

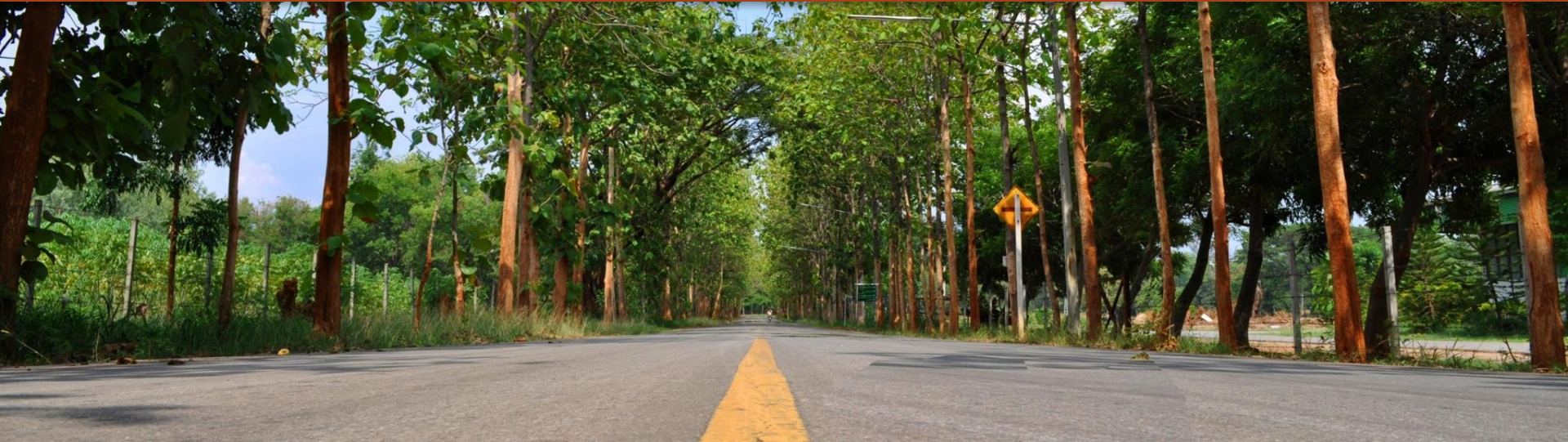
The Association of Spirituality and Quality of Life in Chronic Kidney Diseases Stage V Patients

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OUTLINE

- **BACKGROUND**
- **METHODS**
- **RESULTS**
- **DISCUSSION**
- **REFERENCES**
- **ACKNOWLEDGEMENT**

BACKGROUND [1]

- Chronic kidney disease (CKD)
 - kidney damage or glomerular filtration rate lower than 60 mL/min/1.73 m² for 3 months or longer
 - worldwide prevalence of CKD was estimated to be within range of 8-16%. (Jha et al., 2013)
- CKD patients would experience life disturbances of many health-related quality of life (HRQOL) areas including physical, sexual, social dysfunction, and mental problems such as depression, anxiety, pain, and sleep disturbance. (Finkelstein et al., 2009)
- HRQOL is recognized as an important therapeutic objectives (outcome) of CKD. (Davison & Jhangri, 2010)

BACKGROUND [2]

- QOL, HRQOL
 - World Health Organization: definition of “health” “a state of complete physical, mental, and social well-being, and not merely the absence of disease infirmity” (WHO, 1948)
 - quality of life (QOL) and health related QoL (HRQOL), the more specifically term, has been the important issue in healthcare practice and research. (Testa & Simonson, 1996)
 - Traditionally, HRQOL is based on physical, mental, and social domains of health that perceived by individual person. (Testa & Simonson, 1996; Davison & Jhangri, 2010)

BACKGROUND [3]

- WHOQOL (WHO, 1997)
 - Definition of “health” defined by WHO called for the measure of health and effects of health-care beyond diseases towards well-being.
 - WHO with 15 collaborating centers (America, Middle East, Europe, and Asia, that including Thailand) developed WHOQOL-100 and WHOQOL-BREF for measuring QOL in a variety of culture setting (cross-culturally applicable).

BACKGROUND [4]



- WHOQOL, WHOQOL-SRPB
 - World Health Organization: definition of “QOL”
“individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.” (WHO, 1997)
 - WHOQOL-Spirituality, Religiousness, Personal Beliefs [SRPB]
Spirituality domain was included in QOL concept by recommendations of focus groups of lay people from 18 countries. (Fleck & Skevington, 2007)

BACKGROUND [5]

- WHOQOL-SRPB (Fleck & Skevington, 2007; O'Connell & Skevington, 2007)
 - WHOQOL-SRPB aspects are integrated with QOL [originally developed as an extension part of QOL] not solely focusing on spirituality / religious
 - Strengths
 - Items were recommended by focus groups of lay people from 18 countries, not solely based on health professionals or developer.
 - Not specific for any religious, but could apply with any kinds of beliefs.
 - Genuine cross-cultural (International), translation is no guarantee of cultural-adaptation

BACKGROUND [6]

- QOL measures conventionally include physical, mental, social well-being, but spirituality, religion, existential well-being are not commonly included. (O'Connell & Skevington, 2007)
- Based on WHOQOL-SRPB (Fleck & Skevington, 2007) , psychological dimension moderately correlated with SRPB. However factor analysis results reported that all SRPB items loaded together onto a factor (separated from physical, psychological, social, environmental). Then SRPB is coherent and stands as an independent construct.

BACKGROUND [7]

- There were evidences suggested that spiritual and religious experiences contribute to QOL, and important for coping with illness (WHOQOL SRPB Group, 2006)
- Spirituality/Religious studies in CKD
 - Existential well-being moderately associated with several HRQOL domains. (Davidson & Jhangri, 2010)
 - The association of existential well-being and HRQOL remained after the association of psychosocial adjustment to illness and HRQOL was considered. (Davidson & Jhangri, 2013)
 - 69% of patients had at least one spiritual need. 32% of patients had high spiritual need (≥ 5 of 7) (Davidson & Jhangri, 2010)

BACKGROUND [8]

- SF-36 is a widely used HRQOL, however lack of Thai norm-based scores* (mean & SD scores of sufficient large Thai general population data are unavailable) limits score interpretation
 - The 9-item Thai Health status Assessment Instrument (9-THAI) ([Cheawchanwattana et al., 2006](#))
 - Health status (HRQOL) measure
 - Based on National Health and Welfare Survey 2003 data of National Statistical Office of Thailand, representative sample of Thai general population (N=37,202), providing norm-based scores* for interpretation
- * T-standardized scores

BACKGROUND [9]

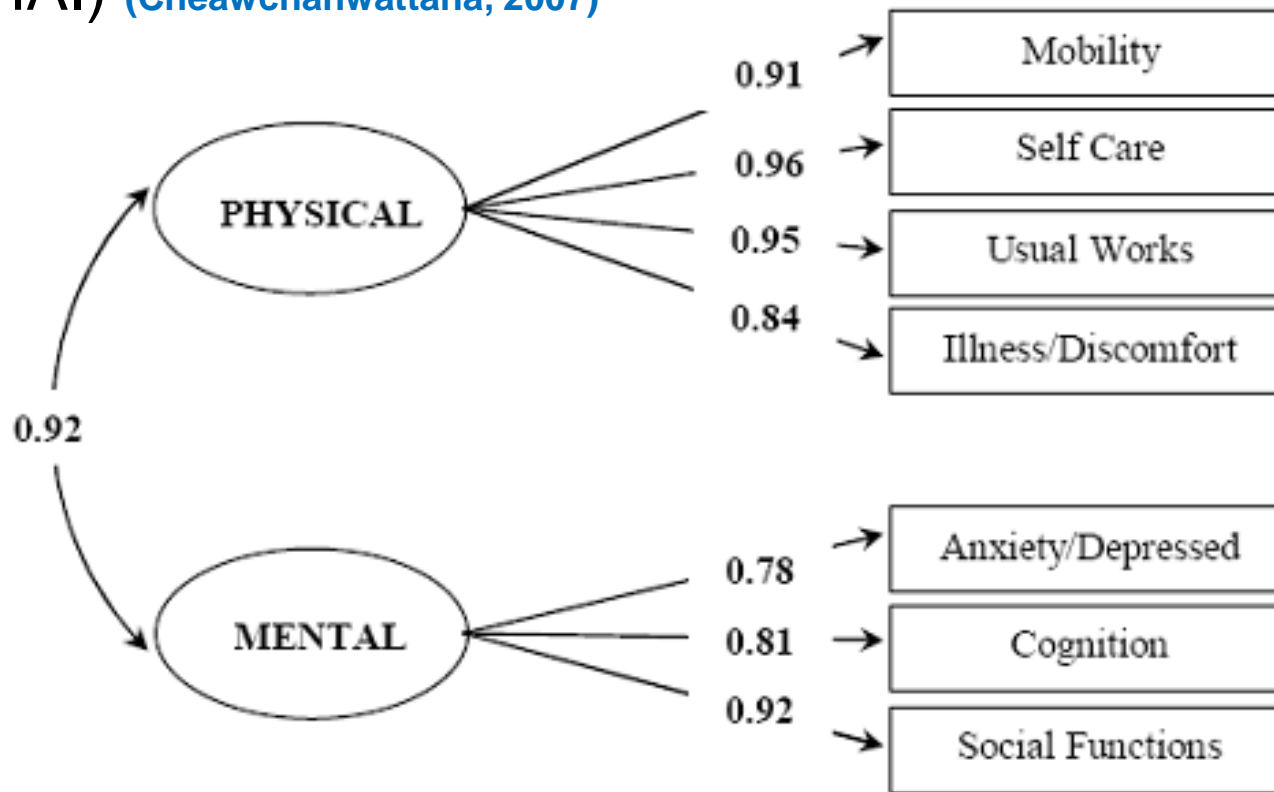


- The 9-item Thai Health status Assessment Instrument (9-THAI) (Cheawchanwattana, 2007)
 - 4 Physical domain; Mobility, Self-care, Illness/Discomfort, Usual Works/Activities
 - 3 Mental domain; Anxiety/Depressed, Cognition, Social activities
 - 2 Global QOL assessment; compared with own health in the last year compared with others (same socioeconomics)
 - Physical (4 items), Mental (3items) Scores based on mean & SD of Thai general healthy population (T-standardized score; mean=50, SD=10)

BACKGROUND [10]



The 9-item Thai Health status Assessment Instrument (9-THAI) (Cheawchanwattana, 2007)



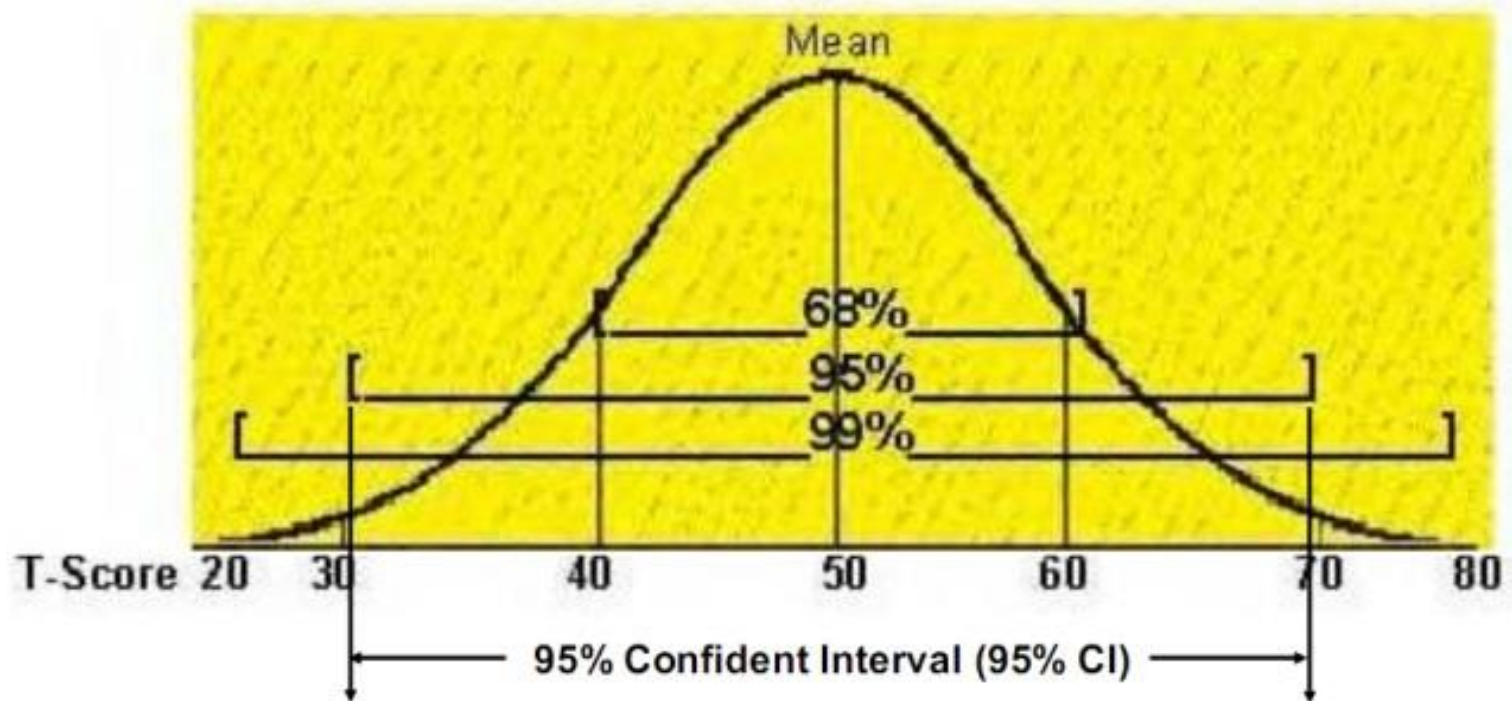
Standardized factor loadings of the two-factor model

BACKGROUND [11]



The 9-item Thai Health status Assessment Instrument
(9-THAI) (Cheawchanwattana, 2007)

The Normal Curve



BACKGROUND [12]

9-THAI; general population & renal replacement therapy (HD, PD, KT)
([Cheawchanwattana et al., 2006](#), [Cheawchanwattana, 2007](#), [Cheawchanwattana & Chanlertrith, 2012](#))

- Reliability;
 - Internal consistency (Cronbach's Alpha=0.72 [Me], 0.87[Ph])
 - Test-retest reliability (Intraclass correlation=0.78[Me], 0.79[Ph])
- Validity;
 - Construct validity;
 - Known-group validity (chronic diseases, self-reported illness/hospitalization, age-groups, two global questions)
 - Confirmatory Factor Analysis (HWS 2003 data)
 - Convergent-Divergent validity (concurrent with SF-36)
 - Concurrent validity (anemia, hospitalization history)
 - Criterion-related validity (predict 3-year survival)

METHODS [1]

To evaluate spirituality of CKD patients, and its association with HRQOL

- Study was approved by the KCU Ethic Committee in Human Research
- SRPB part of WHOQOL-SRPB was translated into Thai according to the protocol of World Health Organization's translation methodology
- Convenience sampling; CKD-V patients (n=63) who visited as routine follow-up appointment at the outpatient renal disease clinic (30-bed community hospital in northeastern of Thailand) Jul-Sep 2013

METHODS [2]

- Patients were asked for consent and interviewed
- Questionnaire consisted of demographic data, laboratory examination, 9-THAI, SRPB (WHOQOL), and SRPB characteristics
- Data were coded, entered, checked for errors, calculated as directed, and analyzed (SPSS v19.0)
- Descriptive statistics were applied according to measurement level
- Multiple linear regression;
SRPB total score (dependent variable)
9-THAI physical and mental scores (factors)
adjusted by gender, age, marital status (married),
GFR, SRPB characters

RESULTS [1]



CKD-V Patients (N=63)

- Female (79%)
- Average age 64 years
- All Buddhist (100%)
- Married 59%
- Primary school [Grade 6] (91%)

<u>Patient Characteristics</u>	<u>N</u>	<u>(%)</u>
<u>Gender</u>		
Male	13	(20.6)
Female	50	(79.4)
Age [Mean (SD)]	64.0	(9.1)
<u>Religion</u>		
Buddhist	63	(100.0)
<u>Marital Status</u>		
Single	4	(6.3)
Married	37	(58.7)
Widow	22	(34.9)
<u>Highest Education Level</u>		
No school education	2	(3.2)
Primary school	57	(90.5)
Secondary school	4	(6.3)

RESULTS [2]



CKD-V Patients (N=63)

- Unemployed/Retired (59%)
- Income < € 222 (98%)
- GFR 9.7 ml/min/1.73m²
- BUN 50.4 mg/dL
- SCr 5.4 mg/dL

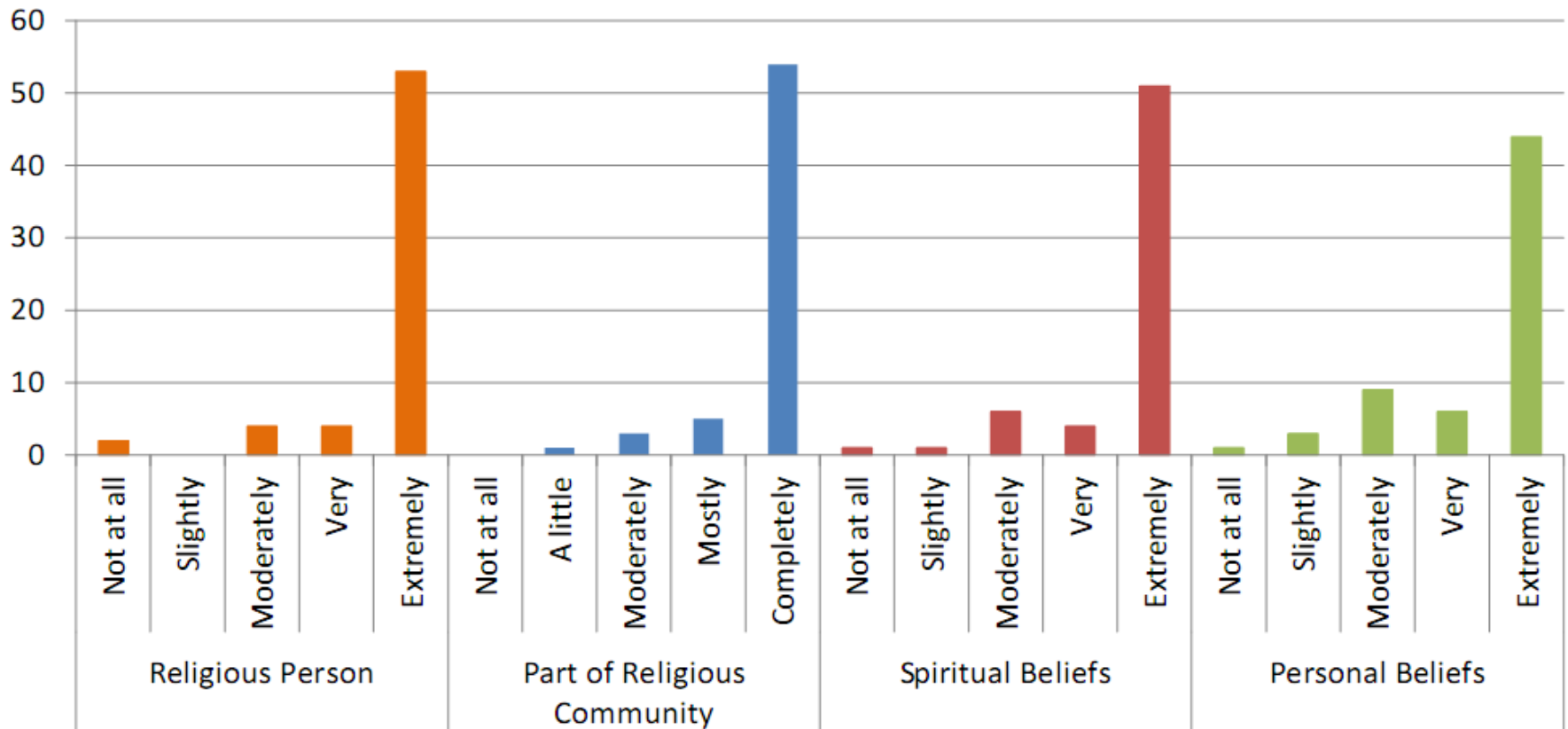
Patient Characteristics	N	(%)
<u>Occupation</u>		
Agriculture	16	(25.4)
House works	9	(14.3)
Own bussiness	1	(1.6)
Unemployed/Retired	37	(58.7)
<u>Income per month</u>		
less than € 222	62	(98.4)
€ 222-444	1	(1.6)
Laboratory Examination		
<u>GFR</u> [Mean (SD)]	9.7	(3.3)
<u>BUN</u> [Mean (SD)]	50.4	(16.4)
<u>SCr</u> [Mean (SD)]	5.4	(2.1)

RESULTS [3]



Almost patients perceived themselves as extremely religious, spiritual/ personal beliefs, and completely part of religious community.

Spiritual, Religious, Personal Beliefs Characters of Patients



RESULTS [4]

Positive association of HRQOL and WHOQOL-SRPB scores. MENTAL was significant ($p=0.009$), PHYSICAL was nearly significant.

Dependent Variable:	Regression Coefficient	
WHOQOL-SRPB Total Score	(95% Confident Interval)	p-value
Gender (Female; Ref. Male)	+1.447 (+0.298 to +2.595)	0.015
Age (years)	-0.050 (-0.104 to +0.004)	0.071
Marital status (Married; Ref. others)	-0.223 (-1.122 to +0.676)	0.621
Glomerular Filtration Rate (GFR)	-0.090 (-0.229 to +0.048)	0.196
Religious person	+0.690 (+0.029 to +1.351)	0.041
Part of religious community	+0.503 (-0.438 to +1.445)	0.288
Spiritual belief person	+0.384 (-0.363 to +1.130)	0.307
Personal belief person	+0.822 (+0.266 to +1.377)	0.005
9-THAI <u>Physical</u> Scores	+0.021 (-0.007 to +0.049)	0.142
9-THAI <u>Mental</u> Scores	+0.033 (+0.008 to +0.057)	0.009

RESULTS [5]



Positive association of SRPB characters and WHOQOL-SRPB scores.
Significant; Personal Beliefs, Religious Person

Dependent Variable:	Regression Coefficient	
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9-THAI <u>Mental</u> Scores	+0.033 (+0.008 to +0.057)	<u>0.009</u>

RESULTS [6]



Female had significantly greater WHOQOL-SRPB scores than male.
Younger had greater WHOQOL-SRPB scores, nearly significant.

Dependent Variable: WHOQOL-SRPB Total Score	Regression Coefficient (95% Confident Interval)	p-value
Gender (Female; Ref. Male)	+1.447 (+0.298 to +2.595)	<u>0.015</u>
Age (years)	-0.050 (-0.104 to +0.004)	0.071
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RESULTS [7]



MENTAL significantly associated with Spiritual Connection, Spiritual Strength, Faith (3 facets more direct connect with spirituality, [\(Moreira-Almeida & Koenig, 2006\)](#))

p-value Based on Multiple Linear Regression

Dependent Variables: Facet Scores	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Gender (Female; Ref. Male)	0.023	0.309	0.323	0.104	0.036	0.022	0.779	0.018
Age (years)	0.107	0.050	0.320	0.351	0.677	0.512	0.095	0.205
Marital status (Married; Ref. others)	0.163	0.596	0.084	0.167	0.214	0.305	0.135	0.688
Glomerular Filtration Rate (GFR)	0.903	0.536	0.136	0.164	0.391	0.105	0.136	0.253
Religious person	0.058	0.757	0.800	0.101	0.021	0.023	0.424	0.119
Part of religious community	0.238	0.191	0.830	0.738	0.013	0.510	0.596	0.046
Spiritual belief person	0.869	0.604	0.061	0.112	0.290	0.978	0.261	0.404
Personal belief person	0.115	0.018	0.033	0.015	0.457	0.021	0.092	0.072
9-THAI <u>Physical</u> Scores	0.520	0.481	0.140	0.016	0.518	0.400	0.532	0.720
9-THAI <u>Mental</u> Scores	0.023	0.697	0.975	0.064	0.025	0.017	0.051	0.006

Remark

[1] Spiritual Connection

[2] Meaning & Purpose in Life

[3] Experiences of Awe & Wonder

[4] Wholeness & Integration

[5] Spiritual Strength

[6] Inner Peace

[7] Hope & Optimism

[8] Faith

DISCUSSION [1]

- This study found a significant positive association of MENTAL-HRQOL and SRPB*, and this was consistent with previous research. (Davison & Jhangri, 2010; Davison & Jhangri, 2013)
- HRQOL and depression and significantly associated with mortality of dialysis patients. (Chilcot et al., 2010; Kimmel et al., 2000; Knight et al., 2003; Lowrie et al., 2003; Mapes et al., 2003)
- Spirituality also significantly associated with mortality of dialysis patients. (Spinale et al., 2008)

* It should be stated here that SRPB assessment in this study through WHOQOL-SRPB might not capture SPIRITUALITY defined by some experts. The SPIRITUALITY is ill-defined term as QOL (no consensus).

DISCUSSION [2]

- The relationship of MENTAL-HRQOL and SPIRITUALITY-HEALTH is still unclear. Whether it is a cause-effect relationship, or they are just sharing some variances, or they are the same component.
- Learning more of the relationship would help more understanding, and better design the appropriate intervention (for modifiable factors), hope to improve QOL and decrease mortality of these patients.

DISCUSSION [3]

- This is a preliminary study that mainly aimed to learn whether SPIRITUALITY HEALTH could be quantitatively assessed, and the WHOQOL-SRPB measure is applicable or not.
- WHOQOL-SRPB was selected due to cross-cultural property, and THAILAND was also one of 15 countries (WHOQOL collaboration).
- Convenience sampling of CKD patients in this study (Buddhist, female, low educated, poor) limited the generalizability of this study. The sample tended to be a high spirituality, religious group (rural nature).
- Female showed to be a high spiritual group, thus the gender difference is un-negligible issue.

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Acknowledgement [1]

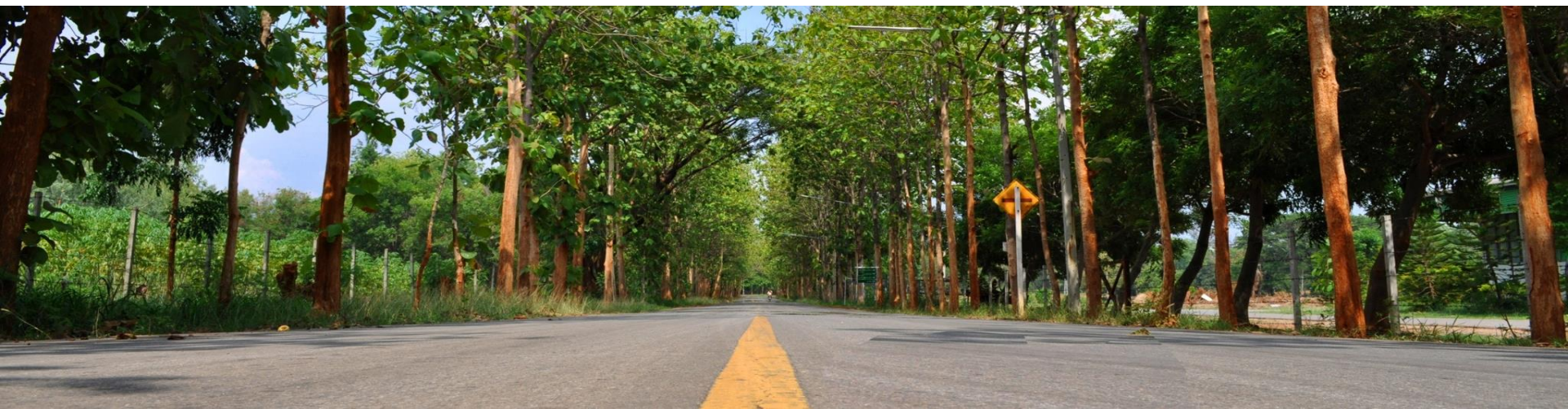


Khon Kaen University (KKU)

MOTTO (3C + 1H)

- CARING: for social and environmental
- CONNECTING: people and knowledge
- CREATING: work, research, service
- HAPPINESS: university (happy work place)

A Warm Welcome to Khon Kaen Marathon: 2015-01-25



Acknowledgement [2]



World Health Organization

- Permission of WHOQOL-SRPB
- Translation Protocol

CKD study patients

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Faculty of Humanities and Social Sciences, KKU

9-THAI

Q.1-7

Response choices;

1=Very severe

2=Severe

3=Moderate

4=Mild

5=Not at all

Q.8-9

Response choices;

1=Much worse

2=A little bit worse

3=The same as

4=A little bit better

5=Much better

1. During the past 1 month, have you had difficulty with the mobility of your hand, limb, torso or the whole body or not? If so, to what level?
2. During the past 1 month, have you had difficulty in self care or not? If so, to what level? (The example of self care are dressing, cleaning the body, getting rid of waste from the body, etc.)
3. During the past 1 month, have you had difficulty in doing work, both outside the home or housework, or not? If so, to what level?
4. During the past 1 month, have you had any sickness or not felt very well, or not? If so, to what level?
5. During the past 1 month, have you felt depressed, blue, or anxious, or not? If so, to what level?
6. During the past 1 month, have you had difficulty in concentrating or remembering, or not? If so, to what level?
7. During the past 1 month, have you had difficulty in participating with others in activities or in social/ community activities, or not? If so, to what level?
8. When you compare your health today with your health in the last year, how would you rate your health?
9. When you compare your health with others' health who are similar to you in age, gender, social and economic status, type of employment, and living style, how would you rate your health?