

THE CORRELATION AMONG CAREER THOUGHTS, DIALYSIS VARIABLES AND DEMOGRAPHIC CHARACTERISTICS OF BAHAMIAN PERSONS DIAGNOSED WITH END STAGE RENAL DISEASE (ESRD) ON HEMODIALYSIS

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Abstract

Since men and women on dialysis need three times a week treatment, there can be an interruption in their work or career thus they can experience some dysfunctional career thought. Therefore, the purpose of this research is to explore the relationship among dysfunctional career thoughts, dialysis variables and demographic characteristics of persons diagnosed with End Stage Renal Disease (ESRD) on hemodialysis in the Bahamas. The aim is to investigate the correlation among dysfunctional career thoughts and dialysis variables, and demographic characteristics (e.g. age, education, marital status). Persons living in the Bahamas on dialysis diagnosed with ESRD were recruited from a local hospital. Results revealed an overall effect of the participants' characteristics on dysfunctional career thoughts was significant. Participants' age between 19 and 28 had a positive correlation with the dysfunctional career thoughts. Accordingly, participants with junior high school certificates significantly have a negative effect on dysfunctional career thought. In addition, further results showed the marital status of participants, especially related to their non-married status, which appeared significant though this significance was weak. Implication for integration of career counseling and nursing implication for persons on dialysis have been developed.

Key words: dialysis, ESRD, dysfunctional, career thoughts, Bahamas, kidney.

Introduction

Society believe individuals in a productive life attend pre-school, elementary, junior. high school, college, work, and eventually retirement. This trend can be in an ideal world but some interruption in this ideal world can be effected with some negative event like being diagnosed with a chronic illness. Martin (2007) states a chronic illness “refers to the lived experience of long-term bodily or health disturbance whether related to a communicable or non-communicable disease, condition, syndrome, or disorder; and how people live and cope with the disruption. It is experience of intrusive

bodily or mental unwelcome unpleasant sensations and includes phenomena such as fatigue, weakness, anomie, confusion, or social stigma” (p. 2086). This definition indicates some disturbance in their way of life, which can also interrupt employment and career concern thus maybe causing some dysfunctional career thinking.

Therefore, the majority of persons diagnosed with ESRD are being treated with hemodialysis. Although, for the most part persons who experience consistent treatment of dialysis manage this condition and the disease, some interruption of their employment will be observed and thus some career decisions must be made to help improve any dysfunctional career thoughts they may experience. The expenses of hemodialysis and the restricted place the treatment is administered can affect the mental condition, employment, and eventually financial concerns of persons that can affect one’s dysfunctional career thoughts. In addition, Dames, Zalaquett, and Exum (2013) indicated being diagnosed with a medical condition that can negatively affect one’s employment and career decisions. Thus, persons in the Bahamas diagnosed with a CKD have not been exempted from this effect of career changes after a diagnosis of ESRD currently on hemodialysis.

Hemodialysis is a recommended treatment for individuals diagnosed with End Stage Renal Disease (ESRD). The amount of patients on hemodialysis in the United States accounted for 380,760 in which 104,252 in 2009 were new cases (USRDS, 2011). Although, the Bahamas has drastically less than that of the United States, the amount of individuals on dialysis treatment accounts for appropriately 2,020 in 2013 (Bahamas Health Statistics, 2015). However, the statistical difference on the amount of individuals on dialysis in the United States and the Bahamas, the conventional three times a week treatment is the same (USRDS, 2011).

Hemodialysis is conventionally a three time a week recommended treatment for individuals diagnosed with ESRD. For public patients currently being treated for hemodialysis there are four *main* dialysis treatment centers that are currently being used in the Bahamas. The Renal House/Kidney Center in Grand Bahamas (private), Renal House in Abaco (private), New Providence (Princess Margaret Hospital; public), and the Dialysis Centre in New Providence (private). The total amount of public patients being treated in the Bahamas is approximately two hundred and seventy-five (275) patients. This does not account for the statistics in private facilities. The Dialysis Unit at Princess Margaret Hospital treats 27.27 % (75 public patients), Renal House Kidney Center in Grand Bahama 45.1 % (124 public patients), Renal House in Abaco 3.6% (10 public patients), and the Dialysis Centre 24 % (66 public patients; Princess Margaret Statistics [Dialysis Unit], 2016). Since men and women on dialysis need these three time a week treatment, there can be an interruption in their work or career thus can experience some dysfunctional career thought. Recent studies done in the Bahamas noted, higher dysfunctional career thoughts were experienced in younger women diagnosed with breast cancer (Dames, 2013). Hence, the results of this previous study prompted the duplication of a study in persons on hemodialysis in the Bahamas. Also, the continued study with dysfunctional career thoughts and persons diagnosed with a chronic illness. Thus, the aim of this research is to explore the correlation between career thoughts, dialysis variables, and demographic characteristics of persons residing in the Bahamas diagnosed with ESRD on hemodialysis.

Problem of Research

Dames (2013) expressed the need for more studies with dysfunctional career thoughts to help improve career decisions of persons diagnosed with a chronic illness like ESRD. The results of these previous international studies prompted the duplication of a study on persons diagnosed on hemodialysis in the same region and the continued study with persons diagnosed with a chronic illness. Also, there is no known study that examines one’s dysfunctional career thoughts, dialysis variables, and demographic characteristics of persons diagnosed with ESRD and on dialysis on a Bahamian population. Studies with persons on hemodialysis, age and pre-end stage have been done with an American population (Harford, Clark, Norris & Yan, 2016) but limited studies with career readiness and concerns with persons on hemodialysis in the Bahamas.

Research Focus

According to Dames (2013), one main conceptual framework has been addressed as the foundation of this proposed study. The theory is *entitled*, Cognitive Information Processing Theory (CIP; Reardon, Lenz, Sampson, & Peterson, 2009) was the focus of this study where dysfunctional career thoughts or career thoughts are examined. Dysfunctional or negative career thoughts or dysfunctional thoughts are known as the combination of blocking, reducing, and distorting one's information process (Lenz, Sampson, Peterson, & Reardon, 2012) in one's career development.

The CIP framework may help explain how persons diagnosed with CKD on hemodialysis make career decisions, maintain their careers, and maybe decide to work part-time because of the increased time consumption of the dialysis treatment. The three subscales noted in this particular conceptual framework look at decision making confusion (DMC), commitment anxiety (CA) and external conflict (EC). Clients who have poor decision making skills, some anxiety, and have increased external conflict such as negative family interferences or lack of support may have low levels of career readiness related to employment concerns after being on dialysis. In addition, Lenz, Sampson, Peterson, and Reardon (1992) developed the notion of one of the two factors in this framework called complexity. Being diagnosed with CKD and having to take dialysis can be considered one of those complexity issues that affect one's employment status. This increased complexity of being diagnosed with CKD can have clients having distorted thoughts and increased dysfunctional thoughts. Also, these subscales are correlated with the Occupational Alternative Question (OAQ) that measures one's career decision state (Lenz, Sampson, Peterson, & Reardon, 2012). The career decision statement also asks the question, "How satisfied are you with your current career choice?" Therefore, persons diagnosed with CKD on dialysis may experience some dissatisfaction to their current career choice after being diagnosed with CKD and may experience elevated dysfunction thoughts about their career and CKD related choices. These indecisive states in career and CKD related choices can be related to physical limitations such as having to receive treatment such as hemodialysis. Therefore, suggested integration of nephrology nurses and career counselors should be developed to help with intervention that leads to improved dysfunctional career thoughts with any of the related demographic characteristics or dialysis variables.

Therefore, the questions and hypotheses to be addressed are:

RQ1: How are demographic characteristics (e.g., age, education, marital status, and ethnicity) related to career thoughts of persons diagnosed with ESRD on hemodialysis?

H1a: There is a correlation between participants' demographic characteristics and their career thoughts.

RQ2: How are the pre-diagnosis of ESRD on dialysis variables (e.g., time of diagnosis, occupation pre-diagnosis, employment status pre-diagnosis, and salary pre-diagnosis) related to career thoughts?

H2a: There is a correlation between participant's pre diagnosis career variables and their career thoughts.

RQ3: How are the post-diagnosis of ESRD on dialysis variables (e.g., support group, occupation post-diagnosis, employment status, salary post-diagnosis) related to career thoughts of persons diagnosed with ESRD on dialysis?

H3_a: There is a correlation between participants' post diagnosis career variables and their career thoughts.

Methodology of Research

General Background of Research

The researchers were granted an approval from the Ethics Committee Board from Public Hospital Authority in The Bahamas. In addition, an IRB approval was granted from North Carolina Central University (NCCU). This research was also an extension of a junior mini grant provided by the NCCU Faculty Senate 2015-2016.

The research was a qualitative design similar to Dames (2013). A quantitative data were collected

through persons living in the Bahamas on a 4-6 hour dialysis treatment. The persons were recruited by the nurse in charge of the unit who assisted in collecting the data. During May 2016, the principal researcher (who is a registered nurse) provided the purpose of the research, the consent form and the direction of completing the surveys to persons on dialysis. After completing a general announcement, purpose, consent form directions, each participant who wanted to complete the research was given this information individually. The majority of the dialysis patients because of their sight impairment requested the principal researcher read the consent form, the questionnaires, the thank you, and the incentive forms. The completed questionnaires were collected and placed in an envelope and stored away.

Sample of Research

The research included 62 patients who scheduled hemodialysis for five days week at the local hospital in New Providence, Bahamas. This is a 22.56 % rate of the total amount of public patients on dialysis in the Bahamas (275 public patients). The Bahamas consist of many different islands but these islands have private renal houses. The other private renal house in New Providence, Abaco, and Grand Bahama were contacted but no approvals were granted. Of these 62 persons, more than 98% ($n = 61$), reported being Bahamians, and 3% ($n = 1$) Jamaican, variables such as employment, occupation, and salary/income were collected.

Instrument and Procedures

Data collected in May 2016 for five days from a local Dialysis Unit in the Bahamas. First, the instruments were read and distributed systemically. The principal researcher read and distributed the demographic instrument. Second, packets of the different instruments were assigned a number. The career thoughts inventory (CTI) was distributed. The CTI is a 48-question instrument that examines one's dysfunctional or career thoughts and explores one's DMC, CA and EC (Reardon, Lenz, Sampson, & Peterson, 2009). Third, the instruments were collected ensuring the same number was placed on each envelope. The packets were collected ensuring the number corresponded to the outside of the packet and the instruments. Last, the participants were debriefed and thanked for participating in the research. After completing the surveys, participants were asked if they wanted to be placed in a \$25.00 raffle. Participants who indicated yes completed a form with their names and contact numbers to be eligible. These completed forms were placed in a bag. Raffles were done twice on each five days of the recruitment period. Twelve participants were granted \$25.00 for their time and effort.

Data Analysis

The current research assume the existence of an association among the variables of interest in the current research. The current research examined three hypotheses postulated to examine the association among career thoughts, dialysis variables, and demographic characteristics on persons living in the Bahamian diagnosed with ESRD on hemodialysis. The applicable statistical methodology was the multiple regression analysis, to determine the existence of an association among the variables on interest. The data on age, gender, education, marital status, and ethnicity, among others, were transformed into dummy variables so they could be applied in the regression models. The dependent variable was the dysfunctional career thoughts (TOTCTI). The TOTCTI was operationalized into natural logarithm. Operationalizing the TOTCTI variable in natural logarithm was significant since it lessened the succession of its values, creating the regressing approximations less prone to outlying (Wooldridge, 2013). The following was the applicable regression analysis for the three hypotheses examined:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 \dots \beta_nx_n + et$$

where Y = the dependent variable

β_0 = a constant (the intercept term);

$\beta_1x_1 + \beta_2x_2$ = the values;

et = an error term

Results of Research

The results of the current research included a preliminary frequency analysis of the partial list of the variables of interest, to reveal any conceivable disparity and dispersion. Table 1 is the summary of some of the variables of interest, including gender, age, and education, among others.

Table 1. A partial list of the frequency distribution of the variables.

Variable		N	%	Variable	N	%	
Gender	Male	35	55.6	Salary Prediagnosis	\$0 - \$40,000.	38	60.3
	Female	28	44.4		\$40,001-\$80,000	12	19
Age	19-28	6	9.5	\$80,001-\$120,000	2	3.2	
	29-39	11	17.5	\$120,001-\$160,000	1	1.6	
	40-51	24	38.1	> \$160,000	2	3.2	
	52-62	14	22.2	Salary Postdiagnosis	\$0 - \$40,000.	25	39.7
	>=63	8	12.7		\$40,001-\$80,000	6	9.5
Education	Junior School Grad	8	12.7	\$80,001-\$120,000	2	3.2	
	High School Grad	33	52.4	> \$160,000	2	3.2	
	College/Univ. Grad	21	33.3				
	Other	1	1.6				
Marital Status	Married	29	46				
	Not-Married	24	38.1				
	Divorced	2	3.2				
	Widowed	4	6.3				
	Other	4	6.3				

According to Table 1, about 56.6% of the participants in the research were males, and 44.4% were females. In addition, Table 1 also revealed the age range of the participants, which was between 19 years and over 63 years. Of this, about 38.1% of the participants had an age range of between 40 years to 51 years. The table also disclosed the salaries for pre-and-post diagnosis of participants, which had a range of between \$0 to over \$160,000 per annum.

Result of Hypothesis 1. The application of the regression model was significant, to investigate the relationship between participants' demographic characteristics (age, marital status, etc.) and their career thoughts. Tables 1 and 2 are the results of hypothesis 1. However, prior to this analysis, the following assumptions were assessed and established: (a) the groups were approximately of equal size, (b) the variances of the populations were equal, (c) the observations were independent, and (d) the dependent variable, TOTCTI, has an approximately normal distribution. Table 1 showed the overall goodness-of-fit of the model. In Table 1, the overall effect of the participants' characteristics on career thoughts was significant, $F(3, 55) = 6.79, p < .0001$.

Table 2. Overall fitness of the model.

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	16.29953	5.43318	6.79	.0006
Error	52	41.61706	.80033		
Corrected Total	55	57.91659			

Table 2 showed the results of the coefficient estimates of hypothesis 1. In Table 2, participants' age between 19 and 28, for example, had a positive relationship with career thoughts (logTOTCTI) ($\beta_1 = .811$, $SE = .38$, $F = 4.35$, $p = .04$). This principally implied a 1% increase in participants' age between 19 and 28 resulted in an increase of about .81% in TOTCTI, indicating the participants' age under review was a good predictor of career thoughts (TOTCTI). Table 2 also showed the coefficient estimates of the participants' education, particularly those who graduated from junior high schools. Accordingly, participants with junior high school certificates significantly influenced TOTCTI (logTOTCTI) ($\beta_2 = -1.31$, $SE = .39$, $F = 11.47$, $p = .0001$). This principally implied a 1% increase in participants with junior high school certificate resulted in a reduction of about 1.31% in TOTCTI, indicating junior high school graduates have a negative effect on career thoughts (TOTCTI). In addition, Table 2 further showed the coefficient estimates of the marital status of participants, especially related to their non-married status, which appeared significant ($\beta_3 = .498$, $SE = .25$, $F = 4.10$, $p = .048$), though this significance was weak. This principally implied a 1% increase in the non-married status of participants resulted in an increase of about .50% in TOTCTI, indicating the non-married status of participants have a positive effect on career thoughts (TOTCTI).

Table 3. The coefficient estimates.

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.76934	.16302	230.94914	288.57	<.0001
Years19_28	.81077	.38859	3.48394	4.35	.0419
JuniorGrad	-1.31368	.38782	9.18319	11.47	.0014
NotMarried	.49765	.24577	3.28147	4.10	.0480

Results of Hypothesis 2. The application of the regression model in hypothesis two was noteworthy, to explore the association between participants' pre-diagnosis variables of ESRD (e.g., time of diagnosis, pre-diagnosis occupation, pre-diagnosis employment status, pre-diagnosis salary, etc.) and their career thoughts. Similarly, the time of diagnosis, pre-diagnosis occupation, pre-diagnosis employment status, and pre-diagnosis salary, among others, were the independent variables, transformed into dummies for use in the regression model in Hypothesis 2. Log TOTCTI (career thoughts) was the dependent variable.

Tables 3 and 4 are the results of Hypothesis 2. Table 3 showed the overall goodness-of-fit of the model. In Table 3, the overall effect of the participants' pre-diagnosis variables of ESRD on career thoughts was only significant at the 10% level of significance, $F(4, 47) = 2.23$, $p = .08$. but not significant at the 5% level of significance.

Table 4. Overall fitness of the model.

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	7.45851	1.86463	2.23	.0811
Error	43	35.89187	.83469		
Corrected Total	47	43.35038			

Even so, Table 4 indicated that some of the individual coefficient estimates were significant and had relationships with career thoughts. It showed the results of the coefficient estimates of Hypothesis 2. In Table 4, participants' years of diagnosis, for example, had a

negative association with career thoughts (logTOTCTI) ($\beta_1 = -.137, SE = .067, t = -2.03, p = .048$), though this relationship was weak. This essentially implied a 1% increase in the participant number of years of diagnosis resulted in a reduction of about .14% career thought (TOTCTI), indicating diagnosis years negatively affected career thoughts. Table 4 also showed the coefficient estimate of the participant's pre-diagnosis occupation, for example, had a negative relationship with career thoughts. This essentially signified a 1% increase in the pre-diagnosis occupation of participants under review had

a negative effect on career thought (logTOTCTI) ($\beta_3 = -.081, SE = .034, t = 2.36, p = .02$). In a negative effect on career thought (logTOTCTI) ($\beta_3 = -.081, SE = .034, t = 2.36, p = .02$). In addition, even when the pre-diagnosis employment, and the pre-diagnosis salary of participants had positive relationships with career thoughts, these associations were not significant.

Table 5. The coefficient estimates.

Parameter Estimates					
Variable	Df	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	3.59177	1.13164	3.17	.0028
DiagYrs	1	-.13714	.06743	-2.03	.0482
EmpPreDiag	1	.39098	.94116	.42	.6799
OccupPreD	1	-.08126	.03440	-2.36	.0227
SalPreD	1	.08212	.14918	.55	.5849

Results of Hypothesis 3. Hypothesis 3 is to explore the relationship between career thoughts of individuals diagnosed with ESRD and a few selected ESRD post-diagnosis variables, including support groups. The multiple regression was the applicable model to determine the relationship among the variables. An initial exploration of the data indicated that the assumptions of linearity, normally distributed errors, and uncorrelated errors were met. Table 5 and Table 6 are the results of the hypothesis. Table 5 indicated the overall fit of the regression model, which was not significant, $F(4,25) = 1.51, p = .231$. The adjusted R squared value was .065, indicating about 6.5% of the variances in the predictor variables were explained by the model. In addition, in terms of the coefficient estimates revealed in Table 6, only total support group (LTotsp) had a relationship with career thoughts (LTotcti), but this association was negative, ($\beta_1 = -.421, SE = 1.47, t = -2.09, p = .047$). This essentially implied a 1% increase in the total support group had a negative impact of about .42% on career thought (TOTCTI).

Table 6. Overall regression model.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	7.829	4	1.957	1.505	.231b
Residual	32.501	25	1.300		
Total	40.329	29			

R-Square .194; Adjusted R-Square .065

The remaining predictors, including post-diagnosis employment, and post-diagnosis salaries, among others, all had positive relationships with career thoughts, but these associations were not significant.

Table 6. Coefficients estimates.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14.555	5.855		2.486	.020
LTotsp	-3.076	1.471	-.421	-2.091	.047
1 EmpProstDiag	.570	.749	.148	.761	.454
OccupPostD	-.058	.222	-.055	-.261	.796
SalPostD	.154	.150	.196	1.027	.314

Discussion

The aim of this research was to explore the relationship between dysfunctional career thoughts, dialysis variables, and demographic characteristics of persons residing in the Bahamas on dialysis diagnosed with ESRD. Results from hypothesis I revealed an overall effect of the participants' characteristics on career thoughts were significant. Participants' age between 19 and 28, had a positive relationship ($p = .04$), and junior high school graduates have a negative effect on career thoughts ($p = .0001$). This research suggests women and men between the ages 19-28 dysfunctional career thoughts increase as their age increase. The results of this present research were consistent with the results of a previous research done in a similar population but with persons diagnosed with breast cancer (Mobley, 2011). Mobley (2011) revealed a positive relationship with age, spirituality and breast screening practices. However, this research was with females diagnosed with breast cancer but did not use dysfunctional career thoughts. However, Dames (2013) was not consistent with the results of the present research. Bahamian women revealed age had an inverse weak to moderate negative relationship with career thoughts in Bahamian women diagnosed with breast cancer. This indicated as age increased so did their career thoughts (Dames, 2013). On the other hand, Harford et al. (2016) noted older patients were less likely to be employed after being diagnosed with ESRD.

Non-married persons showed a weak but positive significant relationship with career thoughts ($p = .048$). This result was similar to that of persons between the ages of 16-28 in this same research. In addition, persons who were not married experienced high dysfunctional career thoughts. This is also consistent with studies done by Wittenburg et al. (2010) which indicated single women experience more depressive symptoms than married individuals. This may suggest persons who have companion in their lives may experience lesser dysfunctional thoughts because they have someone to share their concerns about job, the dialysis issues and other aspects that affect them.

The second hypothesis indicated an overall effect of the participants' pre-diagnosis variables of ESRD on career thoughts was only significant at the 10% level of significance. Participants' years of diagnosis, for example, had a negative but weak relationship with career thoughts. This shows the more the years of diagnosis of ESRD the lower in their dysfunctional career thoughts. On the other hand, the lesser the amount of years diagnosed with ESRD the higher dysfunctional career thoughts. Observation and interaction with the nurses in the dialysis, they indicated persons who are newly diagnosed sometimes may have an increased fear of the unknown after being diagnosed with ESRD and having to be on dialysis three or four times a week. This finding was consistent with Vacchhararajani et al. (2014) who noted elderly patients have a challenge on whether or not to begin renal replacement therapy like being on dialysis because they may be afraid of the unknown.

The final hypothesis examined indicated a total support group ($p = 0.047$) with career thoughts had a negative impact on career thoughts. Persons diagnosed with ESRD on dialysis, career thoughts increase as their lack of support from family or friends decrease. This is consistent with the single versus the married support and companionship versus lack of it. Clients who have poor decision making skills, some anxiety, and have increased external conflict such as negative family interferences or

lack of support may have low levels of career readiness related to employment concerns after being on dialysis. In addition, Lenz, Sampson, Peterson, and Reardon (1992) developed the notion of one of the two factors in this framework called complexity. Being diagnosed with CKD and having to take dialysis can be considered one of those complexity issues that affects one's employment status. This increased complexity of being diagnosed with CKD can have clients having distorted thoughts and increased dysfunctional thoughts. Also, these subscales are correlated with the Occupational Alternative Question (OAQ) that measures one's career decision state (Lenz, Sampson, Peterson, & Reardon, 2012). The career decision statement also asks the question, "How satisfied are you with your current career choice?" Therefore, persons diagnosed with CKD on dialysis may experience some dissatisfaction to their current career choice after being diagnosed with CKD and may experience elevated dysfunction thoughts about their career and CKD related choices. These indecisive states in career and CKD related choices can be related to physical limitations such as having to receive treatment such as hemodialysis.

Limitations

There were several limitations that may have related to the data collection of this research. First, persons on dialysis spend three to four hours on dialysis about three to four days a week. The participants may not complete all of the questions especially after receiving dialysis because they may feel fatigued and may have some issues with side effects. Second, the patients on dialysis had co-morbid conditions such as being diagnosed with diabetes. Diabetes can affect one's eye sight and so most of the questions were read to the patients who could not see well. Also, persons who completed it on their own could have made a mistake. Third, all the instruments constitute self-reports, which can carry inherent biases attributed to self-perceptions. In addition, the length of the surveys over 67 questions (demographic: 19 items, CTI; 48 items, may decrease response rate of participants and number of questions answered.

Implications for Career Counseling.

This research is significant for the nephrology nursing and medical field because it can help renal nursing and medical staff identify persons with greater career dysfunctional thoughts, low career readiness and career concerns. As persons are treated with hemodialysis for ESRD diagnosis there can be a decrease in one's optimism level and self-concept and worth, about having career aspirations, motivation and interest this can maybe improve these aspects of their lives and their outlook on being on dialysis. In addition, effective career interventions can be embedded in the existing nephrology nursing model. Nursing staff can also be provided with short solution focus interventions to help improve career thoughts and optimism and of persons on hemodialysis. The creators of the CTI have developed a worksheet that helps persons to improve their dysfunctional career thoughts. Therefore, nephrology nurses while treating the patients on hemodialysis can be trained in how to use the CTI worksheet to assist in reducing the dysfunctional career thoughts level.

Conclusions

Results revealed persons between ages 19 and 28 had a positive relationship and junior high school graduates have a negative effect on career thoughts. Persons with non-married status of participants have a positive effect on career thoughts. Also, pre-diagnosis variables of ESRD on career thoughts was only significant at total support group which had a relationship with career thoughts but this association was negative. They may have been significant because their occupation, employment, and salary pre-diagnosis were secured because there was no interruption of this ESRD diagnosis and therefore, there was no need for dialysis. Support at the time may not have been needed for pre-diagnosis.

This research was important to help assist persons diagnosed with ESRD explore their dysfunctional career thought while being on dialysis. As career counselors explore the idea of working

with persons with a chronic illness that can be manageable like being on dialysis, this study will help share exploration interventions that combine counseling and nursing.

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