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Effects of The Model of Human Occupation on the Contemplation of Exercise Engagement

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Abstract:

Motivation on Human Occupation (MOHO) intervention has effects in the progression on the stages of change for employees contemplating on regular exercise engagement. The study aimed to determine if MOHO can influence the progression based on the stages. This study is a quasi-experimental comparative design as it assesses the effectiveness of MOHO intervention in the stages of change on employees contemplating to engage in regular exercise. The subjects of the research who signed up for the exercise program grouped randomly into groups A (without MOHO intervention) and Group B (with MOHO intervention). The effects of MOHO in the stages of change will be measured through the exercise log. The effectiveness of the treatment in the experimental group from that of the control group was also measured using the t-test. The p-value of 0.002 was recorded which was clearly less than the level of significance at 0.05; hence we conclude that the difference between the controlled and experimental group was significant. The results of the study concludes that the effects of MOHO intervention on the stages of change (action to maintenance stage) of employees contemplating regular exercise engagement are more predominating that that of the employees contemplating regular exercise engagement but did not receive MOHO intervention.

Keywords: contemplate, physical activity, motivation, noncommunicable diseases, MOHO.

Introduction

Physical activity and exercise have well established benefits on our health and wellness. Regular physical activity at the correct intensity can prevent and treat

dozens of noncommunicable diseases, reduce the risk of death and even decrease depression as effectively as medications or behavioral therapy (EIMP, 2012). Despite the beneficial effects physical activity has brought us, most individuals remain physically inactive. Physical inactivity has created a grave of consequences to everyone's health. The World Health Organization (WHO) identified physical inactivity as the fourth leading risk factor for global mortality with 6% of deaths globally. Little to no engagement in physical activity has been linked to the increased risk for noncommunicable diseases (NCDs) like cardiovascular diseases, obesity and diabetes mellitus and depression. In the Philippines, NCDs kill over 450,000 Filipinos annually, accounting for 68% of all deaths and resulting in a 29% of dying prematurely before the age of 70 (World Health Organization, 2017). As reported by the Food and Nutrition Research Institute, Department of Science and Technology, an estimated 43% of adults were not sufficiently physically especially in urban areas (FNRI, 2015).

Aside from the mortality rate, NCDs also have a big impact on the country's economic loss. The World Health Organization reported a case investment about the economic losses due to NCDs. An overview of the Philippines' economic burden reveals that economic losses from NCDs amount to PHP 756.5 billion, equal to 4.8 percent of gross domestic product in 2017. This economic loss is due to direct and indirect costs. Direct costs involved treatment, care and social security provision. Indirect costs involved the loss of workforce and reduced productivity. Reduced workforce resulted to decreased occupational performance in the labour force and as a cascade effect, it can also affect their caregivers and the public sector. Such dilemma would also lead to a decreased quality of life in individuals affected by NCDs (WHO, 2019).

The fast-growing industrialization of society and increasing mechanical lifestyle are one of the contributing factors of physically inactive individuals. Studies states that a daily electronic device viewing in excess of two hours is associated with reduced physical and psychosocial health (Hancock J., 2013). Some individuals may have also started to participate in exercise however studies show that about 50% of those who start to exercise have setbacks within the three to six months. This connotes that people have a hard time engaging in regular exercise despite their contemplation towards it.

Because employees encompass a large proportion of the population, it is an important setting to promote health through physical exercise and furthermore, those in need of health promotion (WHO, 2019). One of the methods in improving exercise engagement adherence is through a change in behavioral patterns with motivational empowerment (Hashemzadeh, 2019).

The six stages of change also known as the Transtheoretical model (TTM) of behavioral change is one of the behavioral change models which indicates that changing a behavior is not a coincidence rather it is a process and different people are in different stages of change and readiness. In this process, people pass through five stages: precontemplation, contemplation, preparation, action, and maintenance. In the pattern of the stages of change, returning to the previous stage or having setbacks cannot be denied. Prochaska identified three factors controlling the transfer between different stages and the time necessary for change which include the following: process of change, decisional balance, and self-efficiency (Prochaska, 1982).

Motivation is also a key component that drives an individual to take his or her thoughts into actions. In some cases, the motivation to start is there however there are barriers that block it to express it into actions. The Model of Human Occupation (MOHO) recognizes other factors other than motor, cognitive and sensory impairments that make everyday occupations difficult. MOHO interventions both include people with severe disabilities and those without disabilities who have received wellness-based services based on MOHO. MOHO's ultimate concern is the individual's participation and adaptation in life occupations. MOHO encompasses to address the motivation for occupation, the routine patterning of occupations, the nature of skilled performance and the influence of environment on occupation (Kielhofner, 2009).

As occupational therapists who have an emerging role in disease and injury prevention, the researcher wanted to heighten awareness of the detrimental effects of sedentary behavior through implementation of healthy work space interventions to promote a more active and healthier workplace community. In connection with the vision 2025 of American Occupational Therapy Association, the researcher would like to take part in maximizing health, well-being, and quality of life for all people, population, and communities through

effective solutions that facilitate participation in everyday living through occupational therapy (American Journal of Occupational Therapy, 2017). Hence, the researcher aimed to fill in the need to increase exercise engagement through the use of Model Of Human Occupation in the stages of change in behavior among contemplating employees.

Methods

This study is a quasi-experimental comparative design as it assesses the effectiveness of MOHO intervention in the stages of change on employees contemplating to engage in regular exercise. The subjects of the research who signed up for the exercise program grouped randomly into groups A (without MOHO intervention) and Group B (with MOHO intervention). The effects of MOHO in the stages of change will be measured through the exercise log.

Results and Discussion

After all pertinent information were collected using the procedures presented by the researcher, these data were tallied, tabulated, analyzed and interpreted to answer the general and specific objectives of the study which is to measure and compare the effects of MOHO in stages of change among employees contemplating to participate in regular exercise.

The effectiveness of the treatment in the experimental group from that of the control group was also measured using the t-test. The p-value of 0.002 was recorded which was clearly less than the level of significance at 0.05; hence we conclude that the difference between the controlled and experimental group was significant. There was sufficient evidence to indicate that the degree of difference between two results of the two groups is indeed statistically significant as observed and noted in the exercise log sheet of the respondents on the exercise program.

Likewise, the effectiveness of the treatment in the experimental group from that of the control group was also measured using the paired t-test. The p-value of 0.033 was recorded which was clearly less than the level of significance at 0.05; hence we conclude that the difference of perceived differences (1.75 vs 1.25) between the controlled and experimental group was significant. There was sufficient evidence to indicate that the degree of difference between two results

of the two groups is indeed statistically significant as observed and noted in the exercise log sheet of the respondents on the exercise program.

To this end, it is clear that it has been established from the results that the effect of MOHO intervention on the Action to Maintenance stage was dominating than that of those in the control group without receiving MOHO intervention during the exercise program.

Conclusion

The results of the study concludes that the effects of MOHO intervention on the stages of change (action and maintenance stage) of employees contemplating regular exercise engagement are more predominating that that of the employees contemplating regular exercise engagement but did not receive MOHO intervention. Likewise, the proponent of the study disclaims that the results were true to the sampled individuals who contemplate regular exercise engagement due to their sheer number may or may not be a close representative of all cases for the employees.

Tables and Figures

Table 1. Table shows how many sets are completed per session, weight of respondents before and after implementation. For respondents 1-8, MOHO principles weren't applied, however for the rest of the respondents the MOHO principles were used.

(Boxes that indicates 0 means the respondent is absent).

Respondent	Sets completed per session															Weight	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Before	After
1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	85	85
2	3	3	4	0	0	0	0	0	0	0	0	0	0	0	0	79	78
3	3	4	4	0	0	0	0	4	5	5	5	0	0	4	4	74	74
4	3	4	4	4	5	0	0	0	0	0	0	0	0	0	0	68	69
5	3	3	4	4	5	0	4	0	0	0	0	0	0	4	5	72	62
6	3	4	4	4	5	5	5	5	0	0	0	0	4	5	5	71	71
7	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	66	66
8	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	68	68
9	3	4	4	4	4	5	5	5	5	5	5	5	0	5	5	96	90
10	3	4	4	4	4	4	5	5	5	0	5	5	5	0	0	85	84
11	3	3	4	4	4	4	4	4	0	5	5	5	5	5	5	74	73
12	3	3	4	4	4	5	0	0	0	5	5	5	5	5	5	69	68
13	3	3	4	4	4	5	0	0	0	0	0	0	0	0	0	60	60
14	3	4	4	4	4	5	5	0	5	5	5	5	0	0	0	65	64
15	4	4	4	4	4	0	5	4	5	4	5	5	5	5	5	82	78
16	4	4	4	4	4	0	0	5	5	0	0	5	5	5	5	62	61

Table 2: Group Statistics

Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Results	1	8	1.1250	.35355	.12500
	2	8	1.8750	.35355	.12500

Table 3: T-test of Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Results	Equal variances assumed	.000	1.000	-4.243	14	.001	-.75000	.17678	-1.12915	-.37085
	Equal variances not assumed			-4.243	14.000	.001	-.75000	.17678	-1.12915	-.37085

Table 4: Independent Samples Test: Sets Completed per Session, Control and Experimental Group

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PerSession	Equal variances assumed	4.269	.058	-3.739	14	.002	-30.37500	8.12335	-47.79786	-12.95214
	Equal variances not assumed			-3.739	12.145	.003	-30.37500	8.12335	-48.05091	-12.69909

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