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STUDY OF PROFESSIONAL COMPETENCY OF YOUNG AGE AND MIDDLE AGE PROFESSIONALS IN RELATION TO THEIR PHYSICAL ACTIVITY

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ABSTRACT
This study aimed to investigate the connection between young and middle-aged professional's professional competency and physical activity. Purposive sampling was used to select 60 full-time professionals, who were then divided into two age groups: young (ages 25–35) and middle-aged (ages 36–45). The study used a comparative and correlational design. Physical activity levels were measured using the International Physical Activity Questionnaire (IPAQ), burnout was measured using the Maslach Burnout Inventory (MBI), and professional competency was assessed using the Professionalization Scale. There were no discernible differences in burnout or professional competency between the age groups, according to statistical analysis. Additionally, there were no discernible relationships between professional competency, burnout, and physical activity. Professionals who engaged in a lot of physical activity had marginally higher competency scores, but the differences were not statistically significant. These results imply that professional competency may not be determined solely by age or level of physical activity. Additional influencing factors like job roles, mental health, and organizational environment should be investigated in future research.

KEYWORDS: physical activity, professional competency, burnout, young professionals, middle-aged professionals, age differences, workplace performance.

INTRODUCTION
The term "professional competency" describes the coordinated use of the knowledge, abilities, attitudes, and behaviours required to carry out job duties successfully and efficiently. Both young and middle-aged professionals must maintain high levels of professional competency in today's demanding work environments to achieve their organizational and personal career goals. But professional competency is influenced by more than just education and experience; physical activity has been shown to have a major impact on cognitive function, emotional control, and overall productivity at work (Ratey, 2008). Memory, attention, processing speed, and executive control are just a few of the cognitive abilities that exercise is known to improve (Hillman, Erickson, & Kramer, 2008). These enhancements can have a direct impact on performance at work, particularly when it comes to tasks that call for creativity, problem-solving, and multitasking. Frequent exercise also improves mood, lowers stress, and improves sleep quality, all of which are critical for long-term professional competency (Biddle & Asare,

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2011). One important moderating factor in the association between competency and physical activity is age. Despite their high levels of energy and adaptability, young professionals (usually between the ages of 20 and 35) frequently deal with stress related to developing their careers and skills. On the other hand, middle-aged professionals (usually between the ages of 36 and 55) might have more stability and experience, but they might also have less physical energy and engage in more sedentary behaviour (Caspersen et al., 2000). Both age groups can benefit from physical activity as a balancing factor that maintains or improves competency. Designing interventions that support workplace efficiency and health requires an understanding of how professional competency and physical activity interact across age groups. Therefore, the purpose of this study is to compare and examine the professional competency of middle-aged and young professionals regarding their physical activity levels.

OBJECTIVE

The objective of the study was to compare and analyse the professional competency of young and middle age professionals in relation to their physical activity.

HYPOTHESIS

H_{01}: There will be no significant difference in professional competency between young-age and middle-age professionals.

H_{02}: There will be no significant difference in physical activity levels between young-age and middle-age professionals.

H_{03}: There will be no significant correlation between physical activity and professional competency among professionals.

H_{04}: There will be no significant difference in professional competency between high physically active and low physically active professionals.

H_{05}: There will be no significant correlation between physical activity and burnout levels among professionals.

H_{06}: There will be no significant difference in burnout levels between young-age and middle-age professionals.

METHODOLOGY

Comparing the professional competency of young and middle age professionals concerning their levels of physical activity was the goal of the current study. A total of 60 professionals took part in the study, 30 of whom were young professionals (age 25 to 35) and 30 of whom were middle-aged (age 36 to 45). Purposive sampling was used to choose the participants, making sure they fulfilled the requirements for inclusion, which included being willing to take part in the study and having a full-time job at the time of selection. A comparative and correlational research design was used in the study. It was correlational in nature, attempting to investigate the relationship between levels of physical activity and professional competency, and comparative in nature, attempting to identify differences in professional competency between the two age groups. The International Physical Activity Questionnaire (IPAQ) was used to gauge the degree of physical activity. This tool evaluated the amount of walking, sitting, vigorous, and moderate physical activity that had occurred during the preceding seven days. The IPAQ protocol's MET (Metabolic Equivalent of Task) scoring guidelines were used to

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classify the responses into low, moderate, and high levels of physical activity. The Maslach Burnout Inventory (MBI) was used to measure burnout levels. The three main components of burnout, personal accomplishment, depersonalization, and emotional exhaustion, were assessed by this instrument. Professionals' psychological stress was better understood thanks to the inventory, which may have an impact on their degree of professional competency. The participant's professional competency was assessed using the Professionalization Scale. This scale assessed several professional behaviour and attitude traits, such as role clarity, ethical standards, job commitment, and career development involvement. To ensure that every participant filled out every section of the questionnaires, data were gathered online. Throughout the data collection process, ethical guidelines were closely adhered to, including gaining informed consent and protecting the participant's privacy and identity. The Statistical Product and Service Solutions (SPSS) was used to analyse the data that was gathered. To summarize the data, descriptive statistics like the mean and standard deviation were calculated. The Independent Samples t-test was used to compare the professional competency of professionals in their early and middle years. Furthermore, correlational analysis was performed to ascertain the association between professional competency and levels of physical activity.

FINDINGS

Burnout and Professional Competency

TABLE NO. 1

Descriptive Statistics					
VARIABLE	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Burnout	60	20.00	59.00	38.9333	11.84628
Professional competency	60	9.00	100.00	75.3833	16.73633

The participants (N = 60) had a mean burnout score of 38.93 (SD = 11.85), with scores ranging from 20 to 59, according to the descriptive statistics. With scores ranging from 9 to 100, the average professional competency score was 75.38 (SD = 16.74). These numbers show that the respondents had high average professional competency and moderate levels of burnout.

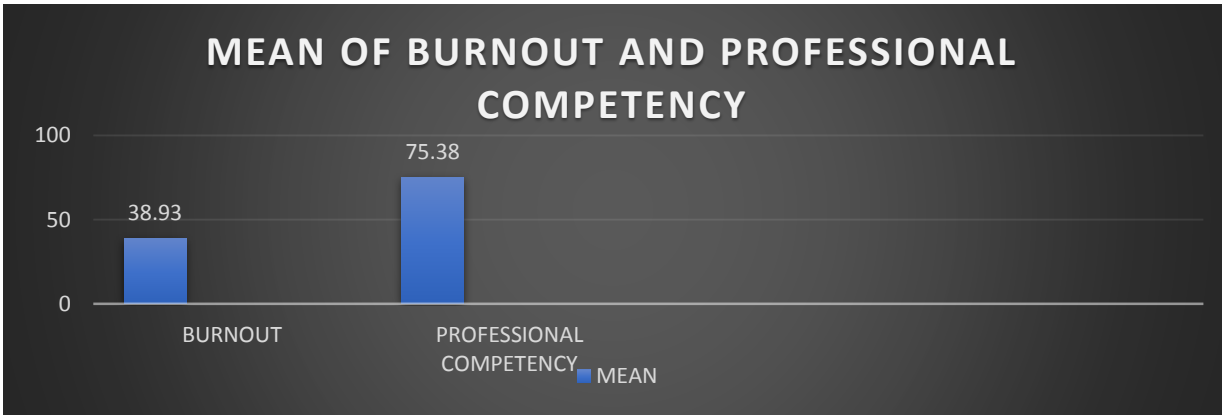

FIG. 1 DESCRIPTIVE ANALYSIS OF BURNOUT AND PROFESSIONAL COMPETENCY OF YOUNG AND MIDDLE AGE PROFESSIONALS

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Group Statistics and t-Test Results (Professional Competency)

TABLE NO. 2

Group Statistics								
Variable	**Age**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**df**	**t**	**Sig. (2-tailed)**
Professional competency	Young	30	75.9333	18.41276	3.36170	58	.253	.802
	Middle	30	74.8333	15.17276	2.77015	58	.253	.802

Young professionals (M = 75.93, SD = 18.41) and middle-aged professionals (M = 74.83, SD = 15.17) did not significantly differ in their professional competency scores according to an independent samples t-test (t (58) = 0.253, p =.802). This implies that in this sample, age group had no discernible impact on professional competency

Group Statistics and t-Test Results (Burnout)

TABLE NO. 3

Group Statistics								
VARIABLE	**Age**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**df**	**t**	**Sig. (2-tailed)**
Burnout	Young	30	38.3667	11.08115	2.02313	58	-.368	.714
	Middle	30	39.5000	12.72995	2.32416	58	-.368	.714

Young professionals (M = 38.37, SD = 11.08) and middle-aged professionals (M = 39.50, SD = 12.73) did not significantly differ in their burnout scores, according to the t-test (t(58) = -0.368, p =.714). As a result, there was no statistically significant difference in burnout levels by age group.

Professional Competency by Physical Activity Level

ANOVA Results

TABLE NO. 4

ANOVA					
PROFESSIONAL COMPETENCY					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	665.245	2	332.622	1.195	.310
Within Groups	15860.939	57	278.262		
Total	16526.183	59			

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The differences in professional competency across various levels of physical activity were investigated using a one-way ANOVA. F (2, 57) = 1.195, p =.310; the results indicated that the differences were not statistically significant. This suggests that professional competency scores were not substantially impacted by physical activity level (low, moderate, or high).

Post Hoc Tukey HSD Test: Professional Competency by Physical Activity Level

Multiple Comparisons (Tukey HSD)

TABLE NO. 5

Multiple Comparisons						
Dependent Variable: PROFESSIONAL COMPETENCY						
Tukey HSD						
(I) PHYSICAL ACTIVITY LEVEL	**(J) PHYSICAL ACTIVITY LEVEL**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
					Lower Bound	**Upper Bound**
Low	Moderate	-2.71861	5.08909	.855	-14.9651	9.5279
	High	-8.26203	5.38671	.283	-21.2247	4.7006
Moderate	Low	2.71861	5.08909	.855	-9.5279	14.9651
	High	-5.54342	5.44233	.568	-18.6399	7.5531
High	Low	8.26203	5.38671	.283	-4.7006	21.2247
	Moderate	5.54342	5.44233	.568	-7.5531	18.6399

There were no statistically significant pairwise differences in professional competency scores between the low, moderate, and high physical activity groups, according to post hoc comparisons using the Tukey HSD test (all p-values >.05). The following were the mean differences:

Low vs. Moderate: -2.72 (p = .855)

Low vs. High: -8.26 (p = .283)

Moderate vs. High: -5.54 (p = .568)

Homogeneous Subsets for Professional Competency

Tukey HSD Homogeneous Subsets

TABLE NO. 6

PROFESSIONAL COMPETENCY		
Tukey HSD[a,b]		
Physical Activity Level	**N**	**Subset for alpha = 0.05**
		1
Low	22	72.0909
Moderate	21	74.8095
High	17	80.3529

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Sig.		.273
Means for groups in homogeneous subsets are displayed.		
a. Uses Harmonic Mean Sample Size = 19.750.		
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.		

Professionals in the moderate (M = 74.81) and low (M = 72.09) activity groups had lower mean professional competency scores than those in the high physical activity group (M = 80.35), even though no significant differences were observed. Nevertheless, these differences' significance level (p =.273) was not statistically significant.

Correlations

Pearson Correlation Matrix

Pearson correlation analysis revealed that

TABLE NO. 7

Correlations				
		Burnout	**PHYSICAL ACTIVITY LEVEL**	**PROFESSIONAL COMPETENCY**
Burnout	Pearson Correlation	1	-.117	-.155
	Sig. (2-tailed)		.372	.237
	N	60	60	60
Physical activity level	Pearson Correlation	-.117	1	.197
	Sig. (2-tailed)	.372		.132
	N	60	60	60
Professional Competency	Pearson Correlation	-.155	.197	1
	Sig. (2-tailed)	.237	.132	
	N	60	60	60

Professional competency and burnout had a negative correlation (r = -0.155), but it was not statistically significant (p =.237). Professional competency and physical activity had a positive correlation (r = 0.197), but it was not statistically significant (p =.132). A weak negative correlation (r = -0.117, p =.372) between burnout and physical activity was also not statistically significant.

CONCLUSION

The purpose of the current study was to compare the levels of physical activity and professional competency between young and middle-aged professionals. The findings showed no statistically significant correlation between professional competency and physical activity levels, nor any discernible differences in professional competency between the two age groups. Furthermore, there was no significant correlation found between burnout levels and age or physical activity. According to these results, professional competency cannot be accurately

predicted by age or level of physical activity alone. Within the parameters of this study, physical activity seems to have little direct impact on professional effectiveness, even though it may improve overall well-being. Therefore, for a more thorough understanding of what improves professional competency across age groups, future research should take into account additional influencing factors, such as organizational culture, job role, mental health, and work-life balance.

DISCUSSION

The purpose of the current study was to compare the levels of physical activity and professional competency between young and middle-aged professionals. The findings showed no statistically significant correlation between professional competency and physical activity levels, nor any discernible differences in professional competency between the two age groups. Furthermore, there was no significant correlation found between burnout levels and age or physical activity. According to these results, professional competency cannot be accurately predicted by age or level of physical activity alone. Within the parameters of this study, physical activity seems to have little direct impact on professional effectiveness, even though it may improve overall well-being. Therefore, for a more thorough understanding of what improves professional competency across age groups, future research should take into account additional influencing factors, such as organizational culture, job role, mental health, and work-life balance.

The results of this study showed no discernible difference in professional competency between young and middle-aged professionals, which is consistent with earlier findings that age is not a determining factor in workplace effectiveness (Ng & Feldman, 2010). Even though middle-aged people bring experience and younger people may be more adaptable, when other factors like role clarity and job commitment are taken into account, both groups may be equal in terms of overall competency. The association between professional competency and physical activity levels was also not statistically significant. This runs somewhat counter to research that highlights the emotional and cognitive advantages of exercise, including enhanced executive function and decreased stress (Hillman, Erickson, & Kramer, 2008; Biddle & Asare, 2011). The impact of a wider range of organizational and psychosocial elements that are not exclusively measured by physical activity metrics on professional competency could be one explanation. Additionally, burnout did not significantly correlate with either competency or physical activity, which may indicate that participants maintained professional standards despite their varied levels of burnout. Nonetheless, research shows that long-term chronic burnout can have a detrimental effect on job performance (Maslach, Schaufeli, & Leiter, 2001), highlighting the necessity of a longitudinal study. All things considered, even though physical activity improves overall health and wellbeing, its direct influence on professional competency may be minimal, underscoring the significance of a multifaceted strategy for improving workplace performance.

SUGGESTIONS

1. Larger and More Diverse Sample: To increase generalizability, future research should use a larger and more demographically diverse sample.

2. Longitudinal Design: The long-term impacts of physical activity on burnout and professional competency may be better captured by a longitudinal approach.
3. Incorporate Additional Variables: A more thorough understanding of professional competency may be provided by incorporating variables such as organizational support, job satisfaction, and mental health.
4. Objective Physical Activity Measurement: For more precise physical activity data, combine self-reports with activity trackers or wearable technology.
5. Intervention-Based Research: Put physical activity programs into action and analyze their results to determine how they directly affect competency and burnout levels.

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