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Factors Affecting Subjective Well Being Of Transfemoral Prosthesis User In Indonesia

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ABSTRACT

Study Design: **This research is Quantitative Research using analytic observational with a cross-sectional approach.** ***Background:*** **Amputation hurts patients physically, psychologically and socially. Permanent physical disability due to amputation affects the thought, feeling and behavior of the patient, because patient will have the negative feeling on body image that can cause a feeling that he is not useful, worry about losing his job, pessimistic about the future and limit social relationships with self-withdrawal, so that patient will experience depression.** ***Objectives*****: This research is to determine the factor affecting the subjective well being of transfemoral prosthesis users in Indonesia.** ***Methods:*** **The sample in this study was 110 users of the transfemoral prosthesis with a simple random sampling technique. The Data collection technique is using questionnaires and documentation. It was used Structural Equation Modeling (SEM) to analyze the data.** ***Results:*** **The result of this study had a statistically significant effect between motivation (p = 0.031), self-efficacy (p = 0.030), religiosity (p = 0.020), social support (p = 0.027), and optimism (p = 0.033) toward subjective well being.** ***Conclusions:*** **motivation, self-efficacy, religiosity, social support and optimism are the factors affecting the subjective well being of transfemoral prosthesis users in Indonesia. Clinical Relevance: Patient who had undergone amputation will have an effect on their subjective well being. It is important to know the factor affecting subjective well being of above knee amputation that use prosthesis. The factors are motivation, self-efficacy, religiosity, social support and optimism.**

Keywords: Subjective Well-Being, Motivation, Self Efficacy, Religiusity, Social Support, Optimisme, Transfemoral Prosthesis, Indonesia

BACKGROUND

World Health Organization (WHO) notes that in 2011 there were more than 5.6 million people died due to accident incidents and around 1.3 million people experienced physical disabilities. The incidence of lower limb fractures has a high prevalence of accidents at around 40% [1]. The United States has 1.7 million people living with lost limbs. One of 190 Americans currently

lives with limb loss and this number is expected to double by 2050 [2]. While the incidence of amputation in Indonesia reached 25-30% of the entire incidence of lower limb amputation [3]. Trauma is the leading cause of foot amputation in developing countries and the second only for arterial disease devices in developed countries among civilians in the UK, trauma accounts for 7-9 percent of the 5,000 amputations performed annually. The prevalence is much higher, because traumatic amputations are usually young life expectancy is long. In the United States it is known that 45 post-amputation people experience trauma [4] .

Amputation is one of the main causes for someone to become permanently disabled so that it brings dramatic changes in all aspects of people's life in their daily activities [5]. Amputation is a surgical procedure that removes part of the body. Amputation action is carried out on a small part to a large part of the body [6]. Amputation more often happen in man than woman, surgery is more common in 60 years of age [7]. Both amputations that occur because of work, disease and other causes, the incidence is higher in men. 85% of amputations occur in the lower extremities and there are 3D indications of amputations, those are: (1) Dead (dying), (2) Dangerous, (3) damn nuisance. Amputation in the lower limbs reaches 85-90% of all amputations and amputation below the knee (transtibial amputation) is the most common type of amputation surgery [8]. Amputation causes a change in a person both physical, social, psychological and environmental changes in the long term [9]. Amputation can affect the sufferer's body image. The body image of a person as a phenomenon of dynamic change, is shaped by feelings and perceptions about a person's body that is constantly changing.

Amputation or disability can cause negative body image and loss of potential social acceptance [10]. Body image not only gives a "sense" of self, body image also influences the way we think, act, and relate to other people [11]. The high number of people with leg disability will increase the demand for prosthetic orthotic services. Orthotic, which is a form of installation and manufacturing of assistive devices for patients who experience abnormalities in parenting and other deformities. Prosthetics is a form of installation and manufacturing of assistive devices for patients who experience loss of limbs. Minister of Health of Indonesia Regulation No. 22 of 2013 defines orthotic prosthetic understanding; it is health services provided by prosthetic orthotics in terms of medical aids in the form of orthosis or prostheses for physical and psychological health based on science and technology [12]. Prosthetic Orthotics is an attempt to help improve the social status and confidence of patients who loss their legs because of amputation by making prosthetic limbs that function as a substitute for lost limbs. At least 90% of all patients with below-knee amputations are able to resume their normal activities by using prosthetics instead of missing limbs [13]. In the rehabilitation process of patient amputation of the lower limbs shows that the installation of prosthesis directly will improve the ability to move the amputated limb, although this requires exercise in the patient. Prosthesis installation will be able to restore the patient's confidence, because it can undertake daily activities without any difficulty and embarrassment especially to the patient with high social status.

Linton stated that people who have high social status will be placed higher in the structure of society than people with low social status, therefore it is very meaningful for the patient to be able to reactivate as before even though using prosthesis. [14].

Persons with disabilities, especially Physical Disability in 2014 who used the services of the Kuspito Orthotic Prosthetic clinic of 350 patients, who came from all cities in Indonesia, only 5% of them came from the Surakarta region. It is hoped that this service user will be able to improve their welfare through increasing their independence and socio-economy. The main target of the empowerment process is those who are weak and do not have the power, strength or ability to access productive resources or people who are marginalized in development. The

ultimate goal of the empowerment process is for independence [15]. It needs a research to prove the factors affecting subjective well being of transfemoral prosthesis user in Indonesia.

MATERIAL AND METHOD

This study received approval from the Ethics Committee of the Faculty of Medicine Sebelas Maret University. Administrative Clearance was obtained from the ministry of internal affairs Republic of Indonesia and National Unity and Community protection office, at district level and from PT Kuspito Prosthetics Orthotic. Informed consent from respondent before the research. This research is analytic observational with cross sectional approach. The sample in this study was 110 users of transfemoral prosthesis with simple random sampling technique. Data collection techniques with questionnaires and documentation. It was used *Structural Equation Modeling* (SEM) to analyze the data.

RESULT AND DISCUSSION

This hypothesis is based on processing research data using SEM analysis by analyzing regression values (regression weights analysis structural equation modeling). The hypothesis is tasted by analyzing the value of the critical ratio (CR) and the probability value (p) of the data processing compared with the statistical limits required, it is above 1.96 for CR values and below 0.05 for p values. The results of hypothesis testing with SEM analysis can be seen in Table 1 as follows:

The influence of motivation on subjective *well-being*

SEM analysis result showed that the CR value on the effect of motivation on subject well-being in the Table 1. was 2.158> 1.96 with a value of p = 0.031 <0.05 so that it can be stated that motivation influences subjective well-being in post-transfemoral amputation patients. It showed that increasing motivation to eat will further increase subjective well-being. This research is supported by research from Moo, et al., Concerning the relationship between participation motivation and well-being among golfers in Korea [16]. The result stated that motivation to participate had a positive and significant effect on psychological well-being and subjective well-being of golf participants in Korea. Motivation is the tendency to behave in a purposive way to achieve specific needs [17]. The better the motivation which exists in a person will cause the people to develop the ability in the process of making decisions, able to understand, understand and overcome the consequences of decisions that have been taken and look for the meaning of the event [1819].

The effect of self-efficacy on subjective well-being

SEM analysis result showed that the CR value on the effect of self-efficacy on subject well-being in the table was 2.166> 1.96 with a value of p = 0.030 <0.05 so that it can be stated that self-efficacy has an effect on subjective well-being in post-transfemoral amputation patients. It means that the stronger the effect of individual self-efficacy, the more subjective well-being an individual will be. The research is supported by research from Adeyemo and Adeleye, which examines emotional intelligence, religiosity and self-efficacy as predictors of psychological well-being among middle school adolescents. The results of the study stated that emotional intelligence, religiosity and self-efficacy affect adolescent psychological well-being [19].

Persons with disabilities in the context of social life need an attention and support in the social processes for them, so they feel accepted and can increase self-efficacy [20]. Self-efficacy allows patients to feel, think, motivate themselves and behave in relation to their health. It can affect motivation, health behavior, and how much effort which is spent to achieve better health behavior and how the patient's attitude when faced with difficulties or failures [21].

The influence of religiosity on subjective well-being

SEM analysis results showed that the value of CR on the influence of religiosity on the subject well-being in the table was 2.324> 1.96 with a value of p = 0.020 <0.05 so that it stated that religiosity affects subjective well-being in post transfemoral amputation patients. It means that the higher the religiosity of person with disabilities, the more subjective well-being will be. The result is supported by research from Adeyemo and Adeleye, which examines emotional intelligence, religiosity and self-efficacy as predictors of psychological well-being among middle school adolescents. The results of the study stated that emotional intelligence, religiosity and self-efficacy affect adolescent psychological well-being [19].

Religiosity is a complex integration between religious knowledge, feelings and religious actions in a person [22]. Religiosity is positively related to life satisfaction, it is because people believe that by implementing religious teaching the level of happiness is higher than people who do not practice their religious teaching [23]. Religiosity had a positive effect on various aspects of subjective well being [24]. Patients state that their religious side can help them find hope, gratitude, and positivity in their experiences, and religiosity is a source of strength that can help patients cope, find meaning in their lives, and understand their experiences when recovering from treatment [25].

The influence of social support on subjective well-being

SEM analysis results showed that the value of CR on the influence of social support on subject well-being in the table was 2.212> 1.96 with a value of p = 0.027 <0.05 so it stated that social support has an effect on subjective well-being in post transfemoral amputation patients. It means that the stronger social support from various parties will further increase the subjective well-being in post-transfemoral amputation patients. The research is supported by research from Xi, et al., Which examines the relationship between social support and subjective well-being mediated by self-esteem and self-efficacy [26]. The results showed that social support has a positive effect on subjective well-being. Self-esteem mediates the relationship between social support and subjective well-being. Self-efficacy mediates the relationship between social support and subjective well-being. Yasin and Dzulkifli pointed that social support is important for individuals in life and social support enacts an important role in managing psychological problems. Lack of social support is one factor that causes many psychological problems [27]. Person with disabilities in daily life is often found psychological problems related to the physical body. By social support it is expected that persons with disabilities feel cared, valued and considered to be part of the communities. Then, social support can take a role in improving the health of individual who comes from the people who have positive experiences, take an active role in social life and are able to cope a stress.

The influence of optimism on subjective well-being

SEM analysis results showed that the CR value on the effect of optimism on the subject well-being in the table was 2.132> 1.96 with a value of p = 0.033 <0.05 so that it can be stated that optimism affects the subjective well-being in post transfemoral amputation patient. It means that the more optimistic a person with a disability will be, the sexuality will increase the subjective well-being. The research is supported by research from Kreis, et al., About the relationship between optimism and HRQoL. The result indicates that optimism affects the mental component [28]. Perera and Mcllven defined that optimism is associated with positive outcomes desired by someone such as good moral conditions, satisfying achievements, and the ability to solve problems which arise [29]. The high level of optimism of a person related with subjective well-being in the face of adversity. Zou, et al., pointed that the high level of optimism has an impact on psychological well-being when facing negative effects on the stress which against the individual [30]. A person with a disability is susceptibility to stress so they feel

useless. With optimism, a person with a disability is able to adjust their behavior according to what they want and distance themselves from what is not desired. The more important goal is for someone, the greater the value in motivating individuals. Without having a goal, a person has no reason to act.

CONCLUSION

Motivation, self-efficacy, religiosity, social supportand optimism has significant effect towards subjective well being of transfemoral prosthesis user in Indonesia.

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Reference:

WHO. World Report on Disability 2011. *Am J Phys Med Rehabil Assoc Acad Physiatr* 2011; 91: 549.

Peirano AH, Franz RW. Spirituality and quality of life in limb amputees. *Int J Angiol* 2012; 21: 47–52.

Bactiar D, Jamari A, Budiwan I. Perancangan Biomekanisme Sendi Protesa Untuk Pasien Amputasi Tungkai Di Atas Lutut Dengan Desain Ergonomi Dan Fleksibel. *Pros SNST ke-7 Tahun 2016 Fak Tek Univ Wahid Hasyim Semarang 7* 2016; 7–12.

Perkins ZB, De'Ath HD, Sharp G, et al. Factors affecting outcome after traumatic limb amputation. *Br J Surg* 2012; 99: 75–86.

Deans SA, McFadyen AK, Rowe PJ. Physical activity and quality of life: A study of a lower-limb amputee population. *Prosthet Orthot Int* 2008; 32: 186–200.

Thomas CL. *Taber's Cyclopedic Medical Dictionary*. F. A. Davis, Philadelphia, 1993.

Armstrong DG, Lavery LA, Van Houtum WH, et al. The impact of gender on amputation. *J Foot Ankle Surg* 1997; 36: 66–69.

British Society of Rehabilitation Medicine. *Amputee and Prosthetic Rehabilitation-Standards and Guidelines (3 rd Edition)*, www.bsrm.org.uk (2018).

Horgan O, MacLachlan M. Psychosocial adjustment to lower-limb amputation: A review. *Disabil Rehabil* 2004; 26: 837–850.

Jacobsen JM. Nursing's role with amputee support groups. *J Vasc Nurs* 1998; 16: 31–34.

Wald J, Alvaro R. Psychological factors in work-related amputation: Considerations for rehabilitation counselors. *J Rehabil* 2004; 70: 6–15.

Mininistry of Health Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 22 Tahun 2013 Tentang Penyelenggaraan Pekerjaan dan Praktik Ortotis Prostetis. Ministry of Health Indonesia, 2013.

Smeltzer SC, Bare BG. *Brunner & Suddarth's medical-surgical nursing*. 13th ed. Philadelphia: Lippincott., https://books.google.co.id/books?id=xfxKDwAAQBAJ (2014).

Linton JD. Assessing the economic rationality of remanufacturing products. *J Prod Innov Manag* 2008; 25: 287–302.

Wijayanti W. *Implementasi kebijakan SD-SMP Satu Atap (Studi Multisitus di Kecamatan Ngablak, Pakis dan Sawangan Kabupaten Magelang)*. Universitas Negeri Malang, http://karya-ilmiah.um.ac.id/index.php/disertasi/article/view/10807 (2011).

Young-Moo L, Yong-Gun L, Boo-Gil S, et al. How Participation Motivation Affects The Psychological and Subjective Well-Being of Korean Golfers. *Indian J Public Heal Res Dev* 2019; 9: 1362–1367.

Conversano C, Rotondo A, Lensi E, et al. Optimism and Its Impact on Mental and Physical Well-Being. *Clin Pract Epidemiol Ment Heal* 2010; 6: 25–29.

Hisam A, Ashraf F, Rana MN, et al. Health related quality of life in patients with single lower limb amputation. *J Coll Physicians Surg Pakistan* 2016; 26: 851–854.

Adeyemo DA, Adeleye AT. Emotional Intelligence, Religiosity and Self-Efficacy as Predictors of Psychological Well-Being among Secondary School Adolescents in Ogbomoso, Nigeria. *Eur J Psychol*; 4. Epub ahead of print 27 February 2008. DOI: 10.5964/ejop.v4i1.423.

Carver CS, Scheier MF, Segerstrom SC. Optimism. *Clin Psychol Rev* 2010; 879–889.

Faltas S, Faltas M, Ameen DA. Self-Eficacy of Patients with Lower Limb Amputation : Nursing Guidelines. *12 th Int Congr Integr Sci Res Educ Evid Based Pract Nursing*.

Susanti R. Hubungan Religiusitas dan Kualitas Kehidupan Kerja dengan Organizational Citizenship Behavior (OCB) Pada Karyawan. *J Psikol UIN Sultan Syarif Kasim Riau* 2015; 11: 94–102.

Murphy PE, Ciarrocchi JW, Piedmont RL, et al. The relation of religious belief and practices, depression, and hopelessness in persons with clinical depression. *Journal of Consulting and Clinical Psychology* 2000; 68: 1102–1106.

Yeary KHK, Ounpraseuth S, Moore P, et al. Religion, Social Capital, and Health. *Rev Relig Res* 2012; 54: 331–347.

Russell JEA. Promoting subjective well-being at work. *J Career Assess* 2008; 16: 117–131.

Xi X, Wang Y, Jia B. The Effect of Social Support on Subjective Well-being:Mediator Roles of Self-esteem and Self-efficacy. 2017; 121: 493–505.

Yasin MASM, Dzulkifli MA. The Relationship between Social Support and Psychological Problems among Students. *Int J Bus Soc Sci* 2010; 1: 110–116.

Kreis S, Molto A, Bailly F, et al. 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 Qual Life Outcomes* 2015; 13: 1–6.

Perera HN, McIlveen P. The role of optimism and engagement coping in college adaptation: A career construction model. *J Vocat Behav* 2014; 84: 395–404.

Ho PJ, Gernaat SAM, Hartman M, et al. Health-related quality of life in Asian patients with breast cancer: A systematic review. *BMJ Open*; 8. Epub ahead of print 2018. DOI: 10.1136/bmjopen-2017-020512.