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عنوان

بررسی تاثیر آموزش از طریق شبکه های اجتماعی بر خودمراقبتی بیماران با اختلال
مواد معدنی و استخوانی تحت همودیالیز در بیمارستان های شهر فسا در سال ۱۴۰۰-

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صدیقه تشکر

استاد راهنما

دکتر رقیه مهدی پور

استاد مشاور

دکتر بهناز باقریان

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فهرست کوتاه نوشته ها

CKD	Chronic Kidney Disease
ESKD	End stage kidney disease
ESRD	End Stage renal Disease
GFR	Glomerular filtration rate
RAAS	renin-angiotensin-aldosterone system
TCKD	Terminal Chronic Kidney Disease
RRT	renal replacement therapy
PTH	Parathyroid hormone
CKD-MBD	Chronic Kidney Disease-Mineral and Bone Disorder
KDQLI	Kidney Disease Quality of Life Instrument
MLHFQ	Minnesota Living With Heart Failure Questionnaire

چکیده فارسی

مقدمه و اهداف: با وجود در دسترس بودن دستورات عمل های جهانی و منطقه ایی برای کاهش پیامدهای مرتبط با بیماری مزمن کلیه و اختلال مواد معدنی و استخوانی بیشتر بیماران هنوز تحت تاثیر عواقب اختلالات مواد معدنی و استخوانی بیماری مزمن قرار دارند. شواهد اخیر نشان می دهد که افراد مبتلا به بیماری مزمن کلیه دانش محدودی در مورد بیماری و درمان خود دارند، با توجه به پیشرفت تکنولوژی و در دسترس بودن اینترنت و شبکه های اجتماعی، این مطالعه به منظور تعیین تاثیر آموزش از طریق شبکه های اجتماعی بر خود مراقبتی بیماران مزمن کلیه با اختلال مواد معدنی و استخوانی تحت همودیالیز در سال ۲۰۲۱ انجام شد.

روش ها: این پژوهش یک مطالعه مداخله ای بود که در سال ۲۰۲۱ در استان فارس / ایران بر روی ۴۹ بیمار مبتلا به اختلال مواد معدنی و استخوانی بیماری مزمن کلیه تحت همودیالیز انجام شد. شرکت کنندگان به روش سرشماری به دو گروه مداخله و کنترل تقسیم شدند. گروه کنترل آموزش های معمول بخش و گروه مداخله علاوه بر آموزش های معمول، آموزش پیشگیری از اختلالات مواد معدنی و استخوانی را از طریق شبکه اجتماعی واتساپ به مدت دوازده جلسه دریافت کردند. جهت سنجش دانش خودمراقبتی پرسشنامه دانش و رفتار در بیماران مزمن کلیه با اختلال مواد معدنی و استخوانی و جهت سنجش عملکرد خودمراقبتی پارامترهای آزمایشگاهی کلسیم، فسفر، پاراتیروئید هورمون، آلکالین فسفاتاز و سطح ویتامین دی (25-hydroxyvitamin D) مرتبط با اختلالات مواد معدنی و استخوانی قبل و یک ماه بعد از مطالعه در دو گروه سنجیده شد. جهت تجزیه و تحلیل اطلاعات از نرم افزار SPSS 22 استفاده گردید. سطح معنی داری ۰/۰۵ در نظر گرفته شد.

یافته ها: دو گروه از نظر آماری تفاوت معنی داری در متغیرهای جمعیت شناختی نداشتند ($p>0.05$) بجز در تحصیلات که با آنالیز کوواریانس اثر این عامل کم رنگ شد میانگین نمره دانش و رفتار قبل از مداخله در دو گروه تفاوت معنی دار آماری نداشت ($p>0.05$) اما بعد از مداخله نمره دانش و رفتار در گروه مداخله به طور معنی داری بیشتر از گروه کنترل بود ($p<0/05$) قابل ذکر است که میانگین نمره رفتار در گروه کنترل و

در گروه مداخله تفاوت معنا دار آماری را نشان داد که آنالیز کوواریانس معناداری در گروه مداخله را توجیه کرد. در پارامترهای آزمایشگاهی بین دو گروه قبل و بعد از مداخله تفاوت معنی داری آماری وجود نداشت ($p>0.05$) اما در گروه ها تفاوت معنادار آماری نشان داده شد که ممکن است به دلایل دیگر غیر از مداخله ی آموزشی باشد برای مثال تغییر تجویز داروهای مصرفی توسط پزشک و مطالعه توسط بیماران به دلیل کاندید پیوند کلیه بودن.

بحث و نتیجه گیری: نتایج تحقیق حاکی از تاثیر مثبت آموزش از طریق شبکه های اجتماعی بر دانش و رفتار بیماران با اختلال مواد معدنی و استخوانی تحت همودیالیز می باشد. پیشنهاد می شود این روش آموزشی مقرون به صرفه برای بیمار و پرستار در بالین استفاده گردد.

کلمات کلیدی: شبکه های اجتماعی، خود مراقبتی، بیماری مزمن کلیه - اختلال مواد معدنی و

استخوانی، همودیالیز، بیماری مزمن کلیه

- 1 Naderinejad N, Ejtahed H-S, Asghari G, Mirmiran P, Azizi F. Dietary Patterns and Risk of Chronic Kidney Disease Among Tehranian Adults with High Blood Pressure. *International Journal of Endocrinology and Metabolism*. 2020;18(1).
- 2 Barahimi H, Zolfaghari M, Abolhassani F, Foroushani AR, Mohammadi A, Rajaei F. E-learning model in chronic kidney disease management: A controlled clinical trial. *Iranian Journal of Kidney Diseases*. 2017;11(4):280.
- 3 Waziri B, Duarte R, Naicker S. Chronic kidney disease-mineral and bone disorder (CKD-MBD): current perspectives. *International journal of nephrology and renovascular disease*. 2019;12:263.
- 4 Golmohammadi S, Tavasoli M, Asadi N. Prevalence and Risk Factors of Hyperuricemia in Patients with Chronic Kidney Disease and Non-Alcoholic Fatty Liver. *Clinical and Experimental Gastroenterology*. 2020;13:299.
- 5 Fukagawa M, Inaba M, Yokoyama K, Shigematsu T, Ando R, Miyamoto K-i, et al. An introduction to CKD-MBD research: restart for the future. *Clinical and Experimental Nephrology*. 2017;21(1):1-3
- 6 Ureña-Torres PA, Vervloet M, Mazzaferro S, Oury F, Brandenburg V, Bover J, et al. Novel insights into parathyroid hormone: report of The Parathyroid Day in Chronic Kidney Disease. *Clinical kidney journal*. 2019;12(2):269-80.
- 7 Li J, Wang L, Han M, Xiong Y, Liao R, Li Y, et al. The role of phosphate-containing medications and low dietary phosphorus-protein ratio in reducing intestinal phosphorus load in patients with chronic kidney disease. *Nutrition & diabetes*. 2019;9(1):1-10.
- 8 Abrita RR, Pereira BdS, Fernandes NdS, Abrita R, Huaira RMNH, Bastos MG, et al. Evaluation of prevalence, biochemical profile, and drugs associated with chronic kidney disease-mineral and bone disorder in 11 dialysis centers. *Brazilian Journal of Nephrology*. 2018;40:26-34.
- 9 Moon H, Chin HJ, Na KY, Joo KW, Kim YS, Kim S, et al. Hyperphosphatemia and risks of acute kidney injury, end-stage renal disease, and mortality in hospitalized patients. *BMC nephrology*. 2019;20(1):362

- 10 Asada S, Yokoyama K, Miyakoshi C, Fukuma S, Endo Y, Wada M, et al. Relationship between serum calcium or phosphate levels and mortality stratified by parathyroid hormone level: an analysis from the MBD-5D study. *Clinical and experimental nephrology*. 2020;24(7):630-7.
- 11 Jovanovich A, Kendrick J. Personalized Management of Bone and Mineral Disorders and Precision Medicine in End-Stage Kidney Disease. *Seminars in nephrology*. 2018;38(4):397-409.
- 12 Xavier BLS, Santos Id. Promoting self-care in clients on hemodialysis: application of the nola pender's diagram. *Revista de Pesquisa: Cuidado é Fundamental Online*. 2017;9(2):545-50.
- 13 BaghianiMoghadam M, Vaezian Z, Karimiankakolaki Z, Hemayati R, Fallahzade H. Evaluating Effect of Self-care Behavior Training as well as its Benefits and Barriers on the Patients Undergoing Hemodialysis. *Toloobehtasht*. 2016;14(5):103-14.
- 14 Mohajan HK. Knowledge is an essential element at present world. *International Journal of Publication and Social Studies*. 2016;1(1):31-53.
- 15 Welch JL, Bartlett Ellis RJ, Perkins SM, Johnson CS, Zimmerman LM, Russell CL, et al. Knowledge and Awareness Among Patients with Chronic Kidney Disease Stage 3. *Nephrol Nurs J*. 2016;43(6):513-9
- 16 Wembenyui CF. Examining knowledge and self-management of chronic kidney disease in a primary health care setting: Validation of two instruments: Queensland University of Technology; 2017:16.
- 17 Chow WL, Joshi VD, Tin AS, Van der Erf S, Lim JFY, Swah TS, et al. Limited knowledge of chronic kidney disease among primary care patients-a cross-sectional survey. *BMC nephrology*. 2012;13(1):54
- 18 YusoffDM, YusofJ, Kueh YC. Knowledge, attitude and practices of the risk for chronic kidney disease among patients in a tertiary teaching hospital. *The Malaysian Journal of Nursing (MJN)*. 2016;8(2):3-11
- 19 Borzou SR, Rasoli M, Khalili Z, Tapak L. Comparison of group discussion and teach back selfcare education effects on knowledge, attitude, and performance of hemodialysis patients. *Nephro-Urology Monthly*. 2020;12(3).
- 20 Borzou SR, Rasoli M, Khalili Z, Tapak L. Comparison of group discussion and teach back selfcare education effects on knowledge, attitude, and performance of hemodialysis patients. *Nephro-Urology Monthly*. 2020;12(3):1-7.

- 21 Shukla B, Kaur A. Study to Assess Knowledge and attitude regarding self care among patients undergoing hemodialysis in selected hospital of Punjab, India. *IARS'International Research Journal*. 2012;2(1)
- 22 Kennedy A, Rogers A, Bower P. Support for self care for patients with chronic disease. *Bmj*. 2007;335(7627):968-70.
- 23 Poorgholami F, Javadpour S, Saadatmand V, Jahromi MK. Effectiveness of Self-Care Education on the Enhancement of the Self-Esteem of Patients Undergoing Hemodialysis. *Glob J Health Sci*. 2015;8(2):132-6
- 24 Bayati L, Kazemi M, Sadeghi T. Comparison of the effect of education by peer and nurse on self-care in hemodialysis patients. *Hayat*. 2019;25(3):277-88.
- 25 Mohamed SK, El-Fouly Y, El-Deeb M. Impact of a designed self-care program on selected outcomes among patients undergoing hemodialysis. *Int J Res Appl*. 2016;4(5):73-90.
- 26 Ramezani T, Sharifirad G, Rajati F, Rajati M, Mohebi S. Effect of educational intervention on promoting self-care in hemodialysis patients : Applying the self-efficacy theory. *J Educ Health Promot*. 2019;8 :65
- 27 Cherrez-Ojeda I, Felix M, Mata VL, Vanegas E, Gavilanes AW, Chedraui P, et al. Preferences of ICT among Patients with Chronic Kidney Disease Undergoing Hemodialysis: An Ecuadorian Cross-Sectional Study. *Healthcare informatics research*. 2018;24(4):292-9.
- 28 Daryazadeh S. Necessity of E-learning application and its effectiveness in self-patients' care. *Razi Journal of Medical Sciences*. 2016;23(149):9-17.
- 29 Shu S, Woo BK. The Roles of YouTube and WhatsApp in Dementia Education for the Older Chinese American Population : Longitudinal Analysis. *JMIR aging*. 2020;3(1):e18179.
- 30 Alanzi T, Bah S, Alzahrani S, Alshammari S, Almunsef F. Evaluation of a mobile social networking application for improving diabetes Type 2 knowledge : an intervention study using WhatsApp. *Journal of comparative effectiveness research*. 2018;7(09):891-9.
- 31 Haddad RN, Mourani CC. Social networks and mobile applications use in young patients with kidney disease. *Frontiers in pediatrics*. 2019;7:45.

- 32 Hosseini MS, ZiaeiRad M. The impact of telenursing consultation by using the social networks to promote the self-efficacy and weight control in patients treating with hemodialysis. *International Journal of Medical Research & Health Sciences*. 2016;5(12):52-9.
- 33 Jung MJ, Roh YS. Factors influencing the patient education performance of hemodialysis unit nurses. *Patient education and counseling*. 2020;103(12):2483-8.
- 34 Ramezani T, Sharifirad G, Rajati F, Rajati M, Mohebi S. Effect of educational intervention on promoting self-care in hemodialysis patients : Applying the self-efficacy theory. *Journal of education and health promotion*. 2019;8:1-23.
- 35 Ghadam MS, Poorgholami F, Jahromi ZB, Parandavar N, Kalani N, Rahmanian E. Effect of self-care education by face-to-face method on the quality of life in hemodialysis patients (relying on Ferrans and Powers Questionnaire). *Global journal of health science*. 2016;8(6):121.
- 36 Maslampak MH, Shams S. A comparison of face to face and video-based self care education on quality of life of hemodialysis patients. *International journal of community based nursing and midwifery*. 2015;3(3):234
- 37 Romagnani P, Remuzzi G, Glasscock R, Levin A, Jager KJ, Tonelli M, et al. Chronic kidney disease. *Nature reviews Disease primers*. 2017;3(1):1-24.
- 38 Ammirati AL. Chronic Kidney Disease. *Revista da Associação Médica Brasileira*. 2020;66:s03-s9
- 39 Control CfD, Prevention. Chronic kidney disease in the United States, 2019. Atlanta, GA : US Department of Health and Human Services, Centers for Disease Control and Prevention. 2019:1-4.
- 40 Ruiz-Ortega M, Rayego-Mateos S, Lamas S, Ortiz A, Rodrigues-Diez RR. Targeting the progression of chronic kidney disease. *Nature Reviews Nephrology*. 2020;16(5):269-88.
- 41 Hinkle JL, Cheever KH. *Brunner and Suddarth's textbook of medical-surgical nursing : Wolters kluwer india Pvt Ltd*; 2018 :4027.
- 42 Lv J-C, Zhang L-X. Prevalence and disease burden of chronic kidney disease. *Renal Fibrosis : Mechanisms and Therapies*. 2019:3-15.
- 43 Stremke ER, Biruete A, Gallant KMH. Dietary protein intake and bone across stages of chronic kidney disease. *Current osteoporosis reports*. 2020;18(3):247-53.

- 44 Bouya S, Balouchi A, Rafiemanesh H, Hesaraki M. Prevalence of Chronic Kidney Disease in Iranian General Population: A Meta-Analysis and Systematic Review. *Therapeutic apheresis and dialysis*. 2018;22(6):594-9.
- 45 Wang AY-M, Akizawa T, Bavanandan S, Hamano T, Liew A, Lu K-C, et al. 2017 Kidney Disease: Improving Global Outcomes (KDIGO) Chronic Kidney Disease-Mineral and Bone Disorder (CKD-MBD) Guideline Update Implementation: Asia Summit Conference Report. *Kidney international reports*. 2019;4(11):1523-37.
- 46 RAVAGHI H, EBRAHIMNIA M, FARZANEH A, ROSTAMI Z, MADANI MHH. Cost-Effectiveness Analysis of Screening Chronic Kidney Disease in Iran. *Journal of Clinical & Diagnostic Research*. 2019;13(11).
- 47 Morovatdar N, Tayebi Nasrabad G, Tsarouhas K, Rezaee R. Etiology of renal replacement therapy in Iran. *International journal of nephrology*. 2019;2019:1-6.
- 48 Motedayen M, Sarokhani D, Ghiasi B, Khatony A, Dehkordi AH. Prevalence of hypertension in renal diseases in Iran: Systematic review and meta-analysis. *International journal of preventive medicine*. 2019;10:1-31
- 49 Chen YC, Chang LC, Liu CY, Ho YF, Weng SC, Tsai TI. The Roles of Social Support and Health Literacy in Self-Management Among Patients With Chronic Kidney Disease. *Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing*. 2018;50(3):265-75.
- 50 Khaleghi F, Pouraboli B, Abadian L, Dehghan M, Miri S. The Effect of Emotional Disclosure by Writing on the Depression of Hemodialysis Patients in Iran: A Randomized Clinical Trial. *Journal of Caring Sciences*. 2021;10(4):223.
- 51 Webster AC, Nagler EV, Morton RL, Masson P. Chronic kidney disease. *The lancet*. 2017;389(10075):1238-52.
- 52 Jonathan Himmelfarb TAI. *Chronic Kidney Disease, Dialysis, and Transplantation*. 4th Edition ed 6th November 2018. 792 p.
- 53 Chen TK, Knicely DH, Grams ME. Chronic kidney disease diagnosis and management: a review. *Jama*. 2019;322(13):1294-304.

- 54 Vaidya SR, Aeddula NR. Chronic renal failure. StatPearls [Internet]. 2020.
- 55 Vadakedath S, Kandi V. Dialysis : a review of the mechanisms underlying complications in the management of chronic renal failure. Cureus. 2017;9(8).
- 56 Vaidya SR, Aeddula NR, Doerr C. Chronic Renal Failure (Nursing). 2021.
- 57 Wu Y, Zhang J, Wang Y, Wang T, Han Q, Guo R, et al. The association of hematuria on kidney clinicopathologic features and renal outcome in patients with diabetic nephropathy: a biopsy-based study. Journal of endocrinological investigation. 2020:1-8.
- 58 Pereira AAC, Destro JR, Bernuci MP, Garcia LF, Lucena TFR. Effects of a WhatsApp-delivered education intervention to enhance breast cancer knowledge in women: mixed-methods study. JMIR mHealth and uHealth. 2020;8(7):e17430.
- 59 Liu D, Lv L-L. New understanding on the role of proteinuria in progression of chronic kidney disease. Renal Fibrosis : Mechanisms and Therapies. 2019:487-500.
- 60 Biruete A, Jeong JH, Barnes JL, Wilund KR. Modified nutritional recommendations to improve dietary patterns and outcomes in hemodialysis patients. Journal of renal Nutrition. 2017;27(1):62-70
- 61 Clementino DC, de Queiroz Souza AM, da Costa Barros DdC, Carvalho DMA, dos Santos CR, do Nascimento Fraga S. Hemodialysis patients : the importance of self-Care with the arteriovenous fistula. Journal of Nursing UFPE on line. 2018;12(7):1841-52.
- 62 Kim B, Kim J. Influence of uncertainty, depression, and social support on self-care compliance in hemodialysis patients. Therapeutics and clinical risk management. 2019;15:1243.
- 63 MUNGULLUH FF, Ruggajo P, Furia FF. Metabolic Bone Disease in Chronic Kidney Disease Patients (CKD-MBD) and its Associated Factors at Muhimbili National Hospital in Dar es salaam, Tanzania: A Cross-Sectional Study. 2020:1-15.
- 64 Elias RM, Dalboni MA, Coelho ACE, Moysés RM. CKD-MBD : from the pathogenesis to the identification and development of potential novel therapeutic targets. Current osteoporosis reports. 2018;16(6):693-702
- 65 Hruska KA, Sugatani T, Agapova O, Fang Y. The chronic kidney disease—Mineral bone disorder (CKD-MBD) : Advances in pathophysiology. Bone. 2017;100:80-6.

- 66 Zou D, Wu W, He Y, Ma S, Gao J. The role of klotho in chronic kidney disease. *BMC nephrology*. 2018;19(1):1-12.
- 67 Yamada S, Giachelli CM. Vascular calcification in CKD-MBD: Roles for phosphate, FGF23, and Klotho. *Bone*. 2017;100:87-93.
- 68 Arad M, Goli R, Parizad N, Vahabzadeh D, Baghaei R. Do the patient education program and nurse-led telephone follow-up improve treatment adherence in hemodialysis patients? A randomized controlled trial. *BMC nephrology*. 2021;22(1):1-13.
- 69 da Silva MNP, Ferreira EMF, Rodrigues FM, Maia ABB, de Macedo Alves A, de Leonice Castro K, et al. Nursing care in the hemodialysis room: integrative review. *International Archives of Medicine*. 2017;10
- 70 Pourbalouch O, Navidian A, Askari H. Assessing the Impact of Telenursing on Self-Care in Hemodialysis Patients: A Clinical Trial Study. *Medical-Surgical Nursing Journal*. 2019;8(4).
- 71 Jaarsma T, Strömberg A, Dunbar S, Fitzsimons D, Lee C, Middleton S, et al. Self-care research: How to grow the evidence base? *International journal of nursing studies*. 2020;105:103555.
- 72 Poorgholami F, Javadpour S, Saadatmand V, Jahromi MK. Effectiveness of self-care education on the enhancement of the self-esteem of patients undergoing hemodialysis. *Global Journal of Health Science*. 2016;8(2):132.
- 73 Dorociak KE, Rupert PA, Bryant FB, Zahniser E. Development of the Professional Self-Care Scale. *Journal of counseling psychology*. 2017;64(3):325-34.
- 74 Riegel B, Barbaranelli C, Sethares KA, Daus M, Moser DK, Miller JL, et al. Development and initial testing of the self-care of chronic illness inventory. *Journal of advanced nursing*. 2018;74(10):2465-76
- 75 Riegel B, Westland H, Iovino P, Barelds I, Slot JB, Stawnychy MA, et al. Characteristics of self-care interventions for patients with a chronic condition: A scoping review. *International Journal of Nursing Studies*. 2020:103713.
- 76 Lee J, Noh D. Factors Associated With Self-Care Among Patients Receiving Hemodialysis: A Cross-Sectional Observational Study. *Res Theory Nurs Pract*. (2):118-31.

- 77 Buck HG, Shadmi E, Topaz M, Sockolow PS. An integrative review and theoretical examination of chronic illness mHealth studies using the Middle-Range Theory of Self-care of Chronic Illness. *Research in Nursing & Health*. 2021;44(1):47-59.
- 78 Riegel B, Jaarsma T, Lee CS, Strömberg A. Integrating symptoms into the middle-range theory of self-care of chronic illness. *ANS Advances in nursing science*. 2019;42(3):206.
- 79 Almutary H, Tayyib N. Factors associated with exercise self-efficacy among people with chronic diseases. *Applied nursing research : ANR*. 2020;54:151275.
- 80 Mohammadi H, Valiee S, Nouri B, Fallahi A, Zehni K. The effect of self-care education through social networks on the patients' quality of life with type 1 diabetes in sanandaj city, iran. *Creative Education*. 2018;9(02):322.
- 81 Singh T. Social Networks in the Dialysis Unit: Can They Influence Patient Behavior? : *Am Soc Nephrol*; 2021. p. 404-5.
- 82 Soodmand M, Ghasemzadeh G, Mirzaee S, Mohammadi M, Amoozadeh Lichaei N, Monfared A. Self-care Agency and Its Influential Factors in Hemodialysis Patients. *Iran Journal of Nursing*. 2019;32(118):86-95
- 83 Ramadan R, Alqatawneh S, Ahalaiqa F, Abdel-Qader I, Aldahoud A, AlZoubi S, editors. The utilization of whatsapp to determine the obsessive-compulsive disorder (ocd): A preliminary study. 2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS); 2019 : IEEE
- 84 Gon S, Rawekar A. Effectivity of e-learning through WhatsApp as a teaching learning tool. *MVP Journal of Medical Sciences*. 2017;4(1):19-25.
- 85 SWALIA. POS-823 SCRUTINY OF A WHATSAPP BASED CONTINUING NURSING EDUCATION TO FACILITATE ON THE JOB LEARNING AMONG HEMODIALYSIS NURSES. *Kidney International Reports*. 2021;6(4):S357-S8.
- 86 Sartori AC, Rodrigues Lucena TF, Lopes CT, Picinin Bernuci M, Yamaguchi MU. Educational intervention using WhatsApp on medication adherence in hypertension and diabetes patients : a randomized clinical trial. *Telemedicine and e-Health*. 2020;26(12):1526-32.

- 87 Naseri-Salahshour V, Sajadi M, Nikbakht-Nasrabadi A, Davodabady F, Fournier A. The effect of nutritional education program on quality of life and serum electrolytes levels in hemodialysis patients : A single-blind randomized controlled trial. *Patient Education and Counseling*. 2020;103(9):1774-9.
- 88 Sandlin K, Bennett PN, Ockerby C, Corradini AM. THE IMPACT OF NURSE-LED EDUCATION ON HAEMODIALYSIS PATIENTS'PHOSPHATE BINDER MEDICATION ADHERENCE. *Journal of renal care*. 2013;39(1):12-8.
- 89 Suzuki H, Uchida S, Kashiwagura Y, Tanaka S, Yamauchi K, Kageyama S, et al. Impact of community pharmacist-led intensive education on the control of serum phosphate levels in haemodialysis patients. *International Journal of Clinical Pharmacy*. 2021;43(1):220-8.
- 90 Pase C, Mathias AD, Garcia CD, Rodrigues CG. Using social media for the promotion of education and consultation in adolescents who have undergone kidney transplant : protocol for a randomized control trial. *JMIR research protocols*. 2018;7(1):e3.
- 91 Rouleau G, Gagnon MP, Côté J, Payne-Gagnon J, Hudson E, Dubois CA, et al. Effects of E-Learning in a Continuing Education Context on Nursing Care : Systematic Review of Systematic Qualitative, Quantitative, and Mixed-Studies Reviews. *Journal of medical Internet research*. 2019;21(10):e15118.
- 92 Evangelista LS, Lee JA, Moore AA, Motie M, Ghasemzadeh H, Sarrafzadeh M, et al. Examining the effects of remote monitoring systems on activation, self-care, and quality of life in older patients with chronic heart failure. *The Journal of cardiovascular nursing*. 2015;30(1):51-7.
- 93 Jerant AF, Azari R, Martinez C, Nesbitt TS. A randomized trial of telenursing to reduce hospitalization for heart failure: patient-centered outcomes and nursing indicators. *Home health care services quarterly*. 2003;22(1):1-20.
- 94 Carlson B, Nadeau CA, Glaser D, Fields W. Evaluation of the effectiveness of the healthy heart tracker on heart failure self-care. *Patient education and counseling*. 2019;102(7):1324-30.
- 95 Al Omar M, Hasan S, Palaian S, Mahameed S. The impact of a self-management educational program coordinated through WhatsApp on diabetes control. *Pharmacy Practice (Granada)*. 2020;18(2)

- 96 Dhar VK, Kim Y, Graff JT, Jung AD, Garrett J, Dick LE, et al. Benefit of social media on patient engagement and satisfaction : Results of a 9-month, qualitative pilot study using Facebook. *Surgery*. 2018;163(3):565-70
- 97 Shi Y-x, Si W, Liu J-d, Gao M, Wang S-y, Cheng M, et al. Development and evaluation of the psychometric properties of the CKD-MBD knowledge and behavior (CKD-MBD-KB) questionnaire for patients with chronic kidney disease. *Journal of Pain and Symptom Management*. 2016;51(3):557-68. e2.
- 98 World Health Organization. Process of translation and adaptation of instruments [2018, May]. Available from : https://www.who.int/substance_abuse/research_tools/translation/en /
- 99 Parvan K, Hasankhani H, Seyyedrasooli A, Riahi SM, Ghorbani M. The effect of two educational methods on knowledge and adherence to treatment in hemodialysis patients : clinical trial. *Journal of caring sciences*. 2015;4(1):83.
- 100 Fadlalmola HA, Elkareem EMA. Impact of an educational program on knowledge and quality of life among hemodialysis patients in Khartoum state. *International Journal of Africa Nursing Sciences*. 2020;12:100205.
- 101 Ahmed SH, Abd Elzaher OM, Sabra HE. Structured Teaching Program's Effect on Knowledge and SelfManagement Behaviors for Hemodialysis Patients. *Tanta Scientific Nursing Journal*. 2021;22(3):64-82
102. Lee MC, Wu SFV, Lu KC, Liu CY, Liang SY, Chuang YH, editors. Effectiveness of a self-management program in enhancing quality of life, self-care, and self-efficacy in patients with hemodialysis : A quasi-experimental design. *Seminars in Dialysis*; 2021 :292-299 Wiley Online Library.
- 103 Bayati L, Kazemi M, Sadeghi T. Comparison of the effect of education by peer and nurse on self-care in hemodialysis patients. *Hayat Journal*. 2019;25(3):277-88.
- 104 Choi ES, Lee J. Effects of a face-to-face self-management program on knowledge, self-care practice and kidney function in patients with chronic kidney disease before the renal replacement therapy. *Journal of Korean Academy of Nursing*. 2012;42(7):1070-8.
- 105 Rakhshan M, Mirshekari F, Dehghanrad F. The Relationship between Illness Perception and Self-Care Behaviors among Hemodialysis Patients. *Iranian Journal of Psychiatry*. 2020;15(2):150.

- 106 Hjemås BJ, Bøvre K, Mathiesen L, Lindstrøm JC, Bjerknes K. Interventional study to improve adherence to phosphate binder treatment in dialysis patients. *BMC nephrology*. 2019;20(1):1-10
107. Milazi M, Bonner A, Douglas C. Effectiveness of educational or behavioral interventions on adherence to phosphate control in adults receiving hemodialysis: a systematic review. *JBI Evidence Synthesis*. 2017;15(4):971-1010.
108. Rastogi A, Bhatt N, Rossetti S, Beto J. Management of hyperphosphatemia in end-stage renal disease: A new paradigm. *Journal of Renal Nutrition*. 2021;31(1):21-34.
109. Carlson B, Austel Nadeau C, Glaser D, Fields W. Evaluation of the effectiveness of the healthy heart tracker on heart failure self-care. *Patient Educ Couns*. 2019;102(7):1324-30.
- 110 Chan MW, Cheah HM, Padzil MBM. Multidisciplinary education approach to optimize phosphate control among hemodialysis patients. *International journal of clinical pharmacy*. 2019;41(5):1282-9
111. Stumm EMF, Kirchner RM, Guido Lda, Benetti ERR, Belasco AGS, Sesso RdCC, et al. Educational nursing intervention to reduce the hyperphosphatemia in patients on hemodialysis. *Revista brasileira de enfermagem*. 2017;70:31-8.
- 112 Stumm E, Kirchner R, Guido L, Benetti E, Belasco A, Sesso R. Educational nursing intervention to reduce the hyperphosphatemia in patients on hemodialysis. *Rev Bras Enferm*. 2017;70(1):26-33

Abstract

Introduction & Objectives: Despite the availability of global and regional guidelines to reduce the consequences associated with chronic kidney disease - mineral and bone disorders, most patients are still affected by the consequences of chronic mineral and bone disorders. Recent evidence suggests that people with chronic kidney disease have limited knowledge about their disease and treatment, given the advancement of technology and the availability of the Internet and social networks, this study aims to determine the impact of education through social networks on Self-care of chronic kidney patients with mineral and bone disorders undergoing hemodialysis was performed in 2021.

Methods: This study was an interventional study that was performed in 2021 in Fars / Iran province on 49 patients with mineral and bone disorders of chronic kidney disease undergoing hemodialysis. Participants were divided into two groups of intervention and control by census method. The control group received the usual training of the ward and the intervention group, in addition to the usual training, received training on the prevention of mineral and bone disorders through the WhatsApp social network for twelve sessions.

To measure self-care knowledge, Knowledge and Behavior Questionnaire in chronic kidney patients with mineral and bone disorders and to measure self-care function, laboratory parameters of calcium, phosphorus, parathyroid hormone, alkaline phosphatase and vitamin D (25-hydroxyvitamin D) levels related to disorders and disorders Bone was measured before and one month after the study in two groups. SPSS software version 15 was used for data analysis. A significance level of 0.05 was considered.

Results: There was no statistically significant difference between the two groups in demographic variables ($p > 0.05$) Except in education, the effect of this factor faded with analyze of Covariance. The mean score of knowledge and behavior before the intervention was not statistically significant in the two groups ($p > 0.05$) but after the intervention the score of knowledge and behavior in the intervention group was significantly higher than the control group ($p < 0.05$) It is noteworthy that the mean behavior score in the control group and in the intervention group showed a statistically significant difference that justified the analysis of covariance in the intervention group. although There was no statistically significant difference in laboratory parameters parameters between the two groups before and after the intervention ($p > 0.05$), However, there was a statistically significant difference between the groups, which may be for reasons other than educational intervention, for example, changing the prescription of drugs used by physicians and study by patients due to being a candidate for kidney transplantation.

Discussion and Conclusion : The results of the study indicate the positive effect of education through social networks on the knowledge and behavior of patients with mineral and bone disorders undergoing hemodialysis. It is recommended to use this cost-effective educational method for patients and nurses in the clinic.

Keywords: social networks, self care, chronic kidney disease - mineral and bone disorders, hemodialysis, chronic kidney disease



**KERMAN UNIVERSITY
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Title

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Hemodialysis Patients Suffering From Mineral and Bone Disorder in
Fasa hospitals 2021**

By

Sedigheh Tashakor

Supervisor

1- Dr. Roghayeh Mehdipour-Rabori

Advisor

Dr. Behnaz Bagherian

Thesis No : (...)

Date : (September 2021)