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Higher Social Difficulty is Associated with Increased Psychological Distress Amongst Patients with End Stage Kidney Disease (ESKD)

Aim
Patients with ESKD frequently experience negative psychological symptoms (i.e., depression, anxiety, and worries). To study the factors related to these symptoms, we examined the association between social difficulties and psychological distress among patients with ESKD.

Methods
A cross-sectional, convenience sample of patients on dialysis and kidney transplant recipients (KTRs) in Toronto was asked to complete the study questionnaire on a tablet-based electronic data capture system. We assessed social difficulties with the Social Difficulty Inventory (SDI; subscales measure problems related to everyday living, finance, and interpersonal relationships), anxiety with the Generalized Anxiety Disorder 7-item scale, and depression with the Patient Health Questionnaire 9-item scale. Clinically relevant social difficulties were defined as an SDI score of ≥10; moderate-to-severe levels of psychological distress were defined as a score of ≥10 on any of the PHQ-9 and GAD-7 scales. Socio-demographic and clinical data were collected from medical records.

Results
494 patients were recruited (311 dialysis, 183 KT). The mean (SD) age was 57 (16) years and 60% were male. 21% had moderate-to-severe psychological distress and 32% experienced clinically relevant social difficulties. Participants with versus without social difficulties were more likely to be on dialysis (60% vs. 40%, p < .001) and had higher rates of psychological distress (75% vs. 25%, p < .001). The association between social difficulties and psychological distress remained significant in a logistic regression model, after controlling for socio-demographic and clinical variables (OR = 9.75, 95% CI = 5.5–17.4; p < .001).

Conclusion
Social difficulties were significantly associated with the presence of moderate-to-severe psychological distress among patients with ESKD. Providing additional social support to these patients may reduce psychological distress and improve quality of life.

Author(s)
Yuelee Khoo 1  /  Vernon Li 1 /  Min Rong Li 1  /  Dan Li 1  /  Nathaniel Edwards 1  /  Marta Novak 2  /  Istvan Mucsi 1

P: Presenting author

Affiliation(s)
1. University Health Network, Multi-Organ Transplant Program and Division of Nephrology, Toronto, CA
2. University Health Network, Centre for Mental Health, Toronto, CA
Lower Social Support is Associated with Higher Social Difficulties Amongst Patients with End Stage Kidney Disease (ESKD)

Aim
Adequate social support has reportedly been associated with reduced distress, anxiety and depression. However, little information is available about the potential association between social support and social difficulties amongst patients with ESKD. Here we assess the association between social support and social difficulties amongst patients with ESKD.

Methods
In a cross-sectional, convenience sample of patients on maintenance dialysis in several outpatient dialysis units in Toronto, we used the MOS Social Support Survey to assess social support. The outcome variable was the 16-item Social Difficulty Inventory (SDI). Social difficulty was defined as a score of ≥10 on the SDI. The association between clinically relevant social difficulties and tertiles of overall social support was assessed using Pearson’s Chi-Square and multivariable-adjusted logistic regression.

Results
272 patients were recruited, 66% (179) were male and 47% (127) were Caucasians. 40% (108) of participants were diabetic with a mean (SD) age was 55 (13). A weak negative correlation was seen between the overall social support and SDI scores (Spearman’s rho=-0.24, p<0.001). Social difficulties were present in 34% of respondents. Of the participants with low, moderate and high social support, 51, 30 and 20% had social difficulties (p=0.001). The relationship between social support, represented by tertiles of the score, and social difficulties remained significant in a multivariable logistic regression model after adjusting for sociodemographic and clinical values (OR=0.42; 95% CI=0.25-0.70; p=0.001).

Conclusion
Patients with a lower level of social support demonstrated greater social difficulties and may benefit from additional assistance from healthcare providers.

Author(s)
Vernon Li P1 / Yuelee Khoo 1 / Dan Li 1 / Ali Ayub 1 / Marta Novak 2 / Istvan Mucsi 1

P: Presenting author

Affiliation(s)
1. University Health Network, Multi-Organ Transplant Program and Division of Nephrology, Toronto, CA
2. University Health Network, Centre for Mental Health, Toronto, CA
**Adult attachment styles and psychosocial distress in patients with end stage kidney disease (ESKD)**

**Aim**
Insecure adult attachment is associated with psychological distress, adherence to treatment recommendations and medical symptom reporting in patients with chronic medical conditions. However, little is known about the potential association between attachment and psychosocial distress in patients with ESKD.

**Methods**
In a cross-sectional, convenience sample of patients on maintenance dialysis in several outpatient dialysis units in Toronto participants completed study questionnaires on a tablet based electronic data capture platform. Socio-demographic and clinical information was obtained from medical records. We used the relationship questionnaire to assess adult attachment. Psychosocial distress was defined as a score ≥10 on any of the Social Difficulty Inventory, Generalized Anxiety Disorder Scale7, or the Patient Health Questionnaire9. The association between secure versus anxious or avoidant attachment and psychosocial distress was assessed using Chi Square test and multivariable logistic regression.

**Results**
255 patients were recruited, 64% (162) were male and 49% (125) were Caucasians. 43% (105) of participants were diabetic with a mean (SD) age was 55 (13) years. Anxious or dismissive attachment was present in 47% of respondents. Of the participants with secure versus anxious or dismissive attachment, 53 and 36% had psychosocial distress (p=0.017). The relationship between attachment style and psychosocial distress remained significant in a multivariable adjusted logistic regression model (OR=2.83; 95%CI=1.40-5.71; p=0.004).

**Conclusion**
Secure attachment style was associated with lower risk of psychosocial distress in patients with ESKD. Future studies will need to confirm if attachment based therapies reduce distress and improve quality of life in patients with ESKD.

**Author(s)**
Marta Novak 1 / Heather Ford 1 / Nathaniel Edwards 2 / Istvan Mucsi 1

P: Presenting author

**Affiliation(s)**
1. University Health Network, Centre for Mental Health, Toronto, CA
2. University Health Network, Multiorgan Transplant Program, Toronto,
Dimensions of depressive symptoms and their association with hospitalization and mortality in dialysis patients: a cohort study

Aim
Depressive symptoms have a high prevalence in dialysis patients and are associated with adverse clinical outcomes. Unraveling specific dimensions of depressive symptoms may help to improve screening and treatment. We aimed to identify the best fitting factorial structure for the Beck Depression Inventory-II (BDI-II) in dialysis patients and assess the relation of these structure dimensions with Quality of Life (QoL), hospitalization and mortality.

Methods
This prospective study included chronic dialysis patients from 10 dialysis centers between 2012 and 2017. Dimensions of depressive symptoms within the BDI-II were unravelling using confirmatory factor analysis. The associations between symptom dimensions and quality of life, hospitalization rate and mortality were investigated using linear, poisson and cox proportional hazard regression models respectively. Multivariable regression models included demographic, social and clinical variables.

Results
In total, 687 dialysis patients were included. The factor model that included a general and a somatic factor provided the best fitting structure of the BDI-II. The factor loadings for the cognitive dimensions were low. Both the somatic and cognitive dimension showed a significant association with Quality of Life scores. However, only the somatic dimension was associated with the hospitalisation rate and all-cause mortality.

Conclusion
The somatic dimension of the BDI-II showed a significant association with adverse clinical outcomes, which was even higher compared to the general score of the BDI-II. These findings indicate that the somatic dimension of depressive symptoms needs specific attention in further research, when unravelling the association of depression scores with adverse clinical outcomes in dialysis patients.

Author(s)
Robbert Schouten ¹ / Victor Harmse ² / Adriaan Honig ³ / Carl Siegert ¹ / Friedo Dekker ³ / Wouter van Ballegooijen ⁴

P: Presenting author

Affiliation(s)
1. OLVG, Department of Nephrology, Amsterdam, NL
2. OLVG, Department of Psychiatry, Amsterdam, NL
3. LUMC, Department of Clinical Epidemiology, Leiden, NL
4. GGZ Ingeest/Vumc, Department of Clinical Psychology, Public Health, Amsterdam, NL
Mental health among anonymous living kidney donors after donation: a retrospective mixed-methods study

Aim
Anonymous living donors donate an organ to an unknown stranger. These donors undergo psychosocial assessment to evaluate likelihood of psychological harm of donation. The aim of this retrospective interview study was to investigate the psychological symptoms, psychiatric diagnoses, and whether these were related to donation among anonymous living donors.

Methods
All anonymous donors (2000-2016) in our center were invited to participate in a semi-structured interview which was audio recorded and to complete questionnaires. Questionnaires used were the Symptoms Checklist (SCL-90), Dutch Mental Health Continuum, and the MINI-Screen, and on indication the MINI-Plus. We asked in open questions about expectations, anonymity, experiences, and the support received.

Results
147 donors were eligible for inclusion however 11 had died in the intermediate period (not related to donation). The majority of the remaining 136 was willing to participate in the study: 94 gave consent, 16 declined, and 26 are pending. Seventythree interviews have been conducted (data collection will be completed in May 2019). In 33/73 (45%) donors a MINI-Plus was required based on the MINI screen. Results on the number of donors reporting psychological complaints, the type of diagnoses, type of required/received treatment, and the attribution to donation will be presented as well as qualitative findings from the interviews.

Conclusion
Willingness of anonymous donors to participate in this study was very high, reflecting the cooperative and altruistic attitude of this population. Forty-five percent MINI-plus indication is understandable in view of the 43,5% prevalence of psychiatric diagnoses in the general population.

Author(s)
Emma Massey \(^1\) / Willij Zuidema \(^1\) / Sohal Ismail \(^2\) / Louiza van Raalten \(^2\) / Jacqueline van de Wetering \(^1\) / Willem Weimar \(^1\)

P: Presenting author

Affiliation(s)
1. Erasmus MC, Internal Medicine, Rotterdam, NL
2. Erasmus MC, Psychiatry, Rotterdam, NL
Promoting Medication Adherence and Self-management among kidney transplant recipients (MARS-trial): development of an intervention protocol

Aim
Introduction: After kidney transplantation patients must adhere to a lifelong immunosuppressive medication regime in combination with other lifestyle recommendations. Nonadherence to this regimen has been demonstrated to be substantial in all age groups, undermining optimal health outcomes. Current adherence promoting interventions have a few limitations and effective interventions are scarce. We aimed to develop an intervention for enhancing adherence among nonadherent kidney transplant recipients anticipating shortcomings of current interventions.

Methods
Method: In order to develop an improved intervention, literature was reviewed to outline shortcomings of current interventions and assess known determinants for nonadherence. Based on these findings, evidence-based theories and methods were selected and translated to the population of nonadherent adolescent and adult kidney transplant recipients (ages > 12 yrs).

Results
Results: The developed intervention is outreaching (home-based) and multisystemic (involves social network of the transplant recipient). During the intervention sessions, determinants of nonadherence on various ecological levels will be assessed with the patient in dialogue with the social network and treatment goals will be formulated. Based on the intervention protocol the patient works towards achieving treatment goals. Duration and frequency of the intervention are not determined a priori, but will be determined by the achievement of goals. Results from the initial pilot study (n=8) will be presented.

Conclusion
Conclusion: The intervention is unique in that it is outreaching, tailored to the needs and situation of each individual and addresses multiple ecological levels. In an ongoing randomized controlled trial we will test effectiveness.

Author(s)
Denise Beck / Mirjam Tielen / Marloes Rechards / Sohal Ismail / Jacqueline van de Wetering / Teun van Gelder / Charlotte Boonstra / Josette Versteegh / Karlien Cransberg / Willem Weimar / Jan Buschbach / Jan van Saase / Emma Massey

P: Presenting author

Affiliation(s)
1. Erasmus MC, Internal Medicine, Rotterdam, NL
2. Erasmus MC, Psychiatry, Rotterdam, NL