

# ANALYSIS OF FACTORS AFFECTED TO PROSTHETIC USERS QUALITY OF LIFE

Nur Rachmat<sup>1</sup>, Mohammad Fanani<sup>2</sup>, Darsono<sup>3</sup>, Suwanto<sup>4</sup>

<sup>1</sup>PoltekkesKemenkes Surakarta, Surakarta, Indonesia.

<sup>1,2,3,4</sup> Universitas SebelasMaret, Surakarta, Indonesia.

Corresponding author: [nurrachmat@gmail.com](mailto:nurrachmat@gmail.com)

## ABSTRACT

**Background:**An amputee is a person with a disability who needs special attention because of the condition of the amputation they are experiencing so that it disrupts their quality of life. Amputee uses prosthesis for daily activities. Quality of life is influenced by many factors, by knowing factors affected to prosthetic users quality of life. **Purpose:**This study aims to conduct an Analysis of factors affected to prosthetic users quality of life in Indonesia. **Methods:**This is Quantitative research, using observational analytic. It is a cross-sectional design. Transfemoral Prosthetic user in Kuspito Clinic is the population. The sampling technique used is a simple random sampling. There were 110 samples. Structural Equation Modeling with AMOS software is used for analysis. The instrument of this research is the questioner. **Result:** The Questioners are valid and Reliable. The Model purposed is fit. The SEM result shows that motivation, optimism, religiosity, self-efficacy, social support have direct and indirect effect in quality of life. Subjective well-being is the mediator of factors affecting quality of life of prosthetic users. **Conclusion:**The study showed that motivation, optimism, religiosity, self-efficacy, social support, are the factors affected to prosthetic users quality of life. It is mediated by subjective well-being.

**Keywords:** Prosthetic, Quality of life, Amputee, Indonesia, Disability

## BACKGROUND

Amputee experiences a feeling of limb loss resulting in loss of self-confidence, so that many are lacking enthusiasm in life because they cannot work as before. Loss of confidence will be increasingly felt if the patient had previously had a high social status. The incidence of amputation in Indonesia reaches 25-30% of all amputation lower limb events (Bactiar, Jamari, & Budiwan, 2016). Amputation results in a person becoming permanently disabled so that it brings dramatic changes to all aspects of one's life in their daily activities and function as an individual (Rosyid, Supratman, Kristinawati, & Kurnia, 2020). Quality of life is an individual's perception that is associated with the goals, hopes, and interests of himself (WHO, 2016). The prosthesis is an effort to improve the quality of life of patients due to amputation. By using prosthetic limbs that serve as a substitute for missing limbs. The majority of patients with amputations are able to resume their normal activities using prostheses instead of lost limbs (van den Berg, Barr, Cavenett, & Crotty, 2020). Persons with disabilities often appear insecure because of their physical condition, they feel less than perfect and feel they have different abilities from ordinary people (Mulyono, 2017). Support needed by people with disabilities to be able to work with motivation. Motivation in the form of a set of strengths originating from within and outside the self (Zeinali & Masoudi, 2016). Motivation to change is certainly not easy to do

because of the complexity of the patient after amputation. With motivation can maintain the strength needed to be able to carry out its activities to completion. This helps patients to stay focused on improving the quality of life despite obstacles from their health (Israwanda, Urbayatun, & Nur Hayati, 2019).

Low self efficacy will cause embarrassment, confusion, nervousness, and will be able to inhibit social relations, excessive low self-esteem will cause difficulties for individuals because individuals withdraw from social relationships. Self-efficacy allows patients to feel, think, motivate themselves and behave in relation to their health. This can affect motivation, health behavior, and how much effort is spent to achieve better health behavior and how the patient's attitude when faced with difficulties or failures (Faltas, Faltas, & Ameen, 2015). Religiosity of a person with a disability in the form of tradition or denomination particular belief of religion (Ahmadi, Darabzadeh, Nasiri, & Askari, 2015). Patients state that their religious side can help in term of religiosity as they recover from care (Puchalski, 2012; Chepa& Razak, 2020; Duman et al., 2020; Ekonomi& Jaya, 2020; Gautam et al., 2020).

Social support has a beneficial effect against stress of psychopathology (Smith et al., 2011). Optimism is improving subjective well being of disable patient (Horney et al., 2011) and pessimism is positively related to poorer quality of life related to health (Petersen et al., 2008). People who are optimistic are proven to have a higher quality of life than pessimistics (Conversano et al., 2010b). Subjective Well Being can be experienced by anyone, including those with disabilities. However, it is not uncommon for people with disabilities not to experience Subjective Well Being, as disabilities are limited in their social life because of the views of the community that causes feelings of inferiority, feeling useless, being passive in community activities so as to reduce individual independence (Takasaki, 2019).

The quality of life of a disability is a collection of multidimensional concepts as emotional and cognitive judgments about one's well-being, life satisfaction, enthusiasm and happiness. Thus, the quality of life of a person is best assessed by the person himself, therefore, many aspects need to be considered to assess the quality of life comprehensively (Panzini et al., 2017). Researchers are interested in Analysis of factors affected to prosthetic users quality of life in Indonesia.

## **OBJECTIVE**

This study aims to conduct an Analysis of factors affected to prosthetic users quality of life in Indonesia.

## **METHODS**

The study was conducted at PT Kuspito Prosthetic Orthotic in Karanganyar Central Java Indonesia. The reason for choosing the place is because PT Kuspito Prosthetic Orthotic provides the service of making artificial limbs and prosthetic limbs with consumers who come from various regions throughout Indonesia. This is Quantitative research, using observational analytic. It is a cross-sectional design. Research is done in 2019. Trans femoral Prosthetic user in Kuspito Clinic is the population. The sampling technique used is a simple random sampling. The purpose of choosing this sampling technique is because in this study the subjects were post-amputation

trans femoral patients, prosthetic users, where the patient's condition cannot be compared to normal people, especially psychological problems, so researchers chose the subjects based on several considerations to minimize bias during the study. The Considerations in determining samples is using inclusion and exclusion criteria. The inclusion criteria are all post-amputation trans femoral who perform services at PT. Kuspito for the past year, willing to be the subject of research by filling out an informed consent sheet, using a prosthesis for at least 1 year, not suffering from comorbidities, and no psychiatric disorders. Whereas the exclusion criteria included all post trans femoral amputations that were not recorded at PT. Kuspito, the subject was not willing to be a research sample, post-amputation trans femoral with complications of the disease. The sample in this study was obtained 110 patients with prosthetic orthotic patients.

The independent variables are motivation, self-efficacy, religiosity, optimism, social support. The mediating variable is subjective well-being. The dependent variable is quality of life, which is carried out simultaneously by filling out a questionnaire. This study uses 7 main variables in the study, namely: motivation (X1), self-efficacy (X2), religiosity (X3), social support (X4), optimism (X5), subjective well-being (Y1) and quality of life (Y2). Motivation is assessed from: (1) intrinsic motivation (changes in a person, state of feeling dissatisfied, psychological tension, desire to do or achieve something because they really want and enjoy or see the value in doing it), and (2) extrinsic motivation (what is desired by someone, the goal is the direction of his behavior, the goal to be achieved). Measurement is done with a Likert scale questionnaire with 6 questions. Self-Efficacy is assessed from: (1) level (related to the degree of difficulty of the task that is person acceptance and confidence in a different task. (2) Generality (feeling of ability shown by individuals in different task contexts, both through behavior, cognitive and affective), and (3) strength (related to the resilience and tenacity of individuals in fulfilling their duties). Measurement is done with a Likert scale questionnaire with 6 questions.

Religiosity is assessed from (1) the ritual dimension, (2) the ideological dimension, (3) the intellectual dimension, (4) the experience dimension and (5) the consequence dimension. Measurement is done with a questionnaire scale of questionnaires with 10 questions. Social support is assessed from: (1) Family support (is all forms of support both morally and materially from people in his family or who have a family relationship), and (2) Friend support (support that comes from peers, friends at work, school, or friends in the community who are not related family) Measurement is done with a Likert scale questionnaire with 6 questions

Optimism is assessed from (1) Permanent (explaining matters relating to time, that is permanent / permanent and temporary / temporary, both about happiness or distress) (2) Pervasive (specific explanation of a problem so that it only creates powerlessness in the affected area only, and 3) Personalization (relating to the source of the cause of an event that befell the individual). Measurement is done with a Likert scale questionnaire with 6 questions. Subjective well-being can be assessed from (1) life satisfaction (a reflective assessment, an assessment in a person, how a good or bad life experience goes and happens to him) and (2) Affective (regarding emotions, moods) and the individual's feelings. Measurement is done with a Likert scale questionnaire with 6 questions. The Quality of life is measure with WHOQOL-BREF instrument. The questionnaire consisted of 4 domains and consisted of 28 question items.

Validity test in this study uses the SPSS (Statistical Program for Social Science) program Ver. 21.0. Validity test conducted on 35 patients post-amputation trans femoral obtained results that questionnaire is valid and can be used for research data collection as shown in table 1.

Table 1. Validity Test Result

Variable	Correlation Coefficient	Critical Value	Conclusion
Motivation	0.556	0.334	Valid
Self-Efficacy	0.566	0.344	Valid
Religiosity	0.571	0.344	Valid
Social support	0.709	0.344	Valid
Optimism	0.677	0.344	Valid
Subjective Well being	0.679	0.344	Valid

To test the reliability of the instrument, the researchers used Alpha Chronbach with the help of the SPSS Version 21. The questionnaire is reliable and can be used for research data collection as shown is table 2.

Table 2. Result of Reliability Test

Variable	Alpha Cronbach	Critical value	Conclusion
Motivation	0.735	0.70	Reliable
Self-Efficacy	0.814	0.70	Reliable
Religiosity	0.842	0.70	Reliable
Social support	0.876	0.70	Reliable
Optimism	0.785	0.70	Reliable
Subjective Well being	0.846	0.70	Reliable

Structural Equation Modeling using AMOS 20 is used to analyze Each dependent and independent variable can be in the form of factors or constructs that are built from several indicators (Ferdinand, 2015). Hypothesis testing is done by statistical analysis of path analysis. The shape of the relationship between variables is shown in Figure 1.

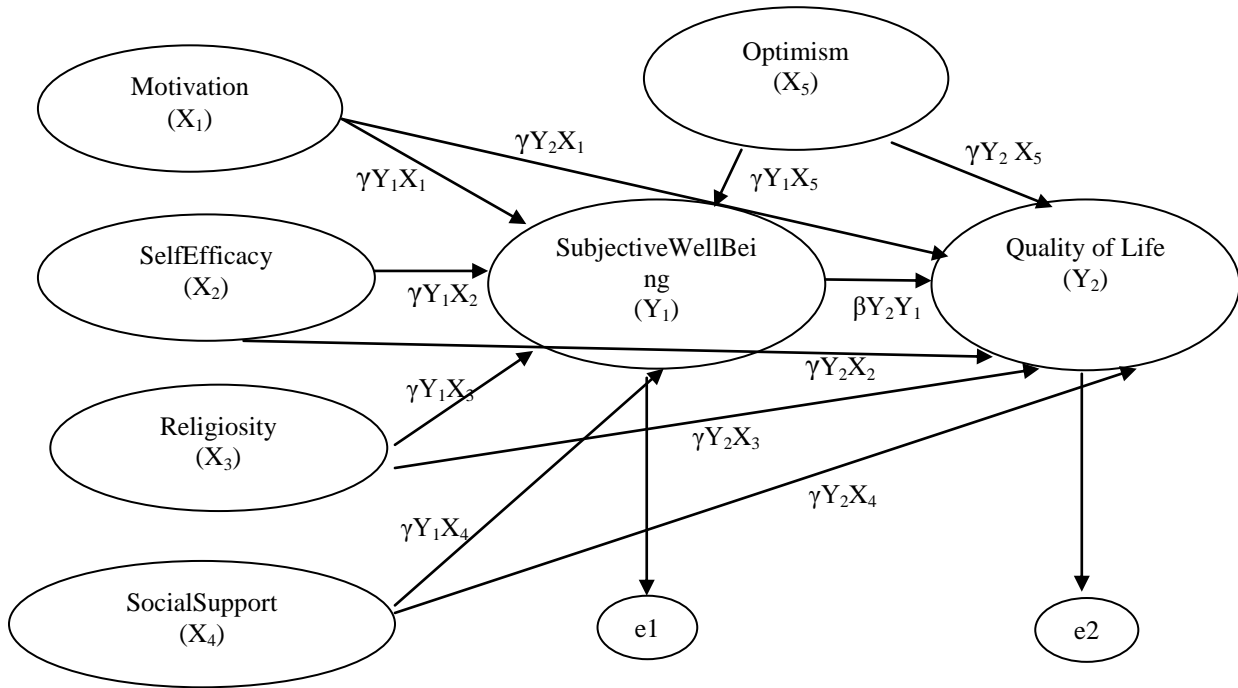


Figure 1. Path Analysis Diagram

Information:

Y1: Subjective well Being

Y2: Quality of Life

X1: Motivation

X2: Self efficacy

X3: Religiosity

X4: Social Support

X5: Optimism

$\gamma_{Y_1 X_1}$  : Coefficient of the variable path X1 with respect to Y1

$\gamma_{Y_1 X_2}$  : Coefficient of variable path X2 with respect to Y1

$\gamma_{Y_1 X_3}$  : Path coefficient of variable X3 to Y1

$\gamma_{Y_1 X_4}$  : Path coefficient of variable X4 to Y1

$\gamma_{Y_1 X_5}$  : Coefficient of the variable path X5 to Y1

$\gamma_{Y_2 X_1}$  : Coefficient of variable path X1 with respect to Y2

$\gamma_{Y_2 X_2}$  : The coefficient of the variable path X2 to Y2

$\gamma_{Y_2 X_3}$  : he coefficient of the variable path X3 to Y2

$\gamma_{Y_2 X_4}$  : Coefficient of the variable path X4 with respect to Y2

$\gamma_{Y_2 X_5}$  : Coefficient of the variable path X5 with respect to Y2

$\beta_{Y_2 Y_1}$  : variable path coefficient with respect to Y2

e1&e2 : Residues (Other Factors)

## RESULT

### *Description of Respondent*

The study was conducted at PT. Kuspito Prosthetic Orthotic in Karanganyar with a sample of 110 respondents, obtained a sample of 110 respondents. Table 3 shows the description of the characteristics of respondents.

Table 3. The Characteristics of Respondents (n =110)

Characteristic	f	%
<b>Gender</b>		
a. Female	48	43.6
b. Male	62	56.4
<b>Age</b>		
a. 21 – 30 years	29	26.4
b. 31 – 40 years	25	22.7
c. 41 – 50 years	38	34.5
d. >50 years	18	16.4
<b>Religion</b>		
a. Islam	79	71.8
b. Christian	18	16.4
c. Catholic	11	10.0
d. Hindu	2	1.8
<b>Occupation</b>		
a. Does not work	28	25.5
b. Entrepreneur	42	38.2
c. Private	33	30.0
d. Civil Servant	7	6.3
<b>Education</b>		
a. 6 Year School	13	11.8
b. 9 Year School	12	20
c. 12 Year School	49	44.6
d. Higher Education	26	23.6
<b>Marital status</b>		
a. Single	26	23.6
b. Married	84	76.4
<b>Motivation</b>		
a. High (if $\geq$ mean value)	52	47.3
b. Low	58	52.7
<b>Self Efficacy</b>		
a. High (if $\geq$ mean value)	54	49.1
b. Low	56	50.9
<b>Religiosity</b>		
a. High (if $\geq$ mean value)	59	53.6
b. Low	51	46.4

<b>Social Support</b>		
a. High (if $\geq$ mean value)	58	52.7
b. Low	52	47.3
<b>Optimism</b>		
a. High (if $\geq$ mean value)	60	54.5
b. Low	50	45.5
<b>Subjective Well Being</b>		
a. High (if $\geq$ mean value)	64	58.2
b. Low	46	41.8
<b>Quality of life</b>		
a. Good (if $\geq$ mean value)	64	58.2
b. Less	46	41.8
<b>Cause of amputation</b>		
a. Traffic accident	91	82.7
b. Diabetes Mellitus	17	15.5
c. Bone Tumor Disease	2	1.8

Source: Primary data processed, 2019

The results showed that the majority of respondents were male as many as 62 people (56.4%) with ages between 41-50 years as many as 38 people (34.5%), Muslim as many as 79 people (71.8%), working in the entrepreneurship sector is 42 people (38.2%), has a high school education of 49 people (44.6%) and is married with 84 people (76.4%), has a low motivation of 58 people (52.7%), with self low efficacy as many as 56 (50.9%), have strong religiosity as many as 59 people (53.6%), with strong social support as many as 58 people (52.7%), have high optimism as many as 60 people (54.5%) , with high subjective well being as many as 64 people (58.2%), and with good quality of life as many as 64 people (58.2%).

### ***Path Diagram***

After developing the theory-based model, the next step is to arrange the model in the form of a path diagram to be estimated using the AMOS program. Figure 2 show the path diagram.

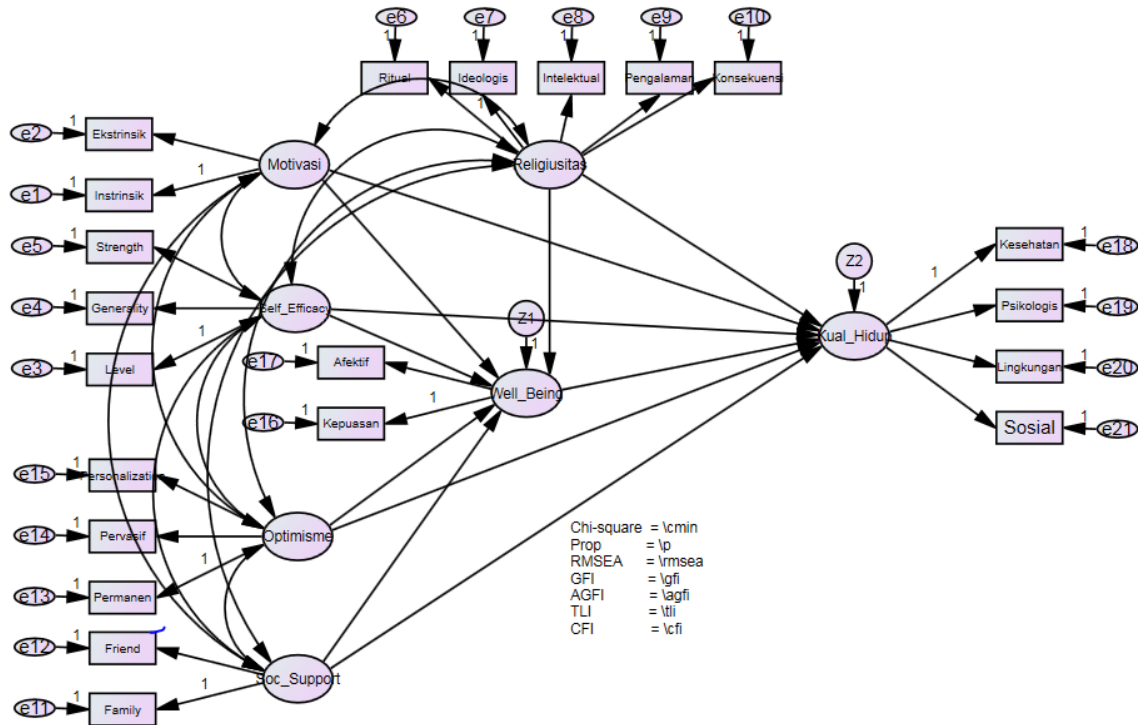


Figure 2. Path diagram

**Fit Model Analysis**

The initial stage of the Structural Equation Model analysis is testing whether the hypothesized model is supported by empirical data. This test is commonly known as the Goodness Of Fit test. Models that do not meet the Goodness Of Fit criteria show that the resulting output is still biased, not yet showing the true value. Based on observations in Figure 2, full model analysis the model is fit.

Structural model CMIN / DF value is 1.360 indicates that the good fit model meets the required criteria. This means that the model is quite fit and feasible to use, because in testing the suitability of all models if only one is fit, this research is already compatible with the data (Ferdinand, 2015).

**Assessing the Problem of Identifying the Measurement Model**

Table 4. Exogenous Variables

Direction of Influence		Standard Estimate	CR	P-value	Fortification
Intrinsic	<--- Motivation	0.618	-	-	Valid
Extrinsic	<--- Motivation	0.595	7.582	0,000	Valid
Family	<--- Social Support	0.692	-	-	Valid
Friend	<--- Social Support	0.685	8.676	0,000	Valid
Level	<--- Self-Efficacy	0.634	-	-	Valid
Generality	<--- Self-Efficacy	0.593	7.627	0,000	Valid



Strength	<---	Self-Efficacy	0.629	7.862	0,000	Valid
Permanent	<---	Optimism	0.748	-	-	Valid
Pervasive	<---	Optimism	0.734	9.545	0,000	Valid
Personalization	<---	Optimism	0723	9.426	0,000	Valid
Ideological	<---	Religiosity	0.666	8.159	0.000	Valid
Intellectual	<---	Religiosity	0.680	8.261	0.000	Valid
Experience	<---	Religiosity	0.597	7.672	0.000	Valid
Ritual	<---	Religiosity	0.655	-	-	Valid
consequences	<---	Religiosity	0.679	8.258	0.000	Valid

The CR values shown in table 4 for all indicators show values > 1.96, so the p-value <0.05 concludes that the indicators making up the exogenous variables are valid. All Estimate Standard values show positive values, this shows that the indicators of each exogenous variable have the same direction, not negate / reverse.

1. Motivation variables will be shown by both Instructional and Extracurricular indicators, this is because the standard estimate values are both positive (unidirectional)
2. Variable Social Support will be well demonstrated by a good indicator of Family and Friend, this is because the standard estimate value is both positive (unidirectional)
3. The Self Efficacy variable will be well indicated by good Level, Generality and Strength indicators, this is because the standard estimate value of the three is positive (unidirectional)
4. The optimism variable will be well demonstrated by a good indicator of Permanent, Pervasive and Personalization, this is because the standard estimate value of the three is positive (unidirectional)
5. The variable of religiosity will be well shown by good ideological, intellectual, experience, ritual and consequence indicators, this is because the sixth standard estimate is positive (unidirectional)

Table 5. Endogenous Variables

Direction of Influence			Standard Estimate	CR	P-value	Information
Satisfaction	<---	Subjective Well Being	0.463			Valid
Affective	<---	Subjective Well Being	0.515	6.562	0,000	Valid
Physical	<---	Subjective Well Being	0.685			Valid
Psychological	<---	Subjective Well Being	0704	8.526	0,000	Valid
Environment	<---	Subjective Well Being	0701	8.498	0,000	Valid
Social	<---	Subjective Well Being	0.752	8.938	0,000	Valid

From the results of the analysis of the influence of endogenous variables with their indicators shown in table 5, CR value for all indicators show values > 1.96, so the p-value <0.05 concludes that the indicators making up the endogenous variables are valid. All Estimate Standard values indicate positive values, this shows that the indicators for each endogenous variable have the same direction, not negate / reverse

The Subjective Well Being variable will be shown by the Satisfaction and Affective indicators, this is because the standard estimate value is both positive. The Quality of Life variable will be well demonstrated by good Physical, Psychological, Environmental and Social indicators, this is because the fourth standard estimate value is positive (unidirectional)

### ***Structural Model***

Testing this hypothesis is based on processing research data using SEM analysis by analyzing regression values (regression weights analysis structural equation modeling) . Table 6 Show the results of data processing. The results is hypothesis is accepted. Five hypotheses are proposed, which are discussed as follows:

1. The influence of motivation on subjective well being  
The analysis shows that the CR value on the influence of motivation on subject well being in the table is  $5.541 > 1.96$  with a value of  $p = 0.000 < 0.05$  so that it can be stated that motivation has a positive effect on subjective well being in prosthetic users.
2. The effect of self efficacy on subjective well being  
The analysis shows that the value of CR on the effect of self efficacy on subject well being in the table is  $6.577 > 1.96$  with a value of  $p = 0.000 < 0.05$  so that it can be stated that self efficacy has a positive effect on subjective well being in prosthetic users.
3. The influence of religiosity on subjective well being  
The results of the analysis show that the CR value on the effect of religiosity on subject well being in the table is  $7.246 > 1.96$  with a value of  $p = 0.000 < 0.05$  so that it can be stated that religiosity has a positive effect on subjective well being in prosthetic users.
4. The influence of social support on subjective well being  
The analysis shows that the CR value on the influence of social support on subject well being in the table is  $6.037 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that social support has a positive effect on subjective well being in prosthetic users.
5. The influence of optimism on subjective well being  
The results of the analysis show that the CR value on the effect of optimism on subject well being in the table is  $7.353 > 1.96$  with a value of  $p = 0.000 < 0.05$  so that it can be stated that optimism has a positive effect on subjective well being in prosthetic users.
6. The influence of motivation on quality of life  
The analysis shows that the CR value on the influence of motivation on quality of life in the table is  $5.560 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that motivation has a positive effect on quality of life in prosthetic users.
7. Effect of self efficacy on quality of life  
The results of the analysis show that the CR value on the effect of self efficacy on quality of life in the table is  $6.851 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that self efficacy has a positive effect on quality of life in prosthetic users.
8. The influence of religiosity on quality of life  
The results of the analysis show that the CR value on the effect of religiosity on quality of life in the table is  $7.217 > 1.96$  with a value of  $p = 0.000 < 0.05$  so that it can be stated that religiosity has a positive effect on quality of life in prosthetic users.
9. The influence of social support on quality of life

The analysis shows that the CR value on the influence of social support on quality of life in the table is  $6.223 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that social support has a positive effect on quality of life in prosthetic users.

10. The effect of optimism on quality of life

The analysis shows that the CR value on the influence of optimism on quality of life in the table is  $7.353 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that optimism has a positive effect on quality of life in prosthetic users.

11. The influence of subjective well being on the quality of life

The analysis shows that the value of CR on the influence of subjective well being on quality of life in the table is  $5.727 > 1.96$  with a value of  $p = 0.000 < 0.05$  so it can be stated that subjective well being has a positive effect on quality of life in prosthetic users.

12. The influence of motivation on quality of life in prosthetic users through subjective well being .

Table 6. Direct Effect test results

Direction of Influence			Standard Estimate	CR	P-value	Information
Subjective Well Being	<---	Motivation	.146	5,541	.000	Significant
Subjective Well Being	<---	Self Efficacy	.225	6,577	.000	Significant
Subjective Well Being	<---	Religiosity	.426	7,246	.000	Significant
Subjective Well Being	<---	Social Support	.215	6,037	.000	Significant
Subjective Well Being	<---	Optimism	.420	7,353	.000	Significant
Quality of life	<---	Subjective Well Being	.060	5,727	.000	Significant
Quality of life	<---	Optimism	.267	7,559	.000	Significant
Quality of life	<---	Motivation	.92	5,560	.000	Significant
Quality of life	<---	Religiosity	.236	7,217	.000	Significant
Quality of life	<---	Social Support	.149	6,223	.000	Significant
Quality of life	<---	Self Efficacy	.156	6,851	.000	Significant

Source: Primary data processed, 2019

Table 7 shows test result of the hypothesis for this Indirect effect is to analyze the value of the *critical* ratio and the probability value (p) of the data processing compared with the statistical constraints required, ie above 1.96 for CR values and below 0.05 for p values.

Table 7. Indirect Effect Test Results

Direction of Influence					ES	CR	p	Label
QOL	<---	SWB	<---	Motivation	0.020	3,965	0,000	Significant
QOL	<---	SWB	<---	Self Efficacy	0.042	4,345	0,000	Significant
QOL	<---	SWB	<---	Religiosity	0.061	4,484	0,000	Significant
QOL	<---	SWB	<---	Social Support	0.028	4.112	0,000	Significant
QOL	<---	SWB	<---	Optimism	0.065	4,504	0,000	Significant

1. The influence of motivation on quality of life in prosthetic users through subjective well-being. Sobel Test shows that the CR value in the table is 3.965 > t table is 1.980 with a value of  $p = 0.000 < 0.05$  so it can be stated that motivation affects the quality of life in prosthetic users through subjective well being .
2. The effect of *self efficacy* on quality of life in prosthetic users through subjective well being. Sobel Test shows that the CR value in the table is 4.345 > t table is 1.980 with a value of  $p = 0.000 < 0.05$  so it can be stated that *self efficacy* affects the quality of life in prosthetic users through *subjective well being*.
3. The influence of religiosity on quality of life in prosthetic users through *subjective well being*. Sobel Test shows that the CR value in the table is 4.484 > t table is 1.980 with a value of  $p = 0.000 < 0.05$  so it can be stated that religiosity affects the quality of life in prosthetic users through *subjective well being*.
4. The effect of *social support* on quality of life in prosthetic users through *subjective well being*. Sobel Test shows that the CR value in the table is 4.112 > t table is 1.980 with a value of  $p = 0.000 < 0.05$  so it can be stated that *social support* affects the quality of life in prosthetic users through *subjective well being*.
5. The effect of optimism on quality of life in prosthetic users through *subjective well-being*. Sobel Test shows that the CR value in the table is 4.504 > t table is 1.980 with a value of  $p = 0.000 < 0.05$  so it can be stated that optimism affects the quality of life in prosthetic users through *subjective well being*.

## DISCUSSION

The participation motivation had a positive effect and significant effect on psychological well-being and subjective well-being of golf participants in Korea. Motivation is the tendency to act voluntarily to achieve goals (Nhat, Van, &Huu, 2013), the better the motivation that exists in a person will cause individuals to develop abilities in the process of making decisions, able to understand, understand and overcome the consequences of decisions that have been taken as well as searching for the meaning of the event (Frielink, Schuengel, &Embregts, 2017). Motivation and hope are one of the factors that can improve patient compliance to recover in an effort to increase the quality of life of patients. Motivation impulses act to achieve certain goals (WarsyahSaputra, Widjasena, &Wahyuni, 2014), while hope is a desire to be achieved by humans. Motivation and hope are needed to help someone improve adherence in undergoing therapy in an effort to increase the quality of life of patient.

In this study the research subjects were people with disabilities where with a high motivation in themselves they would be able to increase productivity so as to increase Subjective well being. Subjective well being felt by individuals influences them in gathering and recalling information about their work. Motivation also affects the level of one's welfare because with motivation the work had done will be more productive. Self-efficacy affects the mechanism of human behavior, if a person believes in having the ability to produce something desired then the individual will try to achieve it, but if the individual does not have the confidence to produce something desired then he will not try to realize it. Self-efficacy is important for patients to be able to deal with all the changes that occur, by having high self-efficacy, the patient has a strong belief to always be able to face all the changes and responsibilities in dealing with periods of development in his life.

Self-efficacy is a self-assessment of the ability of self to regulate and carry out the actions needed to achieve specified performance. This happens because they believe that the actions taken can achieve the desired results, even though they have little incentive to act or to endure difficulties (Bandura, 2009). Individuals who have strong confidence and stability in their ability to carry out a task will continue to survive in their business despite many difficulties and challenges (Suharsono&Istiqomah, 2014). Persons with disabilities in the context of social life, need attention and support for social processes in these individuals so that they feel accepted and can increase self-efficacy (Jarmitia et al., 2016). Self-efficacy allows patients to feel, think, motivate themselves and behave in relation to their health. Empowerment of persons with disabilities needs to be done thoroughly involving various relevant parties according to their potential and needs so that people with disabilities are expected to be independent in the economic and social aspects that will have an impact on their well-being.

Religiosity is a complex integration between religious knowledge, feelings and religious actions in a person (Susanti, 2015). Religiosity is positively related to life satisfaction, this is because people believe that by implementing religious teachings, the level of happiness becomes higher than people who do not practice their religious teachings well (Murphy et al., 2000). Religiosity has a positive effect on various aspects of subjective well being. The emotional intelligence, self-efficacy, and religiosity affect adolescent subjective well-being. (Adeyemo & Adeleye, 2008)

Social support can come from the environment, friends and the most important thing is family, parents. If the individual is received and valued positively, then the individual tends to be able to develop a positive attitude towards himself and the individual is able to live independently in the midst of a harmonious broad society (Kumalasari&Ahyani, 2012). Research which examines the social support influence subjective well-being, it is mediated by self-efficacy and self-esteem (Xi, Wang, & Jia, 2017).

For individual in life, person need social support, and it is needed to managed psychological problems (Yasin & Dzulkifli, 2010). Factor that causes a lot of psychological problems one of them is deficiency in social support. People with disabilities in daily life are often found psychological problems related to the physical body, with social support it is expected that persons with disabilities feel cared for and valued as part of the group. Then, social support can help to increase health of individuals who come from people who have positive experiences, play an active role in social life and are able to cope with stress. Subjective well-being is an evaluation of an individual's psychological well-being . Subjective well-being has two elements, namely affective and cognitive assessment. If the person feels affective happily and cognitively he thinks his life is satisfying then it can be categorized as having a high subjective well-being.

Individuals are optimistic when facing difficulties will continue to try to achieve goals and will adjust to the situation at hand by using effective coping strategies to achieve desired goals. Individuals, who are optimistic and pessimistic, have different ways of dealing with problems and facing challenges, ways and results obtained in solving difficulties encountered. Optimists when facing challenges will face them with confidence and perseverance, although progress in

resolving these challenges is slow because they believe difficulties can be handled. Research about the relationship between optimism and HRQoL (Kreis et al., 2015), this result shows that optimism affects the Health Related quality of life. Optimism is expected that there will be more virtue than terrible that will happen (Aprilianti, Rachmawati, &Pratiwi, 2018).

The high level of optimism is related to subjective well-being when faced with difficulties. High level of optimism has an impact on psychological well-being when facing negative effects on the stress that an individual goes through (Zou, Hu, & McCoy, 2014). A person with a disability is vulnerable to stress so they feel useless. With optimism, people with disabilities are able to adjust their behavior according to what they want and distance themselves from what is not desired. The more important the goal is for someone, the greater the value in motivating individuals. Without having a goal, a person has no reason to act.

Self efficacy, religiosity, and optimism have an influence on the quality of life this means increasing Self-efficacy , religiosity, and optimism will further improve the quality of life in prosthetic user. Quality of work life and self-efficacy is significantly related (Mahmoudi, Rostami, Mahmoudjanloo, &Jahani, 2017). overcome variety of situations that arise in his life people need self efficacy (Bandura & Locke, 2003). Optimism is related to psychological well-being significantly positive (Horney et al., 2011) and pessimism is related to less quality of life (Petersen, et al ., 2008).

WHO has emphasized spirituality, and the religious dimensions of patient life must be an integral part of patient management (Arrey, Bilsen, Lacor, &Deschepper, 2016). Spiritual needs show that basically man must find meaning, purpose, and value in their lives. Study in advanced cancer patient with the result that total spiritual struggle, spiritual search, and spiritual problems are each related with quality of life (Winkelman et al., 2011). There is research which states that religiosity effect improving the quality of life (Wildes, Miller, de Majors, & Ramirez, 2009). Quality of life is an ability to do functionally in perception of health (Pinto, Fumincelli, Mazzo, Caldeira, & Martins, 2017). Quality of life is a personal statement about a person's characteristics, satisfaction, adaptation to change, or perception of health and well-being (Ertekin Pinar, Demirel, Yildirim, &Daglar, 2019).

Subjective well-being is an evaluation of an individual's psychological well-being. Subjective well-being has two elements, namely affective and cognitive assessment. If the person feels affective happily and cognitively he thinks his life is satisfying then it can be categorized as having a high subjective well-being. Affective elements are regarding emotions, moods and feelings of the individual. While the cognitive element is overall life satisfaction and also specifically or in certain parts, such as his work life or relationship with other individuals (Seligman, 2006). This means that the better quality of life of people with disabilities is due to their real work in daily life. Quality of life is to provide an opportunity to live comfortably, maintain physiological conditions that must be balanced with psychological conditions in everyday life. Improving subjective well-being will make the better the quality of life of prosthetic user.

## CONCLUSION

Prosthetic users need to improve their quality of life. Increasing the value of motivation of person, and improving self-efficacy will improve their subjective well-being. The prosthetic user needs to be optimistic. Prayer and belief in religion, which is part of religiosity, will help to improve quality of life. Social support from friend and family is required to help prosthetics user to improve their quality of life. Wherewith a good Subjective well being, a person will be able to face all the problems that occur to him, never give up, and fulfill his needs. Subjective well-being is mediator to improve the quality of life of prosthetic users.

## REFERENCES

1. Adeyemo, D. A., & Adeleye, A. T. (2008). Emotional Intelligence, Religiosity and Self-Efficacy as Predictors of Psychological Well-Being among Secondary School Adolescents in Ogbomoso, Nigeria. *Europe's Journal of Psychology*, 4(1).
2. Ahmadi, Z., Darabzadeh, F., Nasiri, M., & Askari, M. (2015). The Effects of Spirituality and Religiosity on Well-Being of People With Cancer: A Literature Review on Current Evidences. *Jundishapur Journal of Chronic Disease Care*, 4(2), 34–36.
3. Aprilianti, E., Rachmawati, R., & Pratiwi, M. (2018). *Peranan Optimisme Terhadap Orientasi Masa Depan Pada Andikpas Di Lpka Klas I Palembang*. Sriwijaya University.
4. Arrey, A. E., Bilsen, J., Lacor, P., & Deschepper, R. (2016). Spirituality/religiosity: A cultural and psychological resource among sub-saharan african migrant women with HIV/AIDS in Belgium. *PLoS ONE*, 11(7), 1–22.
5. Bactiar, D., Jamari, A., & Budiwan, I. (2016). Perancangan Biomekanisme Sendi Proteza Untuk Pasien Amputasi Tungkai Di Atas Lutut Dengan Desain Ergonomi Dan Fleksibel. *Prosiding SNST Ke-7 Tahun 2016 Fakultas Teknik Universitas Wahid Hasyim Semarang* 7, 7–12.
6. Bandura, A. (2009). Guide For Constructing Self-Efficacy Scales. *Revista Iberoamericana de Psicología Del Ejercicio y El Deporte*, 4(1), 15–28.
7. Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88(1), 87–99.
8. Conversano, C., Rotondo, A., Lensi, E., Della Vista, O., Arpone, F., & Reda, M. A. (2010a). Optimism and its impact on mental and physical well-being. *Clinical Practice and Epidemiology in Mental Health : CP & EMH*, 6, 25–29.
9. Conversano, C., Rotondo, A., Lensi, E., Della Vista, O., Arpone, F., & Reda, M. A. (2010b). Optimism and Its Impact on Mental and Physical Well-Being. *Clinical Practice & Epidemiology in Mental Health*, 6(1), 25–29.

10. Chepa, P., Universiti, J., & Razak, L. T. (2020). WHY DO UNIVERSITY STUDENTS PERPETRATE INTERNETPLAGIARISM? A MULTIPLE LINEAR. 11(12), 947–955.
11. Duman, B., Alpysbaevich, B. T., &Tursynhanovich, Z. E. (2020). Emotional Burnout Syndrome Of Obstetrician- Gynecologists In Different Regions Of Kazakhstan Republic. 11(12), 1020–1024.
12. Ekonomi, F., & Jaya, U. B. (2020). The Effect Of Corporate Social Responsibility And Good Corporate Governance On Pharmaceutical Company Tax Avoidation In Indonesia. 11(12), 977–983.
13. Ertekin Pinar, S., Demirel, G., Yildirim, G., &Daglar, G. (2019). Sexual experiences and quality of life in Turkish women using methods of contraception. *Journal of Obstetrics and Gynaecology*, 39(6), 782–787.
14. Faltas, S., Faltas, M., & Ameen, D. A. (2015). Self-Efficacy of Patients with Lower Limb Amputation : Nursing Guidelines. *12 Th International Congress Integration of Scientific Research, Education Evidence Based Practice in Nursing*.
15. Ferdinand, A. T. (2015). *Structural Equation Modeling dalamPenelitianManajemen: Aplikasi Model-Model RumitdalamPenelitianuntukSkripsi, Tesis Magister dan DisertasiDoktor*. Semarang: Badan Penerbit Universitas Diponegoro.
16. Frielink, N., Schuengel, C., &Embregts, P. (2017). Distinguishing subtypes of extrinsic motivation among people with mild to borderline intellectual disability. *Journal of Intellectual Disability Research*, 61(7), 625–636.
17. Gautam, A., Lodha, G., Vadera, M., & Verma, P. K. (2020). Visualizing impact of Goods and service tax on different corners of Pharmaceutical industry- A study of Jaipur District of Rajasthan. *Systematic Reviews in Pharmacy*, 11(12), 99–108.  
<https://doi.org/10.31838/srp.2020.12.16>
18. Horney, D. J., Smith, H. E., McGurk, M., Weinman, J., Herold, J., Altman, K., ... Boccia, S. (2011). Associations between quality of life, coping styles, optimism, and anxiety and depression in pretreatment patients with head and neck cancer. *Head & Neck*, 33(1), 65–71.
19. Israwanda, D., Urbayatun, S., & Nur Hayati, E. (2019). PelatihanKebersyukuranUntukMeningkatkanKualitasHidup Pada Wanita DisabilitasFisik. *JurnalIntervensiPsikologi (JIP)*, 11(1), 9–24.
20. Jarmitia, S., Sulistyani, A., Yulandari, N., Tatar, F. M., Santoso, H., Jarmitia, S., Santoso, H. (2016). the Relationship Between Social Support and Self Confidence of Persons With Physical Disability in Special Education Schools in. *Psikoislamedia*, 1(April), 61–69.
21. Kreis, S., Molto, A., Bailly, F., Dadoun, S., Fabre, S., Rein, C., Gossec, L. (2015). Relationship between optimism and quality of life in patients with two chronic rheumatic diseases: Axial spondyloarthritis and chronic low back pain: A cross sectional study of 288



- patients. *Health and Quality of Life Outcomes*, 13(1), 1–6.
22. Kumalasari, F., & Ahyani, L. N. (2012). Hubungan Antara Dukungan Sosial Dengan Penyesuaian Diri Remaja Di Panti Asuhan Latifah Nur Ahyani. *Jurnal Psikologi: Pitutur*, 1(1).
  23. Mahmoudi, G., Rostami, F., Mahmoudjanloo, S., & Jahani, M. (2017). Relationship of Employees' Achievement Motivation and Quality of Working Life with Their Self-efficacy at Selected Hospitals with a Multi-group Analysis: Moderating Role of Organizational Ownership. *Materia Socio Medica*, 29(4), 237.
  24. Mulyono, S. E. (2017). Model Pemberdayaan Masyarakat Miskin Melalui Jalur Pendidikan Non Formal Di Kecamatan Gajahmungkur Kota Semarang. *Edukasi*, 2(1), 1–10.
  25. Murphy, P. E., Ciarrocchi, J. W., Piedmont, R. L., Cheston, S., Peyrot, M., & Fitchett, G. (2000). The relation of religious belief and practices, depression, and hopelessness in persons with clinical depression. *Journal of Consulting and Clinical Psychology*, Vol. 68, pp. 1102–1106.
  26. Nhat, N. C., Van, D. N., & Huu, T. H. (2013). Effects of Motivation on Employees' Performance at Petrovietnam Nghe An Construction Joint Stock Corporation. *American Journal of Business and Management*, 2(2), 212–217.
  27. Panzini, R. G., Mosqueiro, B. P., Zimpel, R. R., Bandeira, D. R., Rocha, N. S., & Fleck, M. P. (2017). Quality-of-life and spirituality. *International Review of Psychiatry*, 29(3), 263–282.
  28. Petersen, L. R., Clark, M. M., Novotny, P., Kung, S., Sloan, J. A., Patten, C. A., ... Colligan, R. C. (2008). Relationship of optimism-pessimism and health-related quality of life in breast cancer survivors. *Journal of Psychosocial Oncology*, 26(4), 15–32.
  29. Pinto, S., Fumincelli, L., Mazzo, A., Caldeira, S., & Martins, J. C. (2017). Comfort, well-being and quality of life: Discussion of the differences and similarities among the concepts. *Porto Biomedical Journal*, 2(1), 6–12.
  30. Puchalski, C. M. (2012). Spirituality in the cancer trajectory. *Annals of Oncology*, 23(Supplement 3), 49–55.
  31. Rosyid, F., Supratman, S., Kristinawati, B., & Kurnia, D. (2020). Kadar Glukosa Darah Puasa dan Dihubungkan dengan Kualitas Hidup pada Pasien Ulkus Kaki Diabetik. *Jurnal Keperawatan Silampari*, 3(2 SE-Articles).
  32. Seligman, M. E. P. (2006). Learned Optimism: How to Change Your Mind and Your Life. *Learned Optimism*, Vol. 9, p. 319.
  33. Smith, S. K., Herndon, J. E., Lyerly, H. K., Coan, A., Wheeler, J. L., Staley, T., & Abernethy, A. P. (2011). Correlates of quality of life-related outcomes in breast cancer patients participating in the Pathfinders pilot study. *Psycho-Oncology*, 20(5), 559–564.

34. Suharsono, Y., & Istiqomah. (2014). Validitas Dan Reliabilitas Skala Self-Efficacy. *Jurnal Ilmiah Psikologi Terapan*, 02(01), 144–151.
35. Susanti, R. (2015). Hubungan Religiusitas dan Kualitas Kehidupan Kerjadengan Organizational Citizenship Behavior (OCB) Pada Karyawan. *Jurnal Psikologi UIN Sultan Syarif Kasim Riau*, 11(Desember), 94–102.
36. Takasaki, Y. (2019). Disability and Poverty: Landmine Amputees in Cambodia. *CIRJE-F-1118*, *CIRJE-F-11*. Retrieved from <http://www.cirje.e.u-tokyo.ac.jp/research/03research02dp.html>
37. van den Berg, M. E. L., Barr, C. J., Cavenett, S., & Crotty, M. (2020). Gait Analysis in Individuals with Transtibial Amputation Walking on Sand. *Journal of Prosthetics and Orthotics*, 32(2), 107–115.
38. Warsyah Saputra, R. A., Widjasena, B., & Wahyuni, I. (2014). Analisis Manfaat Kaki Palsu (Prothesa) Terhadap Aktivitas Fisik Pada Kaum Difabel (Tuna Daksa) Di Paguyuban Penyandang Cacat Jasmani Dan Wirausaha. *Jurnal Kesehatan Masyarakat (e-Journal)*, 2(3), 170–175.
39. WHO. (2016). *Global report on diabetes*. World Health Organization.
40. Wildes, K. A., Miller, A. R., de Majors, S. S. M., & Ramirez, A. G. (2009). The religiosity/spirituality of Latina breast cancer survivors and influence on health-related quality of life. *Psycho-Oncology*, 18(8), 831–840.
41. Winkelman, W. D., Lauderdale, K., Balboni, M. J., Phelps, A. C., Peteet, J. R., Block, S. D., ... Balboni, T. A. (2011). The relationship of spiritual concerns to the quality of life of advanced cancer patients: Preliminary findings. *Journal of Palliative Medicine*, 14(9), 1022–1028.
42. Xi, X., Wang, Y., & Jia, B. (2017). *The Effect of Social Support on Subjective Well-being: Mediator Roles of Self-esteem and Self-efficacy*. 121(Ichssr), 493–505.
43. Yasin, M. A. S. M., & Dzulkipli, M. A. (2010). The Relationship between Social Support and Psychological Problems among Students. *International Journal and Business and Social Science*, 1(3), 110–116.
44. Zeinali, K., & Masoudi, R. (2016). Motivational interviews to improve nurses' motivation and self-efficacy for the use of Closed Suctioning System in the ICU MSc Student in Nursing Education, Islamic Azad University, Isfahan (Khorasgan) Branch. *International Journal of Medical Research & Health Sciences*, (9), 100–107.
45. Zou, Z., Hu, J., & McCoy, T. P. (2014). Quality of life among women with breast cancer living in Wuhan, China. *International Journal of Nursing Sciences*, 1(1), 79–88.