

Tables S1. Search strategy to retrieve articles about health literacy and its relationship to bio-behavioral and psycho-social outcomes among hemodialysis patients

Search	Add to builder	Query	Items found
#30	Add	Search (((("Quality of Life"[Mesh]) OR (((("quality of life"[Title/Abstract]) OR "Life Quality"[Title/Abstract]) OR "Health-Related Quality of Life"[Title/Abstract]) OR "Health Related Quality of Life"[Title/Abstract]) OR HRQOL[Title/Abstract]))) AND ((("Renal Dialysis"[Mesh]) OR (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Haemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract]))	4535
#29	Add	Search (((("Self Care"[Mesh]) OR (((("Self Care"[Title/Abstract]) OR selfcare[Title/Abstract]) OR "Self management"[Title/Abstract]) OR "Self-management"[Title/Abstract]) OR "Selfmanagement"[Title/Abstract]) OR self treatment[Title/Abstract]) OR selftreatment[Title/Abstract]))) AND ((("Renal Dialysis"[Mesh]) OR (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Haemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract]))	807
#28	Add	Search (((("Social Support"[Mesh]) OR "Social Support"[Title/Abstract])) AND ((("Renal Dialysis"[Mesh]) OR (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Haemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract]))	449
#27	Add	Search (((("Health Literacy"[Mesh]) OR "Health Literacy"[Title]) OR "Health Literacy"[Title/Abstract])) AND ((("Renal Dialysis"[Mesh]) OR (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Haemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract]))	55

#26	Add	Search ("Renal Dialysis"[Mesh]) OR (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract])	123188
#25	Add	Search (((("Renal Dialyses"[Title/Abstract]) OR "Renal Dialysis"[Title/Abstract]) OR Hemodialysis[Title/Abstract]) OR Hemodialyses[Title/Abstract]) OR "Extracorporeal Dialyses"[Title/Abstract]) OR "Extracorporeal Dialysis"[Title/Abstract]	59501
#23	Add	Search "Renal Dialysis"[Mesh] Sort by: Best Match	107603
#20	Add	Search ("Quality of Life"[Mesh]) OR (((("quality of life"[Title/Abstract]) OR "Life Quality"[Title/Abstract]) OR "Health-Related Quality of Life"[Title/Abstract]) OR "Health Related Quality of Life"[Title/Abstract]) OR HRQOL[Title/Abstract])	289431
#19	Add	Search (((("quality of life"[Title/Abstract]) OR "Life Quality"[Title/Abstract]) OR "Health-Related Quality of Life"[Title/Abstract]) OR "Health Related Quality of Life"[Title/Abstract]) OR HRQOL[Title/Abstract]	235974
#18	Add	Search ("Self Care"[Mesh]) OR (((((((("Self Care"[Title/Abstract]) OR selfcare[Title/Abstract]) OR "Self management"[Title/Abstract]) OR "Self-management"[Title/Abstract]) OR "Selfmanagement"[Title/Abstract]) OR self treatment[Title/Abstract]) OR selftreatment[Title/Abstract])	67359
#17	Add	Search ("Social Support"[Mesh]) OR "Social Support"[Title/Abstract]	81299
#16	Add	Search (((((((("Self Care"[Title/Abstract]) OR selfcare[Title/Abstract]) OR "Self management"[Title/Abstract]) OR "Self-management"[Title/Abstract]) OR "Selfmanagement"[Title/Abstract]) OR self treatment[Title/Abstract]) OR selftreatment[Title/Abstract])	29983
#15	Add	Search "Social Support"[Title/Abstract]	33779
#14	Add	Search (("Health Literacy"[Mesh]) OR "Health Literacy"[Title]) OR "Health Literacy"[Title/Abstract]	8093
#12	Add	Search "Health Literacy"[Title]	3051
#11	Add	Search "Health Literacy"[Title/Abstract]	6451
#10	Add	Search "Quality of Life"[Mesh] Sort by: Best Match	169092
#8	Add	Search "Self Care"[Mesh] Sort by: Best Match	50764

#5	Add	Search " Social Support "[Mesh] Sort by: Best Match	65371
#2	Add	Search " Health Literacy "[Mesh] Sort by: Best Match	4354

Tables S1. Quality assessment of retrieved articles about health literacy and its relationship to bio-behavioral and psycho-social outcomes among hemodialysis patients in a systematic review

Articles	Author	Year	Clarity of criteria for entering the sample	Sample description	Measurement method	Standardization of tools	Identification of confounding factors	Solutions to deal with confounding factors	Ensure measurement	Appropriate statistical analysis	General opinion
Associations of Health Literacy With Dialysis Adherence and Health Resource Utilization in Patients Receiving Maintenance Hemodialysis	Green et al. ¹	2013	Y	Y	Y	Y	Y	U	Y	Y	M
Communicative and critical health literacy, and self-management behaviors in end-stage renal disease patients with diabetes on hemodialysis	Lai et al. ²	2013	Y	Y	Y	Y	U	U	Y	Y	M
Health care providers' support of patients' autonomy, phosphate medication adherence, race and gender in end stage renal disease	Umeukeje et al. ³	2016	Y	Y	Y	Y	Y	U	Y	Y	M
Health Literacy and Access to Kidney Transplantation	Grubbs et al. ⁴	2009	Y	U	U	Y	U	U	Y	Y	M
Health Literacy Associated With Blood Pressure but not Other Cardiovascular Disease Risk Factors Among Dialysis Patients	Adeseun et al. ⁵	2012	Y	U	U	Y	Y	Y	U	Y	M
Health Literacy, Knowledge, and Patient Satisfaction Before Kidney Transplantation	Jones et al. ⁶	2016	Y	Y	Y	Y	Y	U	Y	Y	M
Health literacy, negative emotional status, and self-care behaviors in dialysis	Qobadi et al. ⁷	2014	Y	Y	Y	Y	Y	U	Y	Y	M
Low Health Literacy Associates with Increased Mortality in ESRD	Cavanaugh et al. ⁸	2010	Y	U	Y	U	U	N	U	Y	M

Performance of a brief survey to assess health literacy in patients receiving hemodialysis	Cavanaugh et al. ⁹	2015	Y	Y	Y	Y	Y	U	Y	Y	M
Prevalence and Demographic and Clinical Associations of Health Literacy in Patients on Maintenance Hemodialysis	Green et al. ¹⁰	2011	Y	Y	Y	Y	Y	U	Y	Y	M
Psychosocial Factors and 30-Day Hospital Readmission among Individuals Receiving Maintenance Dialysis: A Prospective Study	Flythe et al. ¹¹	2017	Y	Y	Y	Y	Y	Y	Y	Y	M
Personal Disaster Preparedness of Dialysis Patients in North Carolina	Foster et al. ¹²	2011	Y	Y	Y	Y	Y	U	Y	Y	M
Limited health literacy in advanced kidney disease	Taylor et al. ¹³	2016	Y	Y	Y	Y	Y	U	Y	Y	M
Understanding Patient Barriers to Kidney Transplant Evaluation	Dageforde et al. ¹⁴	2015	Y	Y	Y	Y	Y	U	Y	Y	M
Single-item or two-item literacy screener to predict the S-TOFHLA among adult hemodialysis patients	Jane H. Brice	2014	Y	Y	Y	Y	Y	U	Y	Y	M
Health literacy is associated with higher serum phosphorus levels in urban hemodialysis patients	Vourakis ¹⁵	2012	Y	N	N	U	U	U	Y	N	L
The relationship between health literacy and general health level of hemodialysis patients: A case study in iran	Bahadori et al. ¹⁶	2018	Y	Y	Y	U	U	N	N	Y	M
Health literacy among dialysis patients	Martins et al. ¹⁷	2016	Y	N	N	N	U	U	Y	Y	L
The effect of health literacy on treatment adherence in maintenance haemodialysis patients: a cross-sectional study	Indino et al. ¹⁸	2019	Y	Y	Y	U	Y	Y	U	U	M
The effect of health literacy on self-reported treatment adherence and quality of life in maintenance haemodialysis patients: a cross-sectional study	Indino et al. ¹⁹	2017	Y	Y	U	N	U	N	N	U	L
Health literacy of individuals undergoing dialysis therapy	Bezzera et al. ²⁰	2019	Y	Y	U	U	U	N	Y	U	L
A cross-sectional study of health literacy in patients with chronic kidney disease: Associations with demographic and clinical variables	Stomer et al. ²¹	2019	Y	Y	Y	U	N	Y	Y	N	M
Is Health Literacy of Dialyzed Patients Related to Their Adherence to Dietary and Fluid Intake Recommendations?	Skoumalova et al. ²²	2019	Y	Y	Y	U	Y	U	U	Y	M
Exploring the Relationships Between Health Literacy, Dietary Adherence and its Mediators in Hemodialysis Patients in Malasia	Lim et al. ²³	2019	Y	Y	U	U	U	N	Y	U	L
Health literacy in kidney disease: Associations with quality of life and adherence	Stomer et al. ²⁴	2020	Y	Y	Y	U	N	Y	Y	N	M
Does Health Literacy of Hemodialyzed Patients Predict the Type of Their Vascular Access? A Cross-Sectional Study on Slovak Hemodialyzed Population	Zavacka et al. ²⁵	2020	Y	Y	Y	U	Y	U	U	Y	M
Health Literacy among patients with end-stage kidney disease and kidney transplant recipients	Lennerling et al. ²⁶	2020	Y	Y	Y	U	Y	Y	U	U	M

Associations between health literacy and health care utilization and mortality in patients with coexisting diabetes and end-stage renal disease: A prospective cohort study	Griva et al. ²⁷	2020	Y	Y	Y	U	Y	Y	U	U	M
Evaluation of Health Literacy (HL) and Quality of life (QOL) in Hemodialysis Patients: Is it different in Diabetic Patients?	Shayan et al. ²⁸	2018	Y	Y	U	U	U	N	Y	U	L

*In this table, Y stands for YES, U stands for Unclear, and N stands for NO. Also, L means low methodological quality and M means medium methodological quality.

1. Green JA, Mor MK, Shields AM, et al. Associations of health literacy with dialysis adherence and health resource utilization in patients receiving maintenance hemodialysis. *Am J Kidney Dis.* Jul 2013;62(1):73-80.
2. Lai AY, Ishikawa H, Kiuchi T, Mooppil N, Griva K. Communicative and critical health literacy, and self-management behaviors in end-stage renal disease patients with diabetes on hemodialysis. *Patient Educ Couns.* May 2013;91(2):221-227.
3. Umeukeje EM MJ, Browne T, Wild M, Alsmaan H, Umanath K et al. . Health care providers' support of patients' autonomy, phosphate medication adherence, race and gender in end stage renal disease. *Journal of Behavioral Medicine.* 2016;39(6):1104-1114.
4. Grubbs V, Gregorich SE, Perez-Stable EJ, Hsu CY. Health literacy and access to kidney transplantation. *Clin J Am Soc Nephrol.* Jan 2009;4(1):195-200.
5. Adeseun GA, Bonney CC, Rosas SE. Health literacy associated with blood pressure but not other cardiovascular disease risk factors among dialysis patients. *Am J Hypertens.* Mar 2012;25(3):348-353.
6. Jones J, Rosaasen N, Taylor J, et al. Health Literacy, Knowledge, and Patient Satisfaction Before Kidney Transplantation. *Transplant Proc.* Oct 2016;48(8):2608-2614.
7. Qobadi M, Besharat MA, Rostami R, Rahiminezhad A, Pourgholami M. Health literacy, negative emotional status, and self-care behaviors in dialysis. *Journal of Fundamentals of Mental Health.* 2014;17(1):46-51.
8. Cavanaugh KL, Wingard RL, Hakim RM, et al. Low health literacy associates with increased mortality in ESRD. *Journal of the American Society of Nephrology : JASN.* 2010;21(11):1979-1985.
9. Cavanaugh KL, Osborn CY, Tentori F, Rothman RL, Ikizler TA, Wallston KA. Performance of a brief survey to assess health literacy in patients receiving hemodialysis. *Clin Kidney J.* Aug 2015;8(4):462-468.
10. Green JA, Mor MK, Shields AM, et al. Prevalence and demographic and clinical associations of health literacy in patients on maintenance hemodialysis. *Clin J Am Soc Nephrol.* Jun 2011;6(6):1354-1360.
11. Flythe JE, Hilbert J, Kshirsagar AV, Gilet CA. Psychosocial Factors and 30-Day Hospital Readmission among Individuals Receiving Maintenance Dialysis: A Prospective Study. *American Journal of Nephrology.* 2017;45(5):400-408.
12. Foster M, Brice JH, Shofer F, et al. Personal disaster preparedness of dialysis patients in North Carolina. *Clinical journal of the American Society of Nephrology : CJASN.* 8/20/entrez

8/20/pubmed

2/9/medline 2011;6(10):2478-2484.

13. Taylor DM, Bradley JA, Bradley C, et al. Limited health literacy in advanced kidney disease. *Kidney Int.* Sep 2016;90(3):685-695.
14. Dageforde LA, Box A, Feurer ID, Cavanaugh KL. Understanding Patient Barriers to Kidney Transplant Evaluation. *Transplantation.* 2015;99(7):1463-1469.
15. Vourakis AC MC BP. Health literacy is associated with higher serum phosphorus levels in urban hemodialysis patients [Abstract]. *Am J Kidney Dis.* 2012;59:A24.
16. Bahadori M, Najari F, Alimohammadzadeh K. The Relationship between Health Literacy and General Health Level of Hemodialysis Patients: A Case Study in Iran. *Nephro-Urology Monthly.* 05/14 2018;In Press.
17. Martins C CS, Duarte J, Martins R, Silva D, Chaves C. Health literacy among dialysis patients. *Journal of Economic and Social Development.* 2016:270-275.
18. Indino K SR, Esterman A.. The effect of health literacy on treatment adherence in maintenance haemodialysis patients: a cross-sectional study. *Renal Society of Australasia Journal.* 2019;15(1):11.
19. K. I. 71. The effect of health literacy on self-reported treatment adherence and quality of life in maintenance haemodialysis patients: a cross-sectional study. *Renal Society of Australasia Journal.* 2017;13:124.
20. Bezerra M LO LA, Borba, T. Health literacy of individuals undergoing dialysis therapy. *Texto & Contexto-Enfermagem.* 2019;28.
21. Stømer UE, Gøransson LG, Wahl AK, Urstad KH. A cross-sectional study of health literacy in patients with chronic kidney disease: Associations with demographic and clinical variables. *Nursing open.* 2019;6(4):1481-1490.
22. Skoumalova I, Kolarcik P, Madarasova Geckova A, et al. Is Health Literacy of Dialyzed Patients Related to Their Adherence to Dietary and Fluid Intake Recommendations? *International journal of environmental research and public health.* 2019;16(21):4295.
23. Lim JH, Zakaria NF, Chinna K, Karupaiah T, Daud Z. SUN-313 EXPLORING THE RELATIONSHIPS BETWEEN HEALTH LITERACY, DIETARY ADHERENCE AND ITS MEDIATORS IN HEMODIALYSIS PATIENTS IN MALAYSIA. *Kidney International Reports.* 07/01 2019;4:S290.
24. Elisabeth Stømer U, Klopstad Wahl A, Gunnar Gøransson L, Hjorthaug Urstad K. Health literacy in kidney disease: Associations with quality of life and adherence. *Journal of renal care.* 2020;46(2):85-94.
25. Zavacka M, Skoumalova I, Geckova AM, et al. Does Health Literacy of Hemodialyzed Patients Predict the Type of Their Vascular Access? A Cross-Sectional Study on Slovak Hemodialyzed Population. *Int J Environ Res Public Health.* Jan 20 2020;17(2).
26. Lennerling A, Petersson I, Andersson UM, Forsberg A. Health Literacy among patients with end-stage kidney disease and kidney transplant recipients. *Scand J Caring Sci.* Apr 28 2020.
27. Griva K, Yoong RKL, Nandakumar M, et al. Associations between health literacy and health care utilization and mortality in patients with coexisting diabetes and end-stage renal disease: A prospective cohort study. *Br J Health Psychol.* Sep 2020;25(3):405-427.
28. SHAYAN N, OZCEBE H, ARICI M. FP676EVALUATION OF HEALTH LITERACY (HL) AND QUALITY OF LIFE (QOL) IN HEMODIALYSIS PATIENTS: IS IT DIFFERENT IN DIABETIC PATIENTS ? *Nephrology Dialysis Transplantation.* 2018;33(suppl_1):i273-i273.