

# The Review of Patients' Quality of Life With Chronic Kidney Failure

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## ABSTRACT

Chronic kidney failure is a disease with a global prevalence of height. The high incidence of chronic kidney failure requires special care to improve the quality of life is the state where a person feels comfortable and satisfied in everyday life, including physical, emotional, social and spiritual functions. Limitation of all activities, both physical and psychological, is often the cause of the decreased quality of life of patients with chronic kidney failure. This article is a systematic review that discusses the quality of life of patients with chronic kidney failure. The search for articles was carried out during 2 months (April-June 2020) by the author's team through google scholar and pubmed using several appropriate keywords such as: Health Related Quality of Life (HRQoL), Chronic Kidney Disease (CKD), Hemodialysis and Kidney Disease Quality of Life. Original research articles that discuss QoL of CKD patients and published in the 2010-2020 period are inclusion criteria. PRISMA diagrams (Preferred reporting items for systematic reviews) are used to assist in the selection of articles that fit the established inclusion and exclusion criteria. The results of the systematic review showed that as many as 87 articles were screened according to the study of the abstract and title. The team of authors obtained 38 articles according to the inclusion criteria, while the other 49 articles were exclusion criteria. This systematic review shows that the quality of life in patients with chronic kidney failure is decreasing in various domains. Patients experience decreased quality of life in terms of finances, work, physical limitations, mental and social roles. This situation is exacerbated if the patient is undergoing hemodialysis therapy. Physical limitations is the worst domain and has the lowest score compared to other domains. Older age, comorbid diabetes mellitus, higher stage of CKD and longer duration of haemodialysis according to influence the quality of life of chronic kidney failure.

**Keywords:** *Health Related Quality of Life (HRQoL), Chronic Kidney Disease (CKD), Hemodialysis dan Kidney Disease Quality of Life*

## 1. INTRODUCTION

Chronic Kidney Failure Disease is a disease with a high prevalence rate and a global health problem. The United States Renal Disease Data System (USRDS) in the United States reports that the increase in the incidence of chronic kidney disease in the United States is increasing by 20-25% each year. Global Burden of Disease (2010) data on chronic kidney failure ranks 27 in the world as the largest cause of death. Hemodialysis is one of the treatments for kidney failure with the hope of improving the quality of life (QoL) of the patient. Quality of life is a condition where a person can feel satisfaction in all daily activities in carrying out physical activities, control mentally and feel satisfied in everyday social roles (WHO, 2016)<sup>39</sup>.

A person can be said to have a good quality of life when he is physically able, mentally healthy and has a role in his social society. Previous study have show that a large proportion of patient with chronic renal failure show deteriorations in quality of life. Many of them feel that the quality of their lives is worsening because of limited daily physical activities and poor mental / emotional states when

the diagnosis of illness is received (wild, 2019)<sup>40</sup>. The quality of life (QoL) of chronic kidney failure patients decreases due to emotional instability and has begun to surrender to the disease, which also affects the physical domain and social interactions in everyday life. Chen (2016)<sup>41</sup> in a systematic review wrote that several factors that contribute to the deterioration of the quality of life of patients with chronic kidney failure are comorbid factors and complications suffered, age, hemodialysis treatment, gender and disease severity. Kidney failure greatly affects the physical and mental status where the patient feels physically limited compared to emotional factors. The article provides information to readers regarding the quality of life of patients with chronic disorders and the factors that influence it.

## 2. RESEARCH METHOD

The article discusses the quality of life (QoL) of patients with chronic kidney failure. The researcher tries to describe chronic kidney failure that affects the quality of life and sees the limitations of patients in everyday life. The PRISMA diagram (Preferred reporting item for systematic reviews) is used by the researcher to facilitate the search and selection of

articles to be shown (Figure I). The articles reviewed had met the inclusion and exclusion criteria stated in the data extract.

### 3. SEARCH STRATEGY

Search for articles was carried out for approximately 2 months, from April 10 to June 2020. To facilitate the search, the appropriate keywords were used, namely: Health Related Quality of Life (HRQoL), Chronic Kidney Disease (CKD), Hemodialysis and Kidney Disease Quality of Life. Article searches were carried out on Google scholar (100 articles) and Pubmed (22 articles). The researcher identifies articles by screening titles and abstracts and then adjusts them to the inclusion and exclusion criteria that have been set.

### 4. INCLUSION AND EXCLUSION CRITERIA

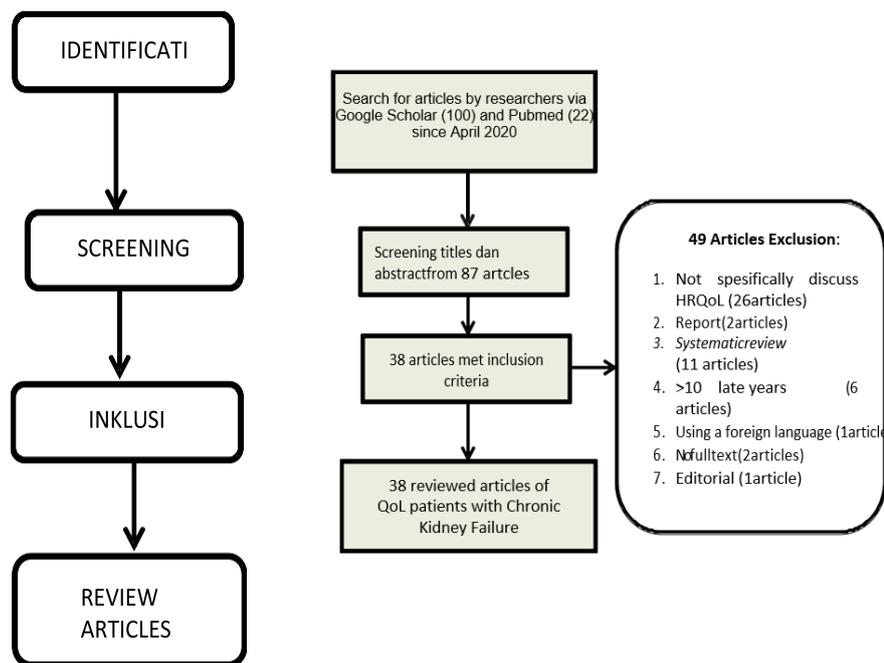
The existing inclusion and exclusion criteria make it easier for the author to get the appropriate and expected articles. An original research type article containing QoL of CKD patients, published 2010-2020 (English & Indonesian) is an inclusion criteria. Inclusion and exclusion criteria can be seen in table 1.

**Table 1.** Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
1. Original research	1. Systematic review, editorial atau report articles
2. Articles in English-Indonesian	2. Nofull text
3. Published in late 10 years (2010-2020)	3. Does not discuss QoL CKD patients specifically
4. Using generic or specific QoL instrument	

### 5. EXTRACT DATA

At the screening stage, the researchers identified the articles according to the title and abstract, which obtained 87 articles. The results of our review that 38 articles met the inclusion criteria while the other 49 articles were exclusion criteria. Articles are included in a table containing the characteristics of data identification: Table (I) research study, research method design, data collection location, number of samples, QoL instrument used and instrument validation. Table (II): score / utility, impact of CKD on patient QoL and description of Comorbid and complications suffered.



**Figure I.** Prisma Diagram

In this systematic review, the PRISMA diagram shows that 49 articles were excluded. A total of 26 articles did not discuss QoL in CKD patients specifically, 11 articles were systematic review, editorial (6 articles), report (2 articles). 6 articles published > 10 years, 2 articles are not full text and in foreign languages (Figure 1).

In our review, 65.7% of the articles used a cross-sectional study design, while the other articles used an observational and descriptive study design. The sampling locations in this systematic review came from 19 countries (India, Sweden, Nigeria, Athens, Saudi Arabia, Bulgaria, Indonesia, Belgium, Denmark, Iran, China, Malaysia, Spain, US, Singapore, Palestine, Portugal, Australia and Korea). Our review assessed that 57.8% of the sampling was carried out in hospitals and the rest were in the hemodialysis clinic. The instruments used to measure the quality of life also varied using generic and specific instruments. The generic instruments used were Short Form-36 (SF-36), SF-6D (Short Form-6 Dimension), WHOQOL-BREF (WHO-Quality of Life-BREF) and EQ-5D-5L (European Quality of Life-Five Dimension-5L) and PedsQoL. The SF-36 instrument is the most generic instrument. It is widely used to assess the quality of life of patients with Chronic Kidney Failure (15.7%). However, the researchers assess, the use of specific instruments is more widely used in this systematic review. Quality of Life). Several other articles assessed the quality of life of CKD patients using PHC and MHC (physical and mental health) instruments, BMVQOLI-15, KINDL and BDI. In measuring QoL using instruments, psychometric properties testing is important to ensure its validity and reliability of the instruments used. Our review shows that only a portion of the articles tested psychometric properties (18.4%). The validity test is the construct validity-convergent validity, while the reliability is carried out using the internal consistency with the Cronbach alpha value (> 0.7).

No	Studies/ Year	Country	Methods	Settings	Sample size	Instrument	Validation
1	Cruz (2011) <sup>1</sup>	San Paulo Brazil	Cross-sectional	Out patient at a neprology clinic, Brazil	155	SF-36	NA
2	Turlapati (2015) <sup>2</sup>	India	observational prospective	Patients in tertiary care hospital	99	SF-36	NA
3	Vankateswaramrthy (2018) <sup>3</sup>	India	Observational & prospective Study	Patients in nephrology department of a tertiary care hospital	200	KDQOL-SF	NA
4	Berger (2016) <sup>4</sup>	Brazil	Descriptive prospective study	Kidney failure patient in 4 Clinics in, Brazil	286	KDQOL-SF-36	NA
5	Pagels (2012) <sup>5</sup>	Sweden	Cross-sectional	Outpatients eight nephrology units	535	SF-36	NA
6	Jesus (2018) <sup>6</sup>	Brazil	Cross-sectional	Patients in public clinic and a private hemodialysis clinic.	114	WHOQOL-BREF	NA
7	Murali (2014) <sup>7</sup>	India	observational prospective,	Patients two tertiary care clinics in ambulatory	50	KDQOL-SF	NA
8	Ayanda (2014) <sup>8</sup>	Nigeria	Cross-sectional	Patients in University of Ilorin Teaching Hospital (UITH),	113	WHOQOL-BREF	NA
9	Georgia (2017) <sup>9</sup>	Athens	descriptive study	Patients in Dialysis Unit in a public hospital	70	WHOQOL-BREF	NA
10	Wakeel (2012) <sup>10</sup>	Saudi Arabia	Cross-sectional	Patient Undergoing hemodialiasis at Rs Khalid Saudi Arabia.	200	KDQOL-SF	NA
11	Abdhelghany <sup>11</sup> (2016)	Alexandria, Egypt	Cross-sectional; Descriptive	Patients hemodialysis unit of Karmouz Health Insurance Hospital	81	KDQOL-SF-36	Construct Validity
12	Dimova (2016) <sup>12</sup>	Bulagaria	Multi-center cross-sectional.	Patients hemodialysis centers across the country	263	B-MVQOLI-15	Internal consistency (0.73) & convergent validity (0.385)

No	Studies/ Year	Country	Methods	Settings	Sample size	Instrument	Validation
13	Saputri (2018) <sup>13</sup>	Indonesia	cross-sectional.	Hemodialysis Patients at the pringsewu District general Hospital.Indonesia	117	KDQOL-SFTM	Internal consistency & coefficient reliability (Cronbach's alpha) (0.941) (0.937)
14	Costa (2016) <sup>14</sup>	Brazil	descriptive & transversal study,	Patients in the Dialysis Center of <i>Cajazeiras</i> (CHC),	50	WHOQOL-BREF	NA
15	Poppe (2013) <sup>15</sup>	Belgium	Cross-Sectional	Outpatient clinic of the Nephrology department of the Ghent University Hospital,	155	SF-36 PHQL and MHQL)	Cronbach's alpha coefficients (0.88)
16	Knudsen (2016) <sup>16</sup>	Denmark.	Cross-Sectional	Renal Failure Pateint In Cardiology departement, Nephrologist who is at Rs. Nordsjaellands.	152	KDQOL	Reliability
17	Veerappan (2020) <sup>17</sup>	India	Cross-Sectional	Patients in tertiary care hospital	131	KDQOL-36	NA
18	Naderifar (2019) <sup>18</sup>	Iran	Descriptive-analitic	Shahid Beheshti University of Medical Sciences,	200	KDQOL-SF	validity and reliability coefficients (0.77) (0.83)
19	Ossama (2020) <sup>19</sup>	Egypt	Cross-Sectional	dialysis unit of both Benha University Hospital and Benha Teaching Hospital.	228	KDQOL-SF36	NA
20	Rostami (2013) <sup>20</sup>	Iran	Cross-Sectional	patients from 132 dialysis centers	6930	KDCS-SF	internalconsistency reliability : Cronbach alphas 0.43 to 0.91
21	Pan (2018) <sup>21</sup>	China	Cross-Sectional	Patients from a tertiary hospital China.	315	KDQOL (PCS, MCS, SF-6D, KDCS)	NA
22	Nayana (2016) <sup>22</sup>	Kerala	Cross-Sectional descriptive	Patients dialysis unit of a tertiary level referral hospital	50	KDQOL	NA

No	Studies/ Year	Country	Methods	Settings	Sample size	Instrument	Validation
23	Bender (2018) <sup>23</sup>	Warsaw	Cross-Sectional	The Clinic of Nephrology and Dialysis	100	KDQOL-SF12	NA
24	Sihombing (2017) <sup>24</sup>	Indonesia	Multicenter prospective study	Patinets from 3 big hospitals in Yogyakarta	113	KDQOL-SF™	NA
25	Morales (2018) <sup>25</sup>	Peru	descriptive, cross-sectional, prospective, observational study	Kidney Failure Patient At Cayetano Heredia Hospital Unit, Paru	79	KINDL	NA
26	Surendra (2019) <sup>26</sup>	Malaysia	cross-sectional study	From the National Renal Registry (NRR)	141	EQ-5D-3L	NA
27	Montilla (2016) <sup>27</sup>	Spanish		From Health district (Haemodialysis Unit at Hospital	52	SF-36 PHC MHC	internal consistency (Cronbach's $\alpha$ ) (0.7) (0.94). PHC, Cronbach's(0.94), MHC, (0.89)
28	Heidari (2020) <sup>28</sup>	Northern Iran	Cross-sectional	Patients from Shahid Beheshti Hospital	154	SF-36	NA
29	Pardede (2019) <sup>29</sup>	Indonesia	Cross-sectional analytical study	Outpatient Care Unit of Nephrology Division, Hemodialysis Unit and Inpatient Care Unit of Child Health Department, RSCM	112	PedsQL	NA
30	Stein (2012) <sup>30</sup>	US	Cross-sectional	Patients from dialysis unit and home dialysis	114	KDQOL-36	NA
31	Wang (2012) <sup>31</sup>	Singapore	census-style survey	from 22 dialysis centers across Singapore	1249	KDQOL-SF	NA
32	Fructuoso (2011) <sup>32</sup>	Portugal	Cross-sectional	From Nephrology Department and dialysis unit	821	SF-36 KDQOL-SF	NA
33	Zyoud (2016) <sup>33</sup>	Palestina	Cross-sectional	Patients From dialysis center	267	EQ-5D-5L	NA
34	Zimbudzi (2016) <sup>34</sup>	Australia	single-centre,	From public teaching hospital	81	EQ-5D-5L	

			prospective cohort study				
35	Negi (2019) <sup>35</sup>	India	Descriptive cross-sectional	Patients dialysis unit of Institute of Liver and Biliary Sciences	70	KDQOL-SF36	Reliability (0.90)
36	Lee (2016) <sup>36</sup>	Korea	comparative descriptive study	Patients from a hospital in Korea dialysis unit	150	EQ-5D-5L	NA
37	Alqahtani (2019) <sup>37</sup>	Saudia Arabia	cross-sectional	From the nephrology center, King Fahd Military hospital	164	KDQOL-SF	NA
38	Teles (2018) <sup>38</sup>	Spain	cross-sectional	patients from a single in-hospital dialysis centre	200	SF-36 BDI	NA

SF-36 ; Short Form-36; PedsQL; Peddiatric quality of life; BDI; Beck Depression Inventory; SF-12; Short Form-12; EQ-5D-5L ; European Quality-five dimension;KDQOL; Kidney Disease Quality of Life; PHQL; Physical Health Quality of Life; MHQL;Mental Health Quality of Life; CKD; Chronic Kidney Disease; WHOQOL-BREF; WHO Quality of Life-BREF.

#### 4. RESULTS AND DISCUSSIONS

The prevalence of chronic kidney failure globally is increasing every year. United State Renal Data System (USRDDS) (2013) reported that the incidence of chronic kidney failure in the world has increased by 10-13%. Chronic kidney failure is one of the diseases that ranks at the top of the high mortality rate globally. The treatment provided is a step to improve the quality of life (QoL) of patients by undergoing hemodialysis (HD) or peritoneal dialysis (PD). This treatment does not necessarily cure the patient because most of the kidney failure patients experience a deteriorating quality of life when diagnosed with CKD and decreased function of other organs. Most patients with a history of kidney failure will experience worsening in various domains of life, quality of life, comfort, and self – satisfaction will be reduced in the domains of finance, work, physical limitations, emotional and social environment. The article is a type of systematic review tries to provide information related to quality of life (QoL). Patients with kidney failure treatment will experience a decrease in the quality of life in financial, work, physical, emotional and social environment. This systematic review assesses the quality of life (QoL) of patients with chronic renal failure measured using instruments, be it generic instruments or those that are specific to measure the quality of life of chronic kidney patients. The results of our systematic review assessed that the quality of life of patients with chronic renal failure was poor in various domains, and the quality of life decreased when undergoing hemodialysis / PD treatment. Research by Cruzz (2011) 1 states that CKD patients experience a decrease in quality of life, especially in the physical dimensions and roles in daily life, as well as in the Turlapati (2015) 2 study which was measured using a specific KDQoL (Kidney Disease Quality of Life) instrument, most patients decreased function in the physical domain. This is due to deterioration of organ functions in the patient so that all the physical activities that are usually carried out on a daily basis experience limitations since suffering from chronic kidney failure. In this systematic review we also found that, although patients were limited in their physical roles, they showed better scores in the emotional and psychological domains. Murali (2014) revealed that the mental health of patients with kidney failure is better than physical health, although it shows a deterioration in quality of life. CKD patients with a good mental state can manage their emotional feelings, make feelings more peaceful, calm and can control feelings of sadness and depression (Ossama (2020) 19. These results show that emotional and mental conditions also affect the quality of life of patients with Chronic Kidney Failure.

The prevalence of chronic gynecological failure actually affects patient with advanced age (> 60 years). Age factors actually affect the quality of life in chronic kidney failure. In

this systematic review, the writer found that the human factor gave a low score compared to other sociodemographic Variables.

Ayanda's research (2014) 8 shows that age affects the score of CKD patients as well as status and level of support in social life. The patient's quality of life will decline with age. However, different results were shown. It is said that elderly patients have a higher score than young people because young people are more worried and problematic about their CKD diagnosis which negatively affects the quality of life. This is associated with better mental and emotional health among older patients than younger patients. The social life of CKD patients is limited due to limited physical activity and social roles in the community, which must routinely carry out hemodialysis treatments and even stay for a long time in the hospital.

**Table 3. Effect of CKD on patient QoL**

No	Study	Instrumen	Score /Utility	HRQoL	Comorbid/ Complication
1.	Cruz (2011)	SF-36	PF = 61.5 PRF= 48.6 P = 59.8 GH = 51.7 V = 54.3 SR = 63.7 ER = 65.7 MH = 64.0	CKD stage and age affect the patient's QoL. QoL descending on a stage / stage CKD.	NA
2.	Turlapati (2015)	SF-36	GH = 54.55 P = 24.14 ER= 66.75 S = 45.35	Comorbids and complications affect QoL .	HT,DM,CG, CP
3.	Vankates waramrth y (2018)	KDQOL-SF	S/P= 77.35 EKD=74.66 BKD=34.15 WS =40.1 C =62.52 QoLs=75.91 SP =65.22 SS =72.81	Comorbids and complications affects QoL None differences in QoL between patients who do not live HD with patients undergoing HD.	HT, IH, DM, AN
4.	Berger (2016)	KDQOL- SF36	60.53	CKD affects QoL, in which case the length of stay affects the patient's QoL	DM
5.	Pagels (2012)	SF-36	PF = 49.2 PRF= 22.1 P = 55.7 GH = 40.2 V = 36.5 SR = 57 ER = 34.6 MH = 62.9	QoL decreased on stages / stage CKD, there are comorbid affects QoL patients	HT, DM
6.	Jesus (2018)	WHOQOL- BREF	RQ1= 3.88 RQ2= 3.47 PD =56.64 PsD=67.5 SD = 70.67	CKD affects QoL. Patients are limited to domains physical and psychological.	NA

			ED = 62.44		
7.	Murali (2014)7	KDQOL-SF	71.93	Patients with CKD have poor QoL, the physical health domain being the most influential. Comorbids affect the patient's QoL	DM, CG, RT,PU, CPD
8.	Ayanda (2014)8	WHOQOL-BREF	NA	Comorbid and CKD stage affect the patient's QoL.	Kardiovaskuler, DM
9.	Georgia (2017)9	WHOQOL-BREF	PD= 12.90 PsD=13.98 SD =14.68 ED =14.15	Age, marital status affect QoL	NA
10.	Wakeel (2012)10	KDQOL-SF	HD=49.5 PD=61.3	Patients with HD have a low QoL score, and the age and duration of HD influence.	NA
11.	Abdhelghany 26(2016)	KDQOL-SF36	S/P= 49.97 EKD=51.04 BKD= 25.62 WS =30.86 C =62.96	Patients with HD have low QoL score. Comorbid affect the patient's QoL	AN, DM,HP
			QoLs=71.52 SP = 50.22 SS =72.22  SF-36=47.22		
12	Dimova (2016)12	B-MVQOLI-15	16.44	Patients with HD have low QoL score.	NA
13	Saputri (2018)13	KDQO-SFTM	55,70	Role with the limited physical suffering of the patient with CKD disease	NA
14	Costa (2016)38	WHOQOL-BREF	64.96	Physical activity affects QoL of CKD Patients	NA
15	Poppe (2013)15	SF-36	52.43	CKD Influence QoL patient	HT,DM, Kardiovaskuler, CG
16	Knudsen (2016)16	KDQOL	S/P= 74.4 EKD=64.1 BKD=38.4 WS =17.9 C = 84.4 QoLs=81.6 SP =66.6	CKD patients are limited in physical activity but show good results in mental health	NA

			SS =74.5		
17	Veerappa n (2020)17	KDQOL- SF36	NA	Comorbid and age affect the patient's QoL	Cardiovaskuler. HT, DM
18	Naderifar (2019)18	KDQOL-SF	46.43	Compliance with taking medication and Age affects QoL	NA
19	Ossama (2020)19	KDQOL-SF	S/P= 69.45 EKD=57.32 BKD=35.21 WS =42.77 C = 73.29 QoLs=74.23 SP =57.78 SS =77.39	HD patients have low QoL, a comorbid affect QoL	DM, AN Hepatiti, IH, HT
20	Rostami (2013)20	KDCF-SF	51.12	Age affects QoL. Physical limitations are more limited than health mentally.	NA
21	Pan (2018)21	KDQOL- SF6D	Utility=0.75	Age and complications affect QoL	Kardiovaskuler
22	Nayana (2016)22	KDQOL	S/P= 68.69 EKD=46.32 BKD=33.50 C = 61.86 QoLs=67.56 SP =65.20 SS =73.54	CKD influences patient's QoL (age, status, and duration)	NA
23	Bender (2018)23	KDQOL- SF12	NA	HD patients havethe QoL lower	NA
24	Sihombin g (2017)24	KDQOL	S/P= 93.36 EKD=90.42 BKD=65.46 WS =55.41 C = 82.88 QoLs=89.82 SP =75.03 SS =98.89	CKD affects the physical limitations of CKD patients.	NA
25	Morales (2018)	KINDL	60.39	The physical domain is scored the lowest	NA

26	Surendra (2019)	EQ-5D-3L	Utility=0.854	HD patients have the QoL lower	NA
27	Montilla (2016)	SF-36	58.63	The quality of life for hemodialysis patients is moe Low	NA
28	Tilaki (2020)	SF-36	44.77 37.1	Age affects QoL CKD patients	NA
29	Pardede (2019)	PedsQL	NA	CKD affects QoL (duration of diagnosis, Stage)	NA
30	Stein (2012)	KDQOL-SF- 36	39.14 51.9	Patients with Comorbids have more QoL low, limited to physical and mental health	DM
31	Wang (2012)	KDQOL-SF- 36	PF = 58.8 PRF= 66.8 P = 76.6 GH = 49.4 V = 58.9 ER = 74.8 MH = 71.7	Low CKD patient QoL, HD duration affects QoL across ethnicities.	NA
32	Fructuoso (2011)	KDQOL-SF- 36	S/P= 71.82 EKD=59.38 BKD=26.35 WS =19.85 C = 68.83 QoLs=80.18 SP = 58.68 SS =75.05	Age, Gender, stage CKD affect QoL. Physical health is the lowest domain and affect life patients at CKD stage 1-4	NA
33	Zyoud (2016)	EQ-5D-5L	0.37-59.38	Comorbidity, HD duration affect QoL	Kardiovaskuler, DM, HT.
34	Zimbudzi (2016)	EQ-5D-5L	0.7	CKD patients are limited self care	NA
35	Negi (2019)	KDQOL-SF- 36	59.28	Age, Gender, CKD stage, presence of comorbidities affect QoL	Kardiovaskuler, DM, HT.
36	Lee (2016)	EQ-5D-5L	Utility=0.87	Stage CKD affects QoL, the patient feels depressed	NA

37	Alqahtani (2019)	KDQOL-SF	37.4  43.5	Increasing age, QoL  Drop	DM, HT
38	Teles (2018)	SF-36	PF = 62.6 PRF= 41.6 P = 55 GH = 45.8 SR = 73.4 ER = 59.7 MH = 73.5 V=62.4	Patients undergoing HD + comorbidities have a QOL which is low by prevalence high depression.	Kardiovaskuler, DM, HT.

NA=Not available; HT= hipertensi; DM= Diabetes Melitus; CG=Chronic glomerulonephritis; CP=Chronic pyelonephritis; GH=General Health; PF= Physical functioning; PRF= Physical role functioning; P= Pain; V=Vitality; SR= Social role functioning;ER=Emotional role functioning; MH=Mental Health; IH= Ischemic Heart; AN=Anemia;S/P= Symtoms/Problems; EKD= effect of Kidney Disease; BKD= Burden of Kidney Disease; WS= Work status; C=cognitive; QoLs= Quality of social interactio; S=Sleep; SS=Social support. RQ1: Perception of quality of life; RQ2: Satisfaction with health; DF: Physical domain; DP domain Psychological; DRS social relations domain; DMA domain Environment; PU=Peptic ulcer; RT= Rheumatologic; CPD= Cardiac and Pulmonary Disease;HD= Hemodialysis; PD; Peritonyal dyalisis;HP=hypoalbuminemia.

Table 3 shows that in addition to age, the presence of comorbid and disease stage of kidney has an impact on deteriorating quality of life. Our review found that 39.4% of patients with kidney failure were comorbid. Diabetes Mellitus is a type of comorbid that most patients suffer. Teles' research (2018) found 38 scores obtained by kidney failure patients with comorbid Diabetes Mellitus are lower than without Diabetes Mellitus, it is said that low quality of life is followed by high depression due to complications suffered and the large number of drugs that must be consumed which makes financial situation it got worse. Most patient with severe stage CKD feel their quality of life is getting worse and out of control. In this systematic review it was reported that patients consisted of many stages. Fructoso's research (2011) that the QoL score in each domain, both physical health, mental health and social environment, decreased from stage 1 to stage 4. It can be said that the more severe the stage of the disease, the lower the score. The physical, emotional and social conditions at each stage of the disease are of course different. Patients who were in the final stage had more treatment, more varied amounts of drug consumed, more frequent hemodialysis duration and longer hospital stay. Osama's study showed that patients with hemodialysis duration (> 6 years) had lower scores than patients with shorter duration of hemodialysis. Similar results are shown in Negi (2019) 35's research, the more HD duration is carried out, the worse the QoL value. Patients undergoing hemodialysis treatment describe a declining quality of life because it is associated with poor financial results due to high funding for one hemodialysis treatment. Some patients feel dependent on hemodialysis machines to survive, which makes physical activity decrease over time. This systematic review can provide information for readers and medical personnel in the health service for more intensive and sustainable health care towards chronic kidney failure. The results we get can be used as a reference for paramedics in renal failure patient care services to be able to provide more intensive care for patients, to help patients manage comorbidities and complications experienced. It is necessary to train health personnel who are trained and familiar in patient care from the initial stage to patients with the severe late stage. Moral support and family support are important and meaningful for managing mental and emotional management of chronic kidney failure patients.

## 7. CONCLUSION

The result of the systematic review show that the quality of life of the chronic mental failures shows a low value in each domain, especially in the physical and psychological domains. The decrease in quality of life in the physical domain is due to decreased organ functions in the patient. Short Form-36 (SF-36) and Kidney Disease Quality of Life (KDQoL) are the most used instrument in measuring the quality of life for chronic kidney failure. Low followed by patients with comorbid diabetes mellitus. The higher the stage of kidney disease, the worse the patient's quality of life will be.

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