cluj-Napoca, currently participate in an observational study. They undergo a specific psychological and lifestyle assessment at baseline and at 2 weeks, one month, 3 months. The assessment includes: psychological testing of irrational beliefs (ABS II), depression (BDI), anxiety (Stai X1, X2), as well as a lifestyle inventory (eating behavior, levels of physical activity). Routine recommendations of changes in eating-behavior, as well as in involvement in physical exercise are prescribed. Adherence is measured based of self-report measures.

Planned Analysis: Correlations between specific irrational beliefs at baseline and modifications in lifestyle (compared to baseline values) at retests; comparisons of self-recorded changes in eating and physical activity levels between people in the upper and lower quintiles of irrationality (based on ABS II scores). Based on these findings, an intervention protocol will be developed and implemented.

Expected outcomes: as the results suggest so far, people with specific irrational beliefs (low tolerance to frustration, global self-downing) are less likely to succeed in optimal, long-term lifestyle changes.

Problems / Questions: (maximum of three) that you hope to be answered by the group discussions: 1) anyone's own practical experience in REBT applied in lifestyle modifications would be of great help; 2) how to practically address the issue of cost/effectiveness of the eventual intervention?

Title: Psychological consequences of early detection and treatment of patients with type-2 diabetes

Authors: Bart J. Thoolen, Dept of Health Psychology

Institute: University Utrecht

Aims: This presentation discusses the psychological reactions of patients recently diagnosed with type-2 diabetes in the context of a screening trial. Studies focussing on the emotional reactions of screen-detected patients found that while patients may experience some initial shock or fear, these feelings generally diminish within a few months after diagnosis. However, little is known about the cognitive responses and adherence of recently detected patients with type-2 diabetes. The few relevant studies found that these patients generally downplayed their illness and its treatment. As a result, there is concern that screen detected patients will not adhere to their medical regimen and as such, will not profit from early detection and treatment. It is also questionable whether an early and intensive medical treatment has any psychological impact on patients who are, as of yet, a-symptomatic and generally unconcerned about their illness. In the context of the study Beyond good intentions we investigated the psychological responses of our screen detected patients, focussing on the following questions: What are the emotional, cognitive and behavioural perspectives of screen-detected patients? In how far are these reactions related to the time since diagnosis? And, in how far are these reactions related to the intensity of medical treatment that a patient is receiving?

Design / Methods: This research is based on data from the Dutch study Beyond good intentions which investigates the effectiveness of a behavioural intervention for patients recently diagnosed in the context of a large scale screening trial (ADDITION). The population included 378 type-2 diabetics who had been detected in the past 3 years, included in the ADDITION study and subsequently randomised to either a care-as-usual condition or intensive pharmacological treatment and supervision. This presentation is based on the baseline data of the 200 patients who had agreed to participate in Beyond Good intentions. They were already receiving medical treatment according to one of the two conditions, but they had not yet received the behavioural intervention. In our baseline questionnaire, we investigated the emotions, cognitions and adherence of our subjects. Emotions were investigated with the HADS (anxiety and depression) and PANAS (positive and negative affect). Cognitions were measured with scales such as perceived seriousness, personal vulnerability, treatment effectiveness, autonomous and controlled motivation, self-efficacy and diabetes knowledge. Adherence was measured using, among others, the Summary of Diabetes Self-care questionnaire.

Planned analysis: In this cross-sectional study, the cognitions, emotions and adherence of patients will be compared based on time since diagnosis (<= 1 year and >= 2 year) and treatment (care-as-usual versus intensive pharmacological intervention). Possible differences and interaction effects related to time since diagnosis and treatment intensity will be investigated using a multivariate analysis of variance, controlling for demographic factors.

Expected Outcomes: This presentation can offer new insights into the psychological response of screen detected patients with type-2 diabetes and the effects of time since diagnosis and intensity of treatment. In accordance with the literature we expect no differences between patient groups with reference to their emotional response, but we do expect to find differences between patients with respect to their cognitions and adherence. Analyses will be completed in march 2005.