Decision Making and Self-Efficacy in Choosing Renal Replacement Therapy (RRT) Option among Chronic Kidney Disease Patients

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Abstract

The patient diagnosed with Chronic Kidney Disease is increasing tremendously. There are 5 stages of CKD progression and patient diagnosed with CKD stages 4 and 5 needs to make decision on choosing the Renal Replacement Therapy (RRT) option as a lifelong treatment. The RRT comprises of renal transplant, CAPD (Continuous Ambulatory Peritoneal Dialysis) and Haemodialysis treatment. Decision-making and self-efficacy may play a role in choosing these options. The impact of Covid-19 pandemic may have an impact on the decision making and self-efficacy of CKD patients. The aim of this research is to study the decision making among Chronic Kidney Disease (CKD) patients in choosing Renal Replacement Therapy (RRT) option. This is a quantitative research study. The sampling method applied is stratified sampling, whereby patients are selected based on selected criteria. It is a prospective study that includes stages 4 &5 CKD patients during Nephrology Clinic review. Data on demographic, clinical, and number of visits will be evaluated. A total of 500 CKD patients will be screened and a total of 200 (100 male and 100 female) CKD patients will be administrated with Shared Decision Making-Q-9 (SDM-Q-9) and Chronic Disease Self-Efficacy scales (CDSES) questionnaire. The quantitative data of the findings will be analysed using SPSS through p-value and correlation. The significance of these study is to assist CKD patients in the decision making process, reduce delayed decision making leads to hospital administration, increase communication skills between health care worker and CKD patient, develop mutual respect and understanding between CKD patients. CKD patients can identify level of

self-efficacy towards their illness, reduce number of regular visit and timing to nephrology clinic, reduce the cost of medical treatment, improve patients' economy level, and increases family unity and support and assisting health care provider in designing effective treatment for the patients.

Introduction

The prevalence of chronic kidney disease (CKD) among Malaysians is worrying. There are many factors that lead to chronic kidney disease (CKD), one of it is prolonged diabetes and hypertension. These patients progressively lose their kidney function until dialysis is required. In fact, these patients may have higher mortality risk if they are not treated. Apart from that, they may also experience a life changing impact on quality of life and functional status. There are five stages of chronic kidney disease, and the last stage is termed as End Stage Renal Disease (ESRD) (Haddad et. al., 2019). During initial stages of 1 to 3, patient kidney function will eventually deteriorate, but when it enters to stage 4 and 5, the kidney's total function is gone and patient requires renal replacement therapy (RRT), as a choice of long-term treatment. Renal Replacement Therapy can be defined as choices of treatment for End Stage Renal Disease (ESRD), which comprises of Kidney transplantation, PD (Peritoneal Dialysis), and Haemodialysis (Smyth, 2012). At these stage patients will need to choose any of the three treatment option as their long-term therapy treatment.

Kidney transplantation or renal transplantation involves a kidney organ transplant for a patient with end-stage renal disease (ESRD). Peritoneal dialysis (PD) refers to a dialysis technique that uses the patient's own body tissues inside the abdominal cavity as a filter while haemodialysis refers to dialysis of purifying through patient's blood (Haddad et. al., 2019). Choosing the choices that represent may impact patient cognitive process as well. The process of cognitive process, which includes decision-making, is very essential in choosing the best option among the patient. The transition from Chronic Kidney Disease (CKD) to renal replacement therapy (RRT) is a stressful event for the patients (Bezerra CIL, et. al., 2018). The RRT decision-making process is very challenging as the nephrologists need to provide education and support in helping patients with dialysis modality, which reflects the patient's personal values and lifestyle (Bezerra CIL, et. al., 2018). In fact, there are no studies on treatment decision-making in ESKD conducted (Boateng et. al., 2018). The factors that can influence patient's decision-making are impact of peers on decision making by patients and carers, the problematic timing of information presented, and the desire by patients to maintain the status quo (Morton et. al., 2010). Four main factors (personal, financial, healthcare system, and support network) were also identified to have an influence on CKD (Chronic Kidney Disease) patient decision-making as well (Boateng et. al., 2018). In the current Covid-19 pandemic, the decision making can be enhanced through many factors as well which may impact on the decision making process of patients choosing the RRT options. During this pandemic, chronic patients may experience inadequate ongoing care due to their chronic condition. The pandemic has strained the health care system resources and adversely affected the clinical decision making among health care workers and patients (Laupacis, 2020).

Self-efficacy was a term introduced by Albert Bandura whereby it's one's belief in their own ability to successfully perform an activity and achieve the expected outcomes (Ebrahimi et. al., 2018). It is also considered an important concept in the assessment and improvement of chronic conditions (self-management, quality of life, behavioral modification, hopefulness, lifestyle modification, physical and mental health, and disease presentation (Mohamadinejad et. al., 2015). This is because there are factors influencing self-efficacy of chronic patients, such as age, low education level, financial distress, single status, caregiver burnout, co-morbidities, increasing body mass index (BMI), illness perception, and disease severity (Shakya, 2018). In another study, self-efficacy factors influence the level of knowledge and how patient manage them self (Milo, 2017). In the current global situation where the pandemic may eventually impact the self-efficacy of chronic disease patients as well. Their belief system may also have an impact on their decision making process as well. The pandemic has impacted the self-efficacy and preventive behaviours which correlate with mental health, and these eventually affect in the factors of gender, age, and type of chronic disease that a patient experiences (Yildirim & Guler, 2020).

The decision making involves cognitive process while patient's action or behaviour on what they have decided, and self-efficacy involve cognitive as well in the internal processes. In fact, the decision-making processes have been shown to have a link in the self-efficacy of an individual (Bahari, 2019).

Problem Statement

In Malaysia, a population-based study in 2011 reported that 9.1% of Malaysians were found to have Chronic Kidney Disease (Ismail et. al., 2019). Looking at the global prevalence, it is reported that the percentage is 11% and 13% (Hill et. al., 2016). The breakdown of the stages OF CKD contributes stage 1, 4.16%; stage 2, 2.0%; stage 3, 2.26%; stage 4, 0.24%; and stage 5, 0.36% (Hill et. al., 2016). When looking at the statistic RRT options, Haemodialysis (HD) with the prevalence of 1059 patients per million population (pmp) in 2016 followed by peritoneal dialysis (PD) (127 patients pmp) and renal transplantation (RT) (59 patients pmp) (Ismail et. al., 2019). The requirement on the need to choose the RRT option is very challenging based on the number. When zooming on the prevalence, the incidence of Chronic Kidney Disease (CKD) patients requiring follow up in Hospital Ipoh from year 2017 (968) to 2018 (1126), the data indicated that a patient who is currently undergoing follow up treatment for Chronic Kidney Disease would eventually end up in End Stage Renal Disease. This number will eventually increase and impact the health care setting and a guided patient needs to establish a good treatment option. Choosing RRT might be a dilemma for both patients and nephrologists since different options of RRT are available for CKD patients (Bezerra CIL, et. al., 2018). Assisting patient in deciding the best option is very challenging for nephrologists and healthcare workers during this period of Covid-19 global pandemic. Understanding and evaluating patient decision making process is important as it can assist the nephrologists to plan further treatment and assist patient with the selected treatment option as the impact of Covid-19 may influence the decision making process. When these patients delay or if they are undecided what treatment option to choose, it will eventually affect their quality of life and eventually, increases the mortality rate. Apart from the pandemic, the mortality rate can increase if an effective strategies are not taken. Current evidence suggested that early RRT option will reduce mortality and provide better renal recovery (Zarbock, 2016). The dilemma that may impact this group will be the factors that lead to a better decision-making. Even with the impact of Covid-19, factors that can influence better decision making need to be evaluated. Patient's own belief system in choosing the treatment option may eventually contribute to better outcome in terms of the quality of treatment. Assisting and guiding these patients in choosing the best option is essential as it can contribute to the well being and quality of life of the CKD patients.

Research Objectives

The general objective of this study is to study the decision-making among Chronic Kidney Disease (CKD) patients in choosing Renal Replacement Therapy (RRT). The specific objectives of the quantitative study are to explore factors that contribute to decision making of CKD patients in choosing RRT options and to identify the association between self-efficacy with decision-making process. The research questions and hypotheses in this research are as follows:

a)   What are the factors that contribute to decision making of CKD patients in choosing RRT options?

b)   How self-efficacy influences decision making of patient in choosing RRT options

- Hypothesis 1: There is a relationship between self-efficacy, social support and decision making

- Hypothesis 2: There are factors that contribute to decision making of RRT options?

- Hypothesis 3: There is a difference in decision making between age and gender

- Hypothesis 4: There is a difference in decision making between gender and education level

- Hypothesis 5: There is a difference in self-efficacy between age and gender

- Hypothesis 6: There is a difference in self-efficacy between gender and education level

Literature Review

Chronic kidney disease (CKD) is a disease where the kidneys are damaged and can't filter blood the way it should be. The risk factors in developing kidney disease are diabetes, high blood pressure, heart disease, and a family history of kidney failure (Fadem, 2018). Chronic kidney disease (CKD) can be categorised to 5 stages of kidney damage, with mild damage in Stage 1 to complete kidney failure in Stage 5. The stages of kidney disease refer to how well the kidney filter waste and extra fluid from the blood. The measure of how the kidney filters waste from the blood, the eGFR (Estimated Glomerular Filtration Rate), is a blood test done to measure it (AKF, 2019). A person with Stage 5 CKD has end stage renal disease (ESRD) with a GFR of 15 ml/min or less (Fadem, 2018). This will be the end stage where the kidney completely fails to work. At this stage, kidney transplant or dialysis is required (AKF, 2019). Apparently, the patient needs to decide and proceed with the renal replacement therapy option. Renal replacement therapy (RRT) is a therapy that replaces the normal blood-filtering function of the kidneys. Basically, RRT used to improve the balance through removing waste, unwanted solutes and water through a semi permeable membrane (Cooper, 2017). Renal replacement therapy includes kidney transplant, haemodialysis, and peritoneal dialysis which are various ways of filtration of blood (Fadem, 2018).

Decision making is a process where an individual is required to select one option from several available alternatives. In general, decision making involves the individual determination of the risks and benefits related to the options, knowledge of the risk, ability to retrieve information from memory and also the ability to hold it in the mind while comparing with other options (Xu, Abshire, & Han, 2015). Decision making process among patients diagnosed with CKD. In a study indicated that medical decision making is influenced by the patient's diagnosis, cognitive functioning, and functional abilities and skills, with sensitivity to the person's race, ethnicity, and past experiences (Gross, 2016). Decision making can be a collaborative process between two individuals or group of members. Shared decision making (SDM) is a term to describe the collaborative process involving, at a minimum, the patient and the clinician finding the optimal treatment option for a patient (Subramaniam et. al., 2018).

When making a decision, it actually differs from one individual to another where different individual may have different factors that affect their decision making. There are many factors that can be discussed that contribute to the decision making of an individual. In the general population, a study that was conducted on behavioral finance, it is documented that factors leading to investors decision making are psychological factors (cognitive and emotional) and demographic factors (Al-Alawi, 2017). In discussing about chronic patients, the factors that influence their decision making are, knowledge, values, experiences, awareness, personality, socio demographic, psychological factor, communication, and internal belief. Decision making is an important task that an individual needs to act as it will guide in solving a problem as well. In the past, there were few studies which discussed the impact of decision making and delayed decision making. In a study done in a clinical setting, crucial decision making is a pathway to the trade-offs in treatment strategies, if it is delayed the impact may cause the lack of congruence among clinicians about the desired options, and also the documented workflow and communication barriers that may prevent clinicians and patients from achieving good decision making (Nichols, 2018).

In order to understand in depth on decision-making style, patient's self-efficacy need to be evaluated and how it impact patient's decision making process. Self-efficacy is the belief that we have in our own abilities, specifically our ability to meet the challenges ahead of us and complete a task successfully (Akhtar, 2008). There are many research being done on the study of self-efficacy. In a spiritual well being of an individual, self-efficacy plays a mediator in their mindfulness for the purpose of well-being (Ruiz, 2018). In order to understand the concept of self-efficacy, understanding the factors that contribute to this is essential to gauge the individual self-efficacy level. In general, understanding experiences do not play a vital role in influencing the self-efficacy level. In special education teachers, it is found that there was no correlation between experience and self-efficacy and professional development of those teachers (Sciarretto, 2019). In comparing self-efficacy in health setting, patient who have been diagnosed with chronic illness, may eventually affect the self-efficacy during illness process. Self-efficacy among CKD can support the behavior and eventually can assist patient in making a good decision-making (Sorait, 2018). In a study among 200 haemodialysis patients, a correlation study was done to determine the relationship between social support, self-efficacy and health promoting behaviour. Self-efficacy was significantly associated with social support, in other words, social support is an important element that contributes to self-efficacy in chronic patients (Kiajamali et. al, 2017).

Research Method

This is an applied research type and its quantitative study mode method. Quantitative method is practical in health setting as it can assess the decision-making and self-efficacy among chronic kidney disease patients. Besides, the questionnaire used is proven to be reliable and valid that will give a sense of involvement and partnership.

The stratified sampling selection process is the ideal technique to determine the generalisability of the survey finding. For the sample of this study, the selected sample was chronic kidney disease patients. The sample size will be taken based on the Krejcie & Morgan table (Krejcie & Morgan, 1970). The total number of sample size needed based on the formula of sample size, will be a total of 277 samples whereby the overall population size is 1000. Hence, in this study, a total of 500 patients will be selected to participate in the study from the 1000 population size. In order to follow this step, a total number of 500 CKD patients will be screened and selected to answer the Shared Decision making (SDM-Q-9) and Chronic Disease Self-Efficacy scales (CDSES) questionnaires, and out of this, 200 patients will be answering the questionnaire and will be selected for data analysis. There are certain criteria that will be set in order to choose a good sample for the research study. The initial 200 patients (100 Male, 100 Female) will be screened from the 500 sample using inclusion and exclusion criteria. Inclusion criteria will be age limit (18-75 years) to ensure the informed consent at legal age, patients who are diagnosed with stage 4 and 5 of chronic kidney disease and patients following under Nephrology follow up more than three times in a year. The exclusion criteria will be patient with serious intellectual impairment, age less than 18 and more than 75 years old, patient defaulted clinic follow up 3 times in a year and patients who are diagnosed with stage 1, 2 and 3 CKD.

Instrument

Survey Tool Quantitative – Shared Decision Making (SDM-Q-9) and Chronic Disease Self-Efficacy Scales (CDSES)

In the measuring the decision making among CKD patients, the nine-item Shared Decision Making questionnaire (SDM-Q-9) will be used in this research. It is considered one of the most frequently applied instruments for assessing patient's involvement in the medical decision making. It was developed in 2009 and has since been translated to 20 languages (Rencz et. al., 2019). Each closed questions represent by statement featuring various aspect of SDM, rated by 6 Likert scale rating. The psychometric testing shows 93% completion rate for all items and the difficulty ranged from 3.52 to 4.34 on scale from 0 to 5 and the scale internal consistency shows (α =.88) hence this version was tested in U.S and confirmed as having a high internal consistency level (Doherr et. al., 2017).

In assessing self-efficacy level among CKD patients, the Chronic Disease Self-Efficacy scales (CDSES**)** questionnaire will be used. It was obtained by adapting the original form of the Chronic Diseases Self-Efficacy Scale (CDSES) to Turkish. The scale developed by Lorig et. al. (1996) in America was composed of 6 questions and ten sub dimensions. The CDSES scale were examined in data with aggregated from 6 studies which include 2,866 patients with various chronic illnesses, the internal consistency was high throughout the 6 research study (Cronbach's a 0.87–0.91), and moderate correlations obtained with SEMCD scores (Riechm et. al., 2016). In another study, the Cronbach's a values of the scale was 0.95 and the total score correlation between the items were 0.55–0.96 (Ceyhan & Unsal, 2017).

Pilot Study

In order to evaluate the reliability and validity of the questionnaire before given to patients, a pilot study was conducted. Generally, there are two types of questionnaire distributed to patients. A total number of 20 patients were selected to answer the question based on the designed criteria. The patients will be excluded from the initial study data collection so as to avoid any bias in data collection and interpretation. The initial pilot study was conducted in Nephrology Clinic on July 22nd and 23rd 2020 whereby a total of 10 patients were selected on 22nd of July 2020, and the remaining 10 patients on the 23rd of July 2020. Generally, the two types of question are in English and Malay language. The patients successfully answered all the questions, and it was analysed using SPSS software. The descriptive characteristics of the sample study are computed and both questionnaires are tested based on the distribution of each item, items difficulty, factor analysis and the internal consistency.

The SDM-Q-9 questionnaire, which has 9 questions shows the internal consistency 0.953 hence it is more than 0.9 range, where else the CDSES questionnaire internal reliability shows that each items question shows alpha value of 0.885 for 6 number of items questions. This shows the internal reliability is overall good hence in this study it still can be applied for further analysis using larger sample population. KMO value for sampling adequacy for SDM-Q-9 questionnaire shows a value of 0.632, where else for CDSES questionnaire the value is 0.615 hence it shows the sampling adequate to be applied in this population.

Prior to commencement of this study, approvals will be obtained from the CRC (Clinical Research Centre Ministry of Health, the Head of Department and institution.

Significance of the Study

Decision making in choosing the best option for Renal Replacement Therapy (RRT) may eventually gives a great impact in preparing patient to undergo lifelong treatment. Apart from that, delay in decision-making may impact the patients due to various complications. By identifying these factors of decision-making and self-efficacy, health care workers can help assist and guide patients to improve their quality of life with the type of treatment chosen. Chronic Kidney Disease patient can identify their level of self-efficacy of their illness, and this may impact their own internal belief and strength besides enhancing their motivational level. With faster decision-making process, the RRT option it will help reduce the waiting time of patients who regularly have followed up visits in one year at the Nephrology clinic. Early decision making will also reduce the cost of medical treatment as a result of patient hospitalisation arising from various complication due to delayed decision making. With proper planning and intervention, patients may be able to continue working to support themselves despite the illness they are facing.

Discussion and Recommendations

Patient decision making in selecting the option for Renal Replacement Therapy (RRT) is very important in nephrology field. During the Covid-19 pandemic, there might be an impact on the decision making of patients in choosing the RRT options. This is due to the many factors that can influence the decision making among these CKD patients, which include knowledge, values, experiences, awareness, personality, socio-demographic, psychological factor, communication, and internal belief. Patient's own belief and abilities which are known as self-efficacy may contribute to the decision making of choosing the RRT option. Factors that contribute to the self-efficacy of an individual include social support, self-efficacy and health promoting behaviour. There are certain aspects of decision making in RRT option among CKD patients that need some attention in future research when using psycho education approach that will enhance the decision-making process.

Conclusion

The overall article discusses about the decision-making and self-efficacy among Chronic Kidney Disease patients in choosing Renal Replacement Therapy (RRT) option. Limitation in this study is the sampling of patients who are randomly selected, and this can affect the sampling size. Apart from the long waiting time for patients to meet the nephrologists, this may lead to patients not cooperating to answer the questionnaire besides the patients' health conditions that may impact the data collection. Also, the pandemic is limiting the number of patients visiting the Nephrology clinic land this may affect the sampling size.

Acknowledgement

References

Akhtar, M. (2008). What is self-efficacy? Bandura's 4 sources of efficacy beliefs. PositivePsychology UK. Retrieved from http://positivepsychology.org.uk/self-efficacy-definition-bandura-meaning/

American Kidney Fund (AKF) (2019). Retrieved 23 September 2019 from http://www.kidneyfund.org/kidney-disease/chronic-kidney-disease-ckd/stages-of-chronic-kidney-disease

Al-Alawi, A. (2017). Holistic approach to the factors affecting individual investor's decision making in the gcc markets: Evidence from Oman and Saudi Arabia. Available from ProQuest Dissertations & Theses Global (1917942662). Retrieved from https://search-proquestcom.newdc.oum.edu.my/docview/1917942662?accountid=48462

Bahari, G. M. (2019). Family social support, self-efficacy, and self-care behaviors among Saudi adult males with hypertension in Saudi Arabia (Doctoral dissertation, George Mason University).

Bezerra, C. I. L., Silva, B. C., & Elias, R. M. (2018). Decision-making process in the pre-dialysis CKD patients: do anxiety, stress and depression matter? BMC nephrology, 19(1), 98.

Boateng, E. A., East, L., & Evans, C. (2018). Decision-making experiences of patients with end-stage kidney disease (ESKD) regarding treatment in Ghana: A qualitative study. BMC nephrology, 19(1), 371.

Cooper, S. D. (2017). The lived experience of in-center hemodialysis patients receiving treatment in DeKalb County, Georgia. Available from ProQuest Dissertations & Theses Global. (1944207502). Retrieved from https://search-proquestcom.newdc.oum.edu.my/docview/1944207502?accountid=48462

Ebrahimi Belil, F., Alhani, F., Ebadi, A., & Kazemnejad, A. (2018). Self-efficacy of people with chronic conditions: A qualitative directed content analysis. Journal of clinical medicine, 7(11), 411.

Fadem, S. Z. (2018). Essentials of chronic kidney disease. New York: NOVA Medicine & Health.

Gross, K. L. (2016). A survey of approaches used by professional psychologists in determining medical decision-making capacity in older adults with known or suspected cognitive impairment. Chestnut Hill College.

Haddad, M. N., Winnicki, E., & Nguyen, S. (2019). Adolescents with Chronic Kidney Disease: From diagnosis to end-stage disease. Cham: Springer International Publishing.

Hill, N. R., Fatoba, S. T., Oke, J. L., Hirst, J. A., O'Callaghan, C. A., Lasserson, D. S., & Hobbs, F. R. (2016). Global prevalence of chronic kidney disease – A systematic review and meta-analysis. PloS one, 11(7), e0158765

Ismail, H., Manaf, M. R. A., Gafor, A. H. A., Zaher, Z. M. M., & Ibrahim, A. I. N. (2019). Economic Burden of end-stage renal disease to the Malaysian healthcare system. Kidney International Reports.

Kiajamali, M., Hosseini, M., Estebsari, F., Nasiri, M., Ashktorab, T., Abdi, A., ... & Abadi, A. S. A. (2017). Correlation between social support, self-efficacy and health-promoting behavior in hemodialysis patients hospitalized in Karaj in 2015. Electronic physician, 9(7), 4820.

Laupacis, A. (2020). Working together to contain and manage COVID-19. CMAJ 2020 March 30; 192: E340-1. doi: 10.1503/cmaj.200428

Milo, R. B. (2017). Patient knowledge, perceived self-efficacy, and self-management among patients with type II diabetes mellitus. Available from ProQuest Dissertations & Theses Global. (1930553686). Retrieved from https://search-proquest-com.newdc.oum.edu.my/docview/1930553686?accountid=48462

Mohamadinejad, F. P. R. S., Pedram Razi, S. H., Aliasgharpour, M., Tabari, F., & Kazemnejad, A. (2015). Effect of patient education program on self-efficacy in patients with diabetes. Iranian Journal of Nursing Research, 10(1), 35–41.

Morton, R. L., Tong, A., Howard, K., Snelling, P., & Webster, A. C. (2010). The views of patients and carers in treatment decision making for chronic kidney disease: Systematic review and thematic synthesis of qualitative studies. BmJ, 340, c112.

Nichols, E. L. (2018). Treatment decision making in Multivessel Coronary Artery disease. Available from ProQuest Dissertations & Theses Global. (1992746581). Retrieved from https://search-proquest-com.newdc.oum.edu.my/docview/1992746581?accountid=48462

Ruiz, R. W. (2018). Mindfulness, anxiety, self-efficacy, self-esteem, and spiritual well-being: A study of the psychological effects of martial arts. Available from ProQuest Dissertations & Theses Global. (2074890202). Retrieved from https://search-proquest-com.newdc.oum.edu.my/docview/2074890202?accountid=48462

Shakya, D. (2018). Self-efficacy among patients with chronic diseases and its associated factors. Journal of Kathmandu Medical College, 7(3), 82–88.

Smyth A. (2012). End-stage renal disease and renal replacement therapy in older patients. Nephro-urology monthly, 4(2), 425–430. doi:10.5812/numonthly.1825

Sciarretto, J. J. (2019). Special education teachers' self-efficacy, self-advocacy, and professional development comparisons at a suburban high school: A quantitative analysis. Available from ProQuest Dissertations & Theses Global. (2247081243). Retrieved from https://search-proquest-com.newdc.oum.edu.my/docview/2247081243?accountid=48462

Subramaniam, L., Zhao, J., Zee, J. J., & Tentori, F. (2018). Selection of Peritoneal dialysis or hemodialysis for kidney failure: Gaining meaningful information for patients and caregivers. doi:10.25302/10.2018.cer.110

Sorait, W. (2018). The association of self-efficacy and self-management behavior in adult patients with chronic kidney disease: An integrative review. Journal of Kidney Treatment and Diagnosis, 1(1).

Yıldırım, M., & Güler, A. (2020). COVID-19 severity, self-efficacy, knowledge, preventive behaviors, and mental health in Turkey. *Death studies*, 1–8.