

# fizjoterapia polska

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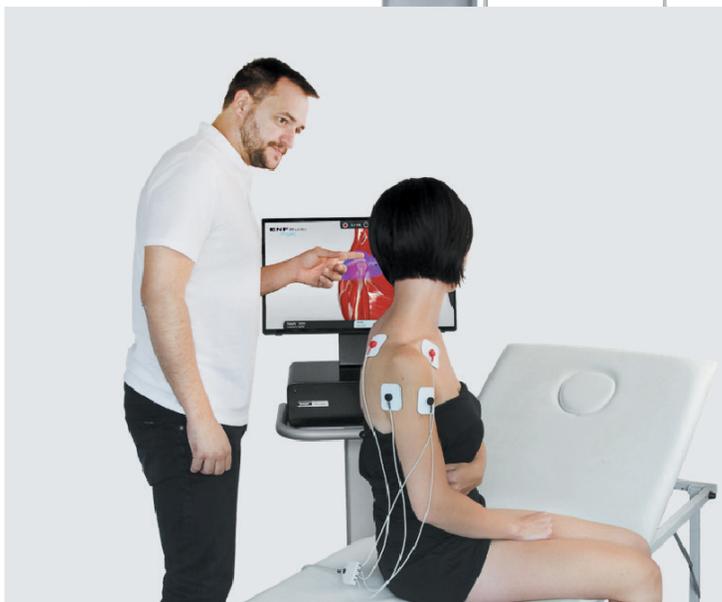
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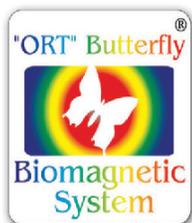
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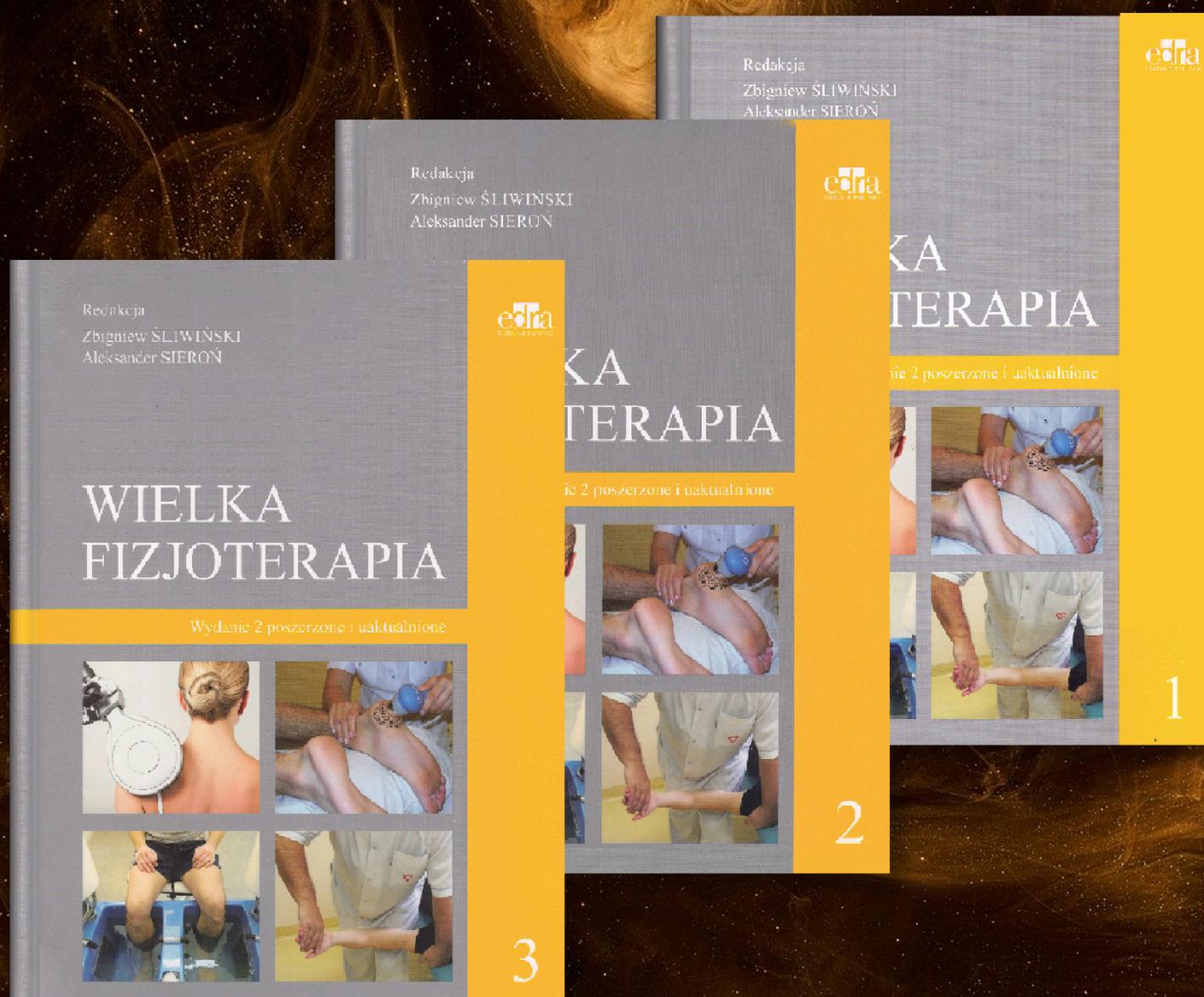


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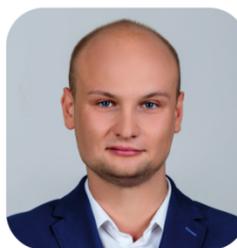
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# The effectiveness of massage to increase the work productivity of persons with disabilities

*Skuteczność masażu w zwiększaniu produktywności zawodowej osób niepełnosprawnych*

**Sumarjo<sup>1(A,B,C,D,E,F,G)</sup>, Sigit Nugroho<sup>1(B,C,E,F)</sup>, Riky Dwiandaka<sup>1(A,C,F,G)</sup>, Yudik Prasetyo<sup>1(B,C,D,E)</sup>, Susanto<sup>2(C,D,E,F)</sup>**

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## Abstract

**Introduction.** The development of human resources begins even before birth, by focusing on the well-being of expectant mothers, and continues throughout various life stages: infancy, toddlerhood, preschool and school years, adolescence, adulthood, and old age.

**Aim.** The aim of this research is to examine and assess the effectiveness of a specific type of health massage in enhancing work productivity among individuals with physical disabilities. This productivity encompasses motivation, knowledge, skills, attitudes, and independence.

**Method.** This study employed a quasi-experimental research method utilizing a one-group time series design (pretest-posttest). The initial observation (pretest) was conducted followed by the posttest observation. The treatment group underwent a massage therapy targeting work productivity factors in people with physical disabilities, encompassing five influential elements: (1) motivation, (2) knowledge, (3) skills, (4) attitudes, and (5) independence. The research sample was drawn from the existing population using a non-random purposive sampling technique. Data collection involved assessments and measurements, with a questionnaire serving as the testing tool for measuring work productivity. Data analysis entailed analysis of variance.

**Results.** The research findings reveal a significant disparity between the initial and final variables, with a significance value (two-tailed) of less than 0.05, as determined by paired t-tests. However, the ANOVA test yielded a significance value of 0.267. This implies a significant impact of the health massage treatment on work productivity variables—motivation, knowledge, skills, attitudes, and independence—for individuals with physical disabilities.

**Conclusion.** The most substantial and effective increase in work productivity was observed in the motivation variable, with a percentage increase of 16.75%.

## Keywords

massage, health, work productivity, disability

## Streszczenie

**Wprowadzenie.** Rozwój zasobów ludzkich rozpoczyna się już przed narodzeniem poprzez skupienie się na dobrostanie przyszłych matek i trwa przez różne etapy życia: niemowlęstwo, wiek przedszkolny i szkolny, okres adolescencji, dorosłość i starość.

**Cel.** Celem tego badania jest zbadanie i ocena skuteczności określonego rodzaju masażu zdrowotnego w poprawie produktywności zawodowej u osób z niepełnosprawnościami fizycznymi. Ta produktywność obejmuje motywację, wiedzę, umiejętności, postawy i niezależność.

**Metoda.** W badaniu wykorzystano metodę quasi-eksperymentalną, korzystając z jednogrupowego projektu szeregów czasowych (pretest-posttest). Po początkowej obserwacji (pretest) przeprowadzono obserwację po zakończeniu interwencji (posttest). Grupa badana przeszła terapię masażem skierowanym na czynniki produktywności zawodowej u osób z niepełnosprawnościami fizycznymi, obejmującą pięć wpływowych elementów: (1) motywację, (2) wiedzę, (3) umiejętności, (4) postawy i (5) niezależność. Próbkę została wybrana spośród populacji za pomocą nielosowej metody próbkowania celowego. Zbieranie danych obejmowało oceny i pomiarów, a kwestionariusz służył jako narzędzie testowe do pomiaru produktywności zawodowej. Analiza danych obejmowała analizę wariancji.

**Wyniki.** Wyniki badania ujawniają istotną różnicę między zmienną początkową a końcową, z wartością istotności (dwustronną) mniejszą niż 0,05, ustaloną za pomocą testów t-Studenta dla par. Jednak test ANOVA dał wynik wartości istotności wynoszący 0,267. Oznacza to istotny wpływ terapii masażem zdrowotnym na zmienne produktywności zawodowej, takie jak motywacja, wiedza, umiejętności, postawy i niezależność, u osób z niepełnosprawnościami fizycznymi.

**Wnioski.** Największy i najefektywniejszy wzrost produktywności zawodowej zaobserwowano w zmiennej motywacyjnej, z przyrostem procentowym wynoszącym 16,75%.

## Słowa kluczowe

masaż, zdrowie, produktywność pracy, niepełnosprawność

## Introduction

Health development is an integral part of the development of human resources (HR), to achieve the development of an advanced, independent and prosperous nation. Development of human resources starts from the womb and even earlier by paying attention to the level of welfare of prospective mothers, then babies, toddlers, preschool and school age, youth, productive age to old age. Efforts to improve public health are the main program in order to improve the quality of family life through community education. In this connection, the role of the family and school becomes important, as the embodiment of the ideals formulated in the national development goals.

The embodiment of a quality generation for the development of the nation and state, including for persons with disabilities. Persons with disabilities are often socially isolated and face discrimination in access to health, educational services and employment. The root of the language for disability is taken from English, namely from the words dis and ability. Dis means no, and ability means ability. Therefore, if we combine disability or disability, it can be interpreted as a person who has limited abilities in certain things. Meanwhile, disabled people are people with disabilities. So the difference between disability and disability is that disability is a condition of a person's inability to do certain things, while disability is a person with a disability.

It is not uncommon for us to see situations where society cannot fully accept the existence of persons with disabilities, even by their own biological parents. Indeed, parents must try to take care of their baby as much as possible so that they can grow healthy and normal, but all possibilities can happen to anyone and anytime. As the closest person who has relatives or family members with disabilities, we have a very important role to play in increasing their self-confidence. When parents feel excessive anxiety, there is a high risk of giving the same feelings to their children because children who can afford to buy bags will feel like a burden to their families. For some families, they may accept the existence of children with disabilities, but afterwards they will be faced with other problems such as being ready to accept opinions from the people around them, lack of social and psychological support, and problems in being able to join the community. Basically, people with disabilities do not need pity, they only need help, understanding and friendship. If this problem continues, it is likely to have a traumatic effect on persons with disabilities [1].

Even though we all definitely agree that everyone has the same right to play a role in society even though they have a disability. Empowerment of people with disabilities has begun to be intensively implemented by various parties. Both the government and the private sector are starting to pay attention to the welfare of people with disabilities where stereotypes in society think that people with disabilities are unable to do anything when in fact their abilities are limited to a lack of organs, not to anything else. Therefore, we as a society that upholds the values of social justice must support one another regardless of one's physical condition. Disability rights movement, where this movement is very useful to defend equal rights for persons with disabilities. To safeguard the rights of

persons with disabilities, there needs to be active collaboration from the perspectives of persons with disabilities, society and policy makers. Therefore, the whole community needs to provide and carry out health promotion in order to increase self-confidence and respect for persons with disabilities [2].

Health promotion is the process of enabling people to increase control over the determinants of health and improve their health (WHO, 2005). One of the goals of health promotion is to change behavior or provide information to the target to lead to a better behavior or to provide an overview of the advantages of positive behavior and the disadvantages of negative behavior. Community health status is determined by the health condition of its citizens, including the condition of the elderly, adolescents and children. Law No. 36 of 2009 concerning Health provides a limitation: "health is a healthy state both physically, mentally, spiritually and socially which allows everyone to live productively socially and economically". The definition that refers to the health limit according to the most recent World Health Organization (WHO), is indeed wider and more dynamic than the previous definition which says that health is a state of complete physical, mental and social well-being, and not only the absence of disease and disabled.

According to Law no. 36 of 2009 concerning health, then health includes five aspects namely physical (body), mental (spirit), social, spiritual, economic (productive). A person's health is not only measured from the physical, mental, spiritual and social aspects, but also measured from his productivity in the sense of having a job or producing economically. The five dimensions of health influence each other in realizing the level of health in a person, group or community. That is why, health is holistic or comprehensive.

Physical disability, defined as a patient who has incomplete physical limbs such as amputations, bone defects, muscle joint defects, limbs, arms and paralysis. In line with WHO calculations (2005) estimates that the number of people with disabilities is 10% of Indonesia's population (24 million). Based on Sakernas 2017 data, the national population of working age with disabilities is 21,930,529 people. Of this total, the data includes a workforce of 11,224,673 people (51.18 percent), for the disabled work force there are 10,810,451 (96.31 percent) and open unemployment is 414,222 people (3.69 percent). Meanwhile, 10,705,856 (48.82 percent) are not in the workforce with disabilities. Data on disabilities who were at school were 206,163 people (1.93 percent), who took care of the household were 5,911,017 people (55.21 percent) and others were 4,588,676 people (42.86 percent) [3].

The results of these data show that there is still unemployment for national disabilities of 3.69%, so the role of the government and institutions as well as disability observers is still very much needed to support unemployment alleviation programs. Disabilities need empowerment steps in various abilities for the sake of their future continuity. Empowerment steps to increase community capacity can make them more empowered, in the sense of being able to do something useful in community development. Basically, people with disabilities have the potential and willingness to change in a better direction according to the potential of natural resources and local wisdom around them.

Society's perception of persons with disabilities, which has been ingrained for centuries, is difficult to get rid of. For example, there are students with disabilities who are refused to live in a boarding house, because the owner thinks that the presence of persons with disabilities will bring disaster to their business. When using air transportation by commercial airplanes, persons with disabilities must sign a sick statement so that insurance is not covered. Not only that, we still often encounter discriminatory practices against persons with disabilities in everyday life. Discrimination against persons with disabilities can occur anywhere, be it on the street, in the work environment, or in public places. They are faced with an unsafe situation when walking alone against physical attacks or theft because of their limited physical movement [4]. In addition, there is a need for physical development for persons with disabilities on an ongoing basis, so that later their fitness will be maintained to support their next activities [5]. There are various types of physical exercise that can be done by persons with disabilities such as playing traditional games [6].

The disabled community can also be interpreted as people with different abilities, namely people who have different abilities from normal people both physically and mentally. All limitations possessed by the community cannot be used as an excuse for them or anyone else to carry out social restrictions, either directly or indirectly. Social restrictions occur when those with physical limitations are grouped into disabled foundations or special schools. These social restrictions are even more real when the environment around us, the public spaces of the city, actually causes every walker to stumble, every wheel chair is stopped, every swing of a white cane for the blind is hampered, and every sign language is ignored by the community [7].

In Indonesia, to develop the independence of people with disabilities can be done in several ways such as entrepreneurial efforts from a number of people with disabilities. In Yogyakarta, a modified motorbike taxi business has been initiated by persons with disabilities for the disabled community and the general public. *Tribun Jogja* (Anonymous, 2016) revealed that there is a motorcycle taxi service labeled Dhifa CT (City Tour and Transport) which is managed by people with disabilities. This service is a forum for the independence of people with disabilities who want to prove that people with disabilities can enter the world of work and eliminate discrimination of people with disabilities in the world of work.

The term disability community is not limited to those with disabilities, but the term disability has a more flexible and broader meaning, namely people who have temporary or permanent obstacles in carrying out their daily activities, including pregnant women, children, the elderly, wheelchair users, crutches, blind, deaf and quadriplegic. WHO data (2005), about 10 percent or approximately 24 million of the total population of Indonesia are people who have limited capabilities and experience almost the same phenomenon of problems related to the right to the provision of public spaces that do not reach and cannot serve specific needs their activities [7].

Efforts to increase the work productivity of people with disabilities have been carried out by the Government of Indonesia through the provision of various skills. There are various

kinds of programs provided by the government to empower people with disabilities, one of which is a program at the Rehabilitation Center for People with Physical Impairment, where people with disabilities are trained to have various skills. Productivity itself is an ability to produce something. To achieve a high level of productivity, there are several factors that support the formation of high productivity for people with disabilities. These supporting factors include: Education, skills, attitudes and work ethics, income level, social security, social level and work climate, motivation, nutrition and health, individual relations, technology, and production. Empowering the productivity of people with disabilities is very useful for maintaining the mental health of people with disabilities because with their participation in life, it will mentally form that they are also useful. Because basically people with disabilities feel that they are only a burden to other people so that their emotions become uncontrollable and they lose self-confidence [8].

The provision of skills for people with disabilities is the fulfillment of needs that are in accordance with needs based on their potential and can be further improved towards independence. Through a health massage development program aimed at people with disabilities, it is hoped that people with disabilities will have a better quality of life and can eliminate the perception that people with disabilities will only be a burden on society by begging in several places. As we know that every deficiency will be offset by strengths, massage training for persons with disabilities is a small step but has a big meaning because it can lead persons with disabilities to a more independent life. Apart from that, providing skills training to persons with disabilities is also able to increase their self-confidence and their role is needed in social life. Apart from self-confidence, decision-making skills or accuracy when carrying out activities are also needed [9].

## Method

This study uses a quasi-experimental research method with a one group time series design (pretest one post test). In this study, the research subjects were persons with disabilities specifically physically disabled who participated in the program at the Integrated Rehabilitation Center for Persons with Disabilities (BRTPD) in Pundong District, Bantul Regency, Special Region of Yogyakarta. The research subjects before and after treatment were given a work productivity questionnaire consisting of five (5) influencing factors, namely: (1) motivation, (2) knowledge, (3) skills, (4) attitudes and (5) independence. In this study, the population was persons with disabilities, specifically quadriplegic monoplegia, who had the following characteristics: (1) Male sex, (2) Age 20–30 years, (3) Physically disabled/paralyzed, only one limb was paralyzed at the bottom. The research subjects totaled 28 people. The data analysis technique used was the analysis of variance test (Anova). before the Anova test was carried out, a paired t test was carried out to determine the effectiveness of each independent variable on the dependent variable. After knowing the effectiveness of each treatment, then proceed with the Anova test.

## Results

The description of the data before and after the treatment for each variable is as follows:

**Table 1. Data of mean pre-test and post-test of work productivity**

Variable	Initial average	Final average	Gain score
Motivation	44.79	52.29	7.5
Knowledge	46.96	52.79	5.83
Skills	44.71	51.64	6.93
Attitude	46.36	52.61	6.25
Independence	46.57	50.00	3.43

The results of the pre-test and post-test data analysis on the variables of work productivity consisting of motivation, knowledge, skills, attitudes and independence have all increased. From these results it can be concluded that the use of health massage is effective in increasing work productivity abilities for people with disabilities with physical disabilities.

**Research prerequisites test results**

The requirements test was carried out before analyzing the research data using parametric statistics. Analysis requirements that must be met in the analysis include the normality test and homogeneity test. The results of the analysis prerequisite test are as follows.

**Normality test**

The normality test is carried out to test whether the analyzed variables have a normal distribution of data or not. The data normality test was carried out using the Kolmogorov Smirnov Z. The reading of the data results is said to be normal if the p value (Sig.) > 0.05. The normality test results are shown in the table below.

Table 2 shows that the results of calculating the normality of the data on all variables both before and after treatment have a significance value greater than 0.05 ( $p > 0.05$ ), it can be stated that the research data is normally distributed.

**Table 2. Normality test results**

Treatment	Variable	KSZ	P	Information
Pre-test	Motivation	1.200	0.112	Normal
	Knowledge	0.848	0.469	Normal
	Skills	1.035	0.235	Normal
	Attitude	0.628	0.825	Normal
	Independence	0.961	0.314	Normal
Post-test	Motivation	0.601	0.864	Normal
	Knowledge	0.666	0.767	Normal
	Skills	0.887	0.411	Normal
	Attitude	1.039	0.230	Normal
	Independence	0.771	0.591	Normal

**Homogeneity test**

Homogeneity test is used to test the similarity of the variance of the observed data in each treatment group. The homogeneity test was carried out on research data from post-test observations. The statistical test used to test homogeneity uses the

Levene test with the F test, namely comparing the largest variance with the smallest variance. The reading of the data results is said to be homogeneous if the p value (Sig.) > 0.05. The homogeneity test results are shown in the following table.

**Table 3. Homogeneity test results**

Variable	F count	p	Information
Motivation	0.492	0.486	Homogen
Knowledge	0.039	0.844	Homogen
Skills	0.292	0.591	Homogen
Attitude	0.565	0.456	Homogen
Independence	3.360	0.072	Homogen

The results of the homogeneity test in Table 3 all data have a calculated F value that is smaller than F table and a significance value greater than 0.05 ( $p > 0.05$ ), it can be stated that the data on the research variables in the observations are homogeneous.

**Results of Hypothesis Testing**

**Test Paired T-Test**

Test paired t test to determine the effectiveness of each inde-

pendent variable on the dependent variable. Reading the results of the data it is said that there is a significant difference between the initial variable and the final variable if the p value (Sig.)  $< 0.05$ . The results of the paired t test are shown in the following table.

**Table 4. Paired t-test results**

Work productivity variables - pairs	Paired Differences					t	df	Sig. (2-tailed)
	Mean	SD	SEM	95% CI Lower	95% CI Upper			
Motivation (Pre Test) Motivation (Post Test)	-7.50000	4.35890	0.82375	-9.19020	-5.80980	-9.105	27	0.000
Knowledge (Pre Test) Knowledge (Post Test)	-5.82143	3.90682	0.73832	-7.33633	-4.30652	-7.885	27	0.000
Skills (Pre Test) Skills (Post Test)	-6.92857	3.09035	0.58402	-8.12688	-5.73026	-11.864	27	0.000
Attitude (Pre Test) Attitude (Post Test)	-6.25000	3.31802	0.62705	-7.53659	-4.96341	-9.967	27	0.000
Independence (Pre Test) Independence (Post Test)	-3.42857	6.97842	1.31880	-6.13452	-0.72262	-2.600	27	0.015

SD - Standard deviation; SEM - Standard error mean; CI - Confidence interval of the difference

The results of the Paired T-Test showed that the significance value (2-tailed) was  $< 0.05$ , so that the data indicated that there was a significant difference between the initial and final variables.

**ANOVA Test**

ANOVA test is used to determine the effectiveness of health

massage treatment on work productivity which consists of motivation, knowledge, skills, attitudes and independence. The following in Table 5 explains in more detail the effectiveness of health massage in knowing how much the dependent variable increases and decreases significantly.

**Table 5. Health massage on increasing work productivity based on stimulant confidence intervals**

Variables	N	Mean	SD	95% CI		Minimum	Maximum
				Lower bound	Upper bound		
Motivation	28	52.2857	5.21293	50.2644	54.3071	41.00	60.00
Knowledge	28	52.7857	4.58142	51.0092	54.5622	43.00	59.00
Skills	28	51.6429	5.74272	49.4161	53.8697	38.00	59.00
Attitude	28	52.6071	4.50793	50.8592	54.3551	41.00	59.00
Independence	28	50.0000	5.84998	47.7316	52.2684	41.00	60.00
Total	140	51.8643	5.23300	50.9898	52.7387	38.00	60.00

SD - Standard deviation; CI - Confidence interval of the difference

The minimum increase based on the 95% stimulant Confidence Interval above can be seen that the increase in the lower limit (lower bound) for the variable motivation is 50.2644, knowledge is

51.0092, skill is 49.4161, attitude is 50.8592, independence is 47, 7316, and independence of 50.9898. Meanwhile, the results of the ANOVA test for each variable are shown in Table 6.

**Table 6. ANOVA results for each research variable**

	Sum of Squares	df	Mean Square	F	Sig.
Between group	142.886	4	35.721	1.316	0.267
Within groups	3663.536	135	27.137		
Total	3806.421	139			

The results of the ANOVA test in the significance column obtained P value (P-value) = 0.267 thus at a significant level = 0.05 Ho was rejected, so the conclusion obtained was that there was a significant difference in the average work productivity variable consisting of motivation, knowledge, skills, attitudes and independence.

**Calculation of work productivity increase**

Increased work productivity is known by using the percentage formula. The increase calculation data can be seen in table 7.

**Table 7. Results of increasing work productivity**

Work productivity	Mean pre-test	Mean post-test	% enhancement
Motivation	44.79	52.29	16.75
Knowledge	46.96	52.79	12.40
Skills	44.71	51.64	15.50
Attitude	46.36	52.61	13.48
Independence	46.57	50.00	7.36

Judging from the calculation of the increase in work productivity, it was found that the variable that experienced the greatest increase was the motivational variable with an increase percentage value of 16.75%. As for the smallest increase in the independent variable with a percentage of 7.36%.

**Discussion**

The results of this study indicate that there are significant differences between the initial variables and the final variables. Meanwhile, from the results of the ANOVA test, a significance of 0.267 was obtained. So that it can be interpreted that there is a significant influence on the treatment given with health massage on work productivity variables consisting of motivation, knowledge, skills, attitudes and independence for people with disabilities with physical disabilities. The results of this study indicate that there is a significant difference between the initial and final variables and there is the effectiveness of health massage to increase work productivity which is most effective consisting of motivation, knowledge, skills, attitudes and independence. From the results of the training it can be concluded that health massage can increase work productivity. The National Productivity Council has the notion that productivity is a mental attitude that always holds the view that the quality of life today must be better than yesterday and tomorrow must be better than today. The philosophy and spirit of productivity have existed since the beginning of human civilization because the meaning of productivity is the will and effort of humans to always improve the quality of life and livelihood in all fields. In general, productivity is a comparison between the output achieved with the input needed to produce that output [10]. States that various factors that affect work productivity include mental attitudes in the form of work

motivation, work discipline and work ethics, education, skills, management, income levels, health, social security, social environment, work climate, production facilities, technology and achievement opportunities [11].

Growing and improving productivity support factors for persons with disabilities will be very useful for their long term lives. By mentally preparing and increasing work motivation for someone, work results or productivity will increase as well as quality so that they can reduce and avoid various kinds of risks at work. Providing appropriate skills training for persons with disabilities is one way that can be done to increase the productivity of persons with disabilities. If they have physical deficiencies in the hands, they can maximize other limbs such as the legs. Likewise, in physical conditions where they have deficiencies in vision or hearing, they can maximize the function of the limbs in the hands and feet. For example, we often see massage training for people with visual disabilities or commonly called the blind [12].

To improve the skills of persons with disabilities, of course, there are various kinds of obstacles [13]. He explained that there were several obstacles experienced by persons with disabilities such as education in special schools which were unable to meet the readiness of persons with disabilities in facing the world of work. Furthermore, there are still many companies that do not have a work system that is adapted for workers with disabilities. Then persons with disabilities who are looking for jobs do not match the demand. This is also supported by inadequate facilities making it difficult to access for persons with disabilities. Lastly is the unavailability of work designs that are in accordance with the capabilities of people with disabilities.

In order to maximize the potential of persons with disabilities, counseling efforts are needed to improve skills. There is a need

for counseling on skills in finding new product ideas, planning and developing products, conducting entrepreneurship training and how to increase success in entrepreneurship, the ability to manage both finances and marketing so that persons with disabilities are able to improve economic quality and productivity independently. Not only for blind people, massage training is also very useful for people with other disabilities. Looking at the benefits of massage itself, we cannot deny that massage is very beneficial for the health of the body and is needed by many people [14].

This study shows that there are differences in health massage and it has an effect on work productivity consisting of motivation, knowledge, attitude skills and independence. In line with research conducted by Peter, showing that massage can cause relaxation and calm. The massage technique applied is very useful for treating health, overcoming complaints of pain and can overcome fatigue [15]. Massage is a fun thing, because it can help the body and mind to produce endorphins which are pain relievers experienced by the body [16]. In accordance with the opinion of Kaur, that massage has a mechanical effect that will improve circulation, remove waste products from the body, increase joint mobility and reduce muscle tension [17]. Massage will affect the work of the cerebral cortex so as to produce positive perceptions and relaxation, indirectly helping the body's homeostatic balance through the HPA Axis, producing Corticotropin Releasing Factor (CRF) [18].

If you look at its history, that massage has a long history that was found since ancient civilizations in Egypt, China and India where these three countries have health care systems that are role models throughout the world. He also added that massage can make a person able to convey his feelings easily, especially the interaction between the nurse and the patient. With the correct massage technique, it will help improve blood circulation and reduce heart tension and blood pressure. In addition, massage can increase mental and psychological peace and reduce anxiety levels in a person. Talking about anxiety, this will certainly stick with persons with disabilities whose roles have high self-confidence. Not only does it affect their social life, low levels of self-confidence will also affect their work productivity [19].

Social anxiety often arises when a person feels that he is different from other people, especially in terms of body image. This of course greatly affects people with physical disabilities, because at certain times they may feel that they are different from other people in general. Therefore increasing self-confidence in persons with physical disabilities will have a very good impact on their social life. When people with disabilities have more abilities compared to humans who have complete body organs in general, their self-confidence will also increase indirectly. Not only that, he also added that a person's mental health will not only affect their productivity level but will also cause new health problems such as cardiovascular disease, diabetes, hypertension, cancer, osteoporosis, and obesity [20]. Health massage has various manipulations, including: Techniques used are friction, petrisage, tapotement, walken and effleurage. Each of these massage techniques certainly has its own function and use. Friction technique is a massage manipulation technique by rubbing, while petrisage is a technique

by massaging or squeezing. Meanwhile for the tapotement technique is the tapping or tapping movement, for the massage movement with the walken technique means massaging by vibrating, and the last is the massaging movement with the effleurage technique, namely the massaging technique by rubbing. Friction massage is done by rubbing certain parts of the body, either by rotating or sliding the hands to form a certain order. Some of the functions of friction include putting pressure on the skin so that blood flow becomes smooth, skin glands become active, and tightens the skin muscles so that wrinkles will disappear. Friction technique is very useful as a therapeutic technique for people with low back pain. With this movement, the pain will subside and improve activity abilities. He also added that this friction massage technique is able to increase circulation so that the tissues in the body can get adequate amounts of nutrients, oxygen, blood. While the petrisage movement is done by clamping several parts of the skin using the fingertips or palms. With this movement, the skin becomes more stimulated and the muscles become more relaxed [21].

The basic movement in the next massage is tapotement, which is a tapping movement repeatedly and quickly while paying attention to the rhythm of the beats given. This movement will restore loose muscles and stimulate the nerves in this way blood circulation becomes smoother and fresher. Another type of movement, namely walken, is to move certain areas of the body quickly and continuously. By doing this massage, the tissues will become more limp and relieve tension, but please note that this movement should not be done excessively, just occasionally. As for the last movement, namely effleurage, which is a rubbing movement on certain parts of the body which is done repeatedly while pressing slowly on the part that is being massaged.

The specifications for the form of health massage are body positions consisting of two positions, prone and supine. In the prone position starting from the left starting from the bottom, namely the left leg. The order of the parts of the body to be massaged when in the prone position, including: soles of the feet, ankles, calves, thighs, buttocks and back. Modification of health massage between sport massage and circular massage methods. Sports massage can produce several hormones such as endorphins, adrenaline hormones, and thyroxine. Endorphins are obtained from effleurage and friction techniques. Endorphins are calming hormones. The thyroxine hormone is obtained from the petrisage, tapotement, effleurage, shaking, walken movement techniques. The hormone aims to transport the remains of the body's metabolism. Adrenaline hormone aims to control the nervous system, obtained by tapotement movements. Sport massage stimulates the peripheral nerves obtained from tapotement, stroking, effleurage movements [22].

The mainstay technique in circular massage is friction with circular movements. Tapotement is meant to maximize friction, and effleurage is meant to be calming. At the beginning of the massage, friction is deliberately given immediately to cause a shock and stimulate the release of endorphins which function as sedatives. All members of the body from the soles of the feet to the head will be manipulated in this circular massage by considering the structure of the muscles and how the organs of the body work. Manipulation or how to hold or grip is a way of using the hands in doing circular massage in certain areas, as

well as giving a certain influence as well. Various types of circulo massage manipulation that are used include: friction, tapotement, walken, effleurage, and skin rolling [23].

This study shows that there is a significant difference with the level of school and non-school education in increasing work productivity which consists of motivation, knowledge, skills, attitudes and independence. In various studies it has been reported that the sample that received training has a better attitude after attending the training program [24]. Regular massage can lower systolic and diastolic blood pressure, lower levels of the stress hormone cortisol, reduce sources of depression and anxiety, so that blood pressure will continue to fall and body function will improve. If the function of the body is getting better, then the quality of life and work productivity can improve properly [25].

Persons with disabilities who are given massage training need not only know the techniques used in massage but also must know the many benefits that can be obtained from the massage itself. The effect of massage is to increase one's work productivity, which is a selling point for people with disabilities who have massage skills.

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#### Conclusion

Based on the research results, the following conclusions can be drawn: From the results of the Paired T-Test it was found that the significance value (2-tailed) was  $< 0.05$ , so that the data indicated that there was a significant difference between the initial and final variables. Meanwhile, from the results of the ANOVA test, a significance of 0.267 was obtained. So that it can be interpreted that there is a significant influence on the treatment given with health massage on work productivity variables consisting of motivation, knowledge, skills, attitudes and independence for people with disabilities with physical disabilities. The increase in work productivity that experienced the greatest increase was in the variable Motivation with a percentage increase of 16.75%.

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