

An Educational Intervention To Optimize Physical Wellness Of University Students

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Abstract

Wellness is a subtle combination of different dimensions that enhances quality of life, provides a sense of wellbeing and enables individuals to function effectively with a definite purpose. The main objective of the study was to find out the effect of intervention in the form of personal enrichment experiences and the effectiveness of teaching methods used to offer these experiences. The personal enrichment experiences were relevant to the augmentation of physical wellness. The sample of the study consisted of 105 Bachelor's degree students. All three groups were taught by the researcher, and after completion of the personal enrichment initiatives workshop, the students were given a self-developed physical wellness questionnaire based on a comprehensive review of related literature. The results showed that the students were able to enhance their physical wellness as a result of intervention. Furthermore, the experiences helped students in realizing the significance and value of physical wellness and thus improved their perception about it. Hence, it can be concluded that personal enrichment experiences (course) help students to embark on a journey to physical wellness and thereby increase it. The three teaching methods have a more or less similar effect with regard to promoting change in students' physical wellness.

Keywords: Physical wellness, Personal enrichment, Discussion method, Reflective learning, Collaborative learning.

Introduction

The term "wellness" became popular from the book by Halbert Dunn, High Level Wellness, launched in 1961. Based on his views, the term "wellness" started gaining popularity during the 1970s when it was elaborated by others (Foster et al, 2011). In 1976, Bill Hettler, the co-founder of the National Wellness Institute, introduced the physical, emotional, intellectual, spiritual, social and occupational dimensions of wellness. Currently, his six dimensions of wellness model

is taught to health and fitness students in college, applied in professional settings and considered as a significant theory for the term "wellness" (Patalisky, 2010).

The term "wellness" is being extensively used in today's literature along with such interconnected terms as "wellbeing" and "quality of life" (Ahmad, I., Gul, R. & Kashif, M. 2022). Wellness is a "way of life" in which individuals are in a constant pursuit for meaningful answers to questions related to the

different dimensions to enable them to achieve maximum success in each dimension at a particular time period in their lives (Salameh, A. A., Akhtar, H., Gul, R., Omar, A. B., & Hanif, S. 2022). Thus, wellness is a continuously evolving process of growth and development geared towards achieving an optimal balance in the various dimensions of wellness (Brooklyn College, 2013).

Physical wellness

It encourages students in making decisions for adopting a healthy lifestyle, including eating healthy, exercising and physical fitness activities. Additionally, annual physical and dental checkups as well as vaccinations are important elements of optimal physical wellness (Zhou, G., Gul, R., & Tufail, M. 2022; Gul, N., Tahir, T., Gul, R., Batool, S. 2022; Swarbrick & Yudof, 2015). Physical wellness is also dependent on taking the necessary safety precautions while on the road, such as using seat belts while driving or riding a car (Swarbrick & Yudof, 2015) and following the speed limit (Corbin, 2011). Personal hygiene is yet another important aspect of physical wellness. According to National Institute of Cultural Studies (Ahmad, I., Gul, R. & Zeb, M. 2022), it includes taking a bath every morning, practicing good oral hygiene, wearing clean clothes that are well ironed, covering the mouth while sneezing or coughing, etc. The major health-enhancing behaviour are discussed as follows:

Exercise

Physically well persons are involved in some kind of workout for half an hour at least thrice a week. Adequate bodily movements like brisk walk, flight of stairs or executing chores as well as 20 minutes of cardio thrice a week proves to be significant (Gul, R., Ahmad, I., Tahir, T., Ishfaq, U. 2022; Batool, S., Tahir, T., Gul, R., Ishfaq, U. 2021; Nesbitt, 2012; Swarbrick & Yudof, 2015).

Weight Control

Centering one's nutrition on a thorough diet plan and shun using junk diet; cut-down on oily diet and eat identical quantity of calories daily, exercising on a regular basis and monitoring one's diet servings etc (Gul, R., Tahir., Ishfaq, U., Batool, T. 2021; Nesbitt, 2012; Brooklyn College, 2013).

Health-enhancing Diet

A healthy diet for most individuals includes using about 60% of fresh fruits and vegetables, about 25% whole grains, about 10% proteins and about 10% fatty food (Preston, 2007). Furthermore, our body requirement is to follow regular mealtimes daily (Bukhari, S, K, S.; Said, Hamdan; Gul, R; Seraj, P, M, I. 2021; Corbin, Welk, Corin & Welk, 2011; Nesbitt, 2012). Consumption of eight glasses of water every day is recommended, which helps eradicating contaminants from human body, improves skin quality and averts numerous slight ailments (Preston, 2007).

Medical examination

Yearly bodily and dental examinations and required immunizations are likewise significant fundamentals for optimum physical wellness (Swarbrick, & Yudof, 2015).

Personal hygiene

Major guiding principles for taking precaution for personal hygiene, including: taking a bath every morning and particularly after physical actions and scouring the body appropriately; committed to upright oral cleanliness twice a day; keeping the hands and nails clean and using a sanitizer in civic spaces; face and neck wash before going to sleep; using clean clothes etc. (Ahmad, I., Gul, R. 2021; Gul, R., Zakir, S., Ali, I., Karim, H., Hussain, R. 2021).

Adequate rest

Some physician recommend at least 6 to 8 hours sleep, however, 7 to 9 hours of sleep each night is recommended by others (Swarbrick & Yudof, 2015). Additionally, persons also need to find time to ease and get restored during the day to recover from routine stress and have sufficient energy to make it through the working day and beyond (Ali, I., Gul, R., Khan, S. S., Karim, K. 2021; Corbin, Welk, Corin & Welk, 2011; Covey, 2003; Nesbitt, 2012).

Personal care and safety

Physically well individuals keep themselves well informed about information related to health and fitness (Covey, 2003). They also take the necessary safety precautions while on the road. They use seat belts while driving or riding a car and follow the speed limit and other traffic rules (Ayub, A., Gul, R., Ali, A., Rauf, B., M. 2021; Swarbrick & Yudof, 2015; Corbin, Welk, Corin & Welk, 2011).

Personal enrichment initiatives

These initiatives positively influence one's whole personality, including one's thoughts, habits, behaviour, attitudes, strengths, weaknesses, interests, skills and capacities (Gul, R., Talat, M., Mumtaz, M., Shaheen, L. 2021). According to Kane County, personal enrichment programs enable individuals to reflect positively on their aims, aspirations, and life goals; re-assess the financial, social and family aspects of their lives; develop positive behavioural attitudes; and eliminate stress and other behavioural negativities (Ruggerie, et al 2020). Therefore, the predominant purpose of these initiatives is to help individuals achieve their personal objectives so that they are able to enrich their lives and realize their potential (Bukhari, S. K. U. S., Gul, R., Bashir, T., Zakir, S., & Javed, T. 2021; Aubrey, 2010). Thus, personal enrichment initiatives help in promoting a wellness-oriented lifestyle.

Rationale of the Study

In Pakistan, there is a dire need for personal enrichment experiences to promote physical wellness, especially at the university-level, where a wide majority of students neglect their health predominantly due to their study load. Physical wellness enables students to be physically fit by keeping their energy levels high during the day to help them manage their hectic study schedules and other commitments (Rashid, 2010). Therefore, to reiterate the significance of physical wellness as well as to bridge the research gap in this area, the study was undertaken under the title, "Taking the Healthy Route for Optimal Physical Wellness"

Objectives of the study

1. To find out the difference between the pretest and posttest scores related to physical wellness as a result of the effect of teaching methods used for offering personal enrichment experiences.
2. To examine the difference in the effect of teaching methods with regard to promoting change in students' physical wellness.

Methodology

Participants

The experimental study entailed selecting three intact sections of Bachelors of Business Administration 5th and 6th semester of a private sector university. The population of the study was consisted of 105 science students, which was also taken as the sample. The research procedure was submitted for approval to the University's research ethics committee before the conduction of study. Each participant was adequately informed of the aims of the research and their consent was obtained prior to intervention and data collection. Demographic profile is reported in the Table 1.

Table 1 Demographic profile

Demographic Variable	Total	%
Total Population	105	
Male	55	51%
Female	50	49%
Average Age	23 years	
Marital Status		
Single	99	94%
Married	6	6%
Employment Status		
Student	95	90%
Intern	0	0
Part-time	6	6%
Full-time	1	1%
Self employed	3	3%

Procedures

Table 2 Intervention for each group

Group	Intervention
Physical Wellness Pretest	
Control Group (C) taught through the Discussion method	<p>Personal enrichment content was imparted to students through the following strategies:</p> <ul style="list-style-type: none"> • Problematic and informational discussions based on questions by the teacher. • Supporting an important concept discussed in the class with an example at regular intervals. • Writing in own words concepts inferred from a particular discussion. • Term paper on physical wellness.
Experimental Group 1 (X ₁) taught through the Reflective Learning method	<p>Following activities were used to teach the personal enrichment content:</p> <ul style="list-style-type: none"> • Self-assessments • Self-reflection worksheets (Relating content to personal life) • Reflection circle (Allowing each student in a random order to answer a question posed by the teacher) • Video activities, real life stories and anecdotes inciting self-reflection • Term paper on physical wellness.

Experimental Group 2 (X ₂) taught through the Collaborative Learning Method	Personal enrichment experiences were offered based on the following: <ul style="list-style-type: none"> • Learning Partners – I: Suggesting how concepts relate to the characters or situations depicted in the video clips • Learning Partners – II: Enabling partners to discuss a particular content and then each to write how it is applicable to him or her • Self-Study Triads: Proposing strategies for addressing physical wellness-related problems or those depicted in the video clips • Learning Triads: Assessing how the characters depicted in the video clips could make effective use of the lessons taught by the personal enrichment experiences. • Term paper on physical wellness.
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The above table presents the details of the intervention for the control and experimental groups. All three groups were taught by the researcher who has over 10 years of experience in participatory experiential facilitation skills and as such is well versed with the teaching methods.

Table 3 presents the Intervention Fidelity Assessment Grid:

Table 3 Intervention/Treatment fidelity assessment grid

Type of Fidelity	Steps Taken to Ensure Fidelity	How Was Fidelity Assessed?
Fidelity to Theory	<ol style="list-style-type: none"> 1. The content of the treatment was reviewed by experts. 2. Adequate dose of treatment was received by the control and experimental groups. 3. Equivalent dose of treatment was applied across the three groups. 	<ol style="list-style-type: none"> 1. The content of the treatment was validated by three experts in the field and its learning outcomes were reviewed by a training specialist and an instructional design specialist. 2. Each of the 3 groups was taught for a total of 20 hours (10 weeks) between 9AM and 12PM on Tuesday, Wednesday and Thursday. The trial time was 01 February 2022 to 8th April 2022. 3. The same five personal enrichment workshops were conducted for each group by the same teacher/researcher. The experiment was conducted in the same university, where similar learning conditions were provided to all the 3 groups.

Training Provider	<ol style="list-style-type: none"> 1. Training of the interventionist 2. Experience /Capacities of the interventionist 3. Preparation by the intervention 	<ol style="list-style-type: none"> 1. The researcher acted as the interventionist who is also a faculty member of the Preston University. He is well-versed in the three teaching methods. 2. The researcher/interventionist has over 10 years of experience of training and instructional design with national and international organizations. 3. The interventionist carefully reviewed the treatment content and relevant resources before conducting each workshop for each group.
Treatment Implementation	<ol style="list-style-type: none"> 1. Application of standardized intervention protocol 2. Measures undertaken to minimize treatment contamination 	<ol style="list-style-type: none"> 1. Standardized Participants' Workbook, Power Point Presentations and Handouts were used for treatment implementation. Furthermore, the interventionist strictly adhered to achieving the same behavioural objectives for each group. 2. Methods used to minimize contamination: <ul style="list-style-type: none"> ▪ Multiple-treatment interference: This was controlled, as students in all three groups were never involved in any research study before. Besides, the between-subjects design is meant to provide a single treatment to each participant. ▪ Placebo effect did not play any role in the study, as all 3 groups enjoyed learning through their respective teaching methods. ▪ The novelty effect of the study was largely minimized by the 10-week duration of the experiment.
Treatment Receipt	<ol style="list-style-type: none"> 1. Checking participants' understanding 2. Administration of paper and pencil test 	<ol style="list-style-type: none"> 1. Participants' understanding was checked through the following methods: <ul style="list-style-type: none"> ▪ Asking different students to provide a recap of major topics taught.

Treatment Enactment	1. Checking the implementation of new behaviors	<ul style="list-style-type: none"> ▪ Observing how students participated in different activities based on checklists. ▪ Evaluating assignments, quizzes and term papers. <p>2. The physical wellness questionnaire was administered before and after the treatment.</p> <p>1. Assessing self-reports by students regarding how they were applying the lessons learnt from the personal enrichment workshops with regard to enhancing their physical wellness (Tasked 2 months after the treatment).</p> <p>2. A focus group was conducted 4 months after the treatment consisting of 20 randomly selected participants (5 from control group, 9 from experimental group 1 and 6 from experimental group 2) to assess the implementation of new behaviours or activities by the participants related to their physical wellness.</p>
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Measures

The physical wellness questionnaire was developed based on a comprehensive review of related literature. The students were required to rate each statement/item in the questionnaire on a five-point Likert scale. The research instrument was validated by three specialists in the field. After pilot-testing, its reliability was determined by calculating the Cronbach's alpha and further improvements were made in its items. The value of Cronbach's alpha for the research instrument was 0.81. The confirmatory factor analysis indicated a good model fit, $\chi^2(48) = 66.70$, $p < .05$; $2/df = 1.47$; $RMSEA = .051$, $CFI = 0.88$; $TLI = 0.89$; $IFI = 0.88$; $SRMR = 0.063$. The KMO test obtained a 0.83 index and the Bartlett's sphericity test was 1247.3 at $p < 0.05$.

The physical wellness content was based on five personal enrichment workshops (treatment) and the content was delivered through the particular teaching method assigned to each group. The major physical wellness contents covered by the personal enrichment workshops are enumerated below:

1. Essence of personal enrichment
2. Physical wellness plan
3. Adopting a healthy lifestyle
4. Healthy nutritious diet
5. Exercise and weight control
6. Physical fitness and mental well-being
7. Personal hygiene
8. Personal care
9. Regular medical examination
10. Adequate Rest

The following three methods were used in the study. These methods are reported with their operational definitions:

Discussion. The discussion method enhances students' creative thinking, critical reasoning, problem-solving and literary appreciation skills as well as their ability to communicate their points of view with self-confidence, as it enables them to defend their own arguments, answer counter arguments as well as the questions posed by their class mates.

Reflective Learning. It enables students to contemplate on their existence, peculiar practices, skills and weaknesses and the development of empathy.

Collaborative Learning. It is a kind of team effort by students to achieve desired learning outcomes. The students work in groups of 4, 5 or greater to share their experiences where teacher acts as a facilitator.

The independent variables were the teaching methods e.g. discussion method, reflective learning method and collaborative learning method. The dependent variable was the dimension of physical wellness.

Results

Table 4 Comparison of pretest and posttest physical wellness scores obtained by the control group and experimental groups

Statistics	Pretest			Posttest		
	Control Group	Exp. Group 1	Exp. Group 2	Control Group	Exp. Group 1	Exp. Group 2
N	28	46	31	28	46	31
Mean	59.71	57.07	56.61	71.50	75.89	71.06
SD	11.975	14.830	11.658	16.588	13.611	12.607
df	27	45	30	27	45	30
t-test	6.414	9.425	6.875	6.414	9.425	6.875
t at 0.05level	2.0518	2.0141	2.0423	2.0518	2.0141	2.0423

Table 4 shows that there is a significant difference between the pretest ($M = 59.71$, $SD = 11.975$) and posttest ($M = 71.50$, $SD = 16.588$) scores, i.e., $t(27) = 6.414$, $p = 0.000$ for the control group taught through the discussion

method. This signifies that the calculated value of $t(6.414)$ is statistically significant ($p < 0.05$), as it is greater than the table value of $t(2.0518)$ at 0.05 level.

Table 5 One way ANOVA to determine the difference in the effect of teaching methods with regard to promoting change in students' physical wellness

Teaching Method	N	Mean	SD
Discussion	28	71.50	16.588
Reflective learning	46	75.89	13.611
Collaborative learning	31	71.06	12.607
Total	105	73.30	14.240

	ANOVA		
	df	F	Sig.
Between Groups	2	1.377	.257
Within Groups	102		
Total	104		

The table depicts that there is a significant difference between the pretest ($M = 56.61$, $SD = 11.658$) and posttest ($M = 71.06$, $SD = 12.607$) scores, i.e., $t(30) = 6.875$, $p = 0.000$ for experimental group 3 taught through the collaborative learning method. This signifies that the calculated value of t (6.875) is statistically significant ($p < 0.05$), as it is greater than the table value of t (2.0423) at 0.05 level. Hence, the personal enrichment experiences helped students enhance their physical wellness.

A one-way between subjects ANOVA was conducted to examine the effect of discussion method, reflective learning method and collaborative learning method with regard to promoting change in students' physical wellness.

Table 5 shows the mean and standard deviation related to students' physical wellness based on each teaching method, i.e., discussion method ($M = 71.50$, $SD = 16.588$), reflective learning method ($M = 75.89$, $SD = 13.611$), and collaborative learning method ($M = 71.06$, $SD = 12.607$). ANOVA results reveal that there is no significant difference in the effect of teaching methods with regard to promoting change in students' physical wellness at the $p < .05$ level for the three conditions: $F(2, 102) = 1.377$, $p = .257$. The three teaching methods had a more or less similar effect with regard to promoting change in students' physical wellness.

Discussion

Results of the present study support the results of a study by Nesbitt based on offering a community health course to the students at the University of Illinois. The wellness course

helped students in realizing the worth of wellness behavioural attitudes as well as enhancing their knowledge and perception about the different dimensions of wellness. Furthermore, the analysis of pretest and posttest scores using the t -test revealed significance in the physical dimension of wellness. However, the major limitation of Nesbitt's study is that there was no comparison group to solidify the results and enhance the impact of the wellness course. The present study uses a control group and two experimental groups to present more meaningful results and determine the efficacy of the personal enrichment experiences (Nesbitt, 2012).

Another study corroborates the importance and significance of wellness education in promoting students' physical wellness. Alameda (2009) findings revealed that there is a strong need for wellness-based education in US colleges, as the posttest wellness scores for the intervention group were significantly higher than those of the control group for all the six dimensions of wellness. With regard to physical wellness, the results of Alameda's study are consistent with the present study. The posttest physical wellness scores of the three groups were also significantly higher than the pretest scores in the present study.

The findings of Horton and Snyder (Horton & Snyder, 2010) were also similar to the results of the study. His study was based on the dimensions of wellness shed light on how a wellness intervention can trigger awareness of wellness and its significance to students enrolled

in a hospitality and tourism management program at a university in the United States.

Furthermore, as researched by Murray and Miller (2001), students enrolled in an introductory health and wellness course at a Rocky Mountain regional college viewed Hettler's six dimensions of wellness in a much favourable light (Gul, R., Khan, S. S., Mazhar, S., & Tahir, T. 2020; Gul, R., Tahir, T., Ishfaq, U. 2020). The students also believed that each dimension has its own significance and their ratings suggested that each dimension had a moderate to strong influence on their overall wellness and they required judicious guidance pertaining to each dimension.

Additionally, a mix-method study by Ford is consistent with the results of the present study with regard to students realizing the significance of physical wellness. The study revealed that first-year students at University of Nebraska-Lincoln made healthy choices within the physical dimension of wellness and perceived it as vital like all other dimensions of wellness. However, focus group discussions revealed that students paid a greater emphasis on physical and social wellness as compared to the other dimensions of wellness (Gul, R., Ayub, A., Mazhar, S., Uddin, S., S., Khanum, M. 2021). Also, the findings of a study by Beauchemin study corroborates the findings of the present study with regard to improving students' perception of wellness attitudes and behaviours as well as understanding the significance of adopting a healthy lifestyle (Gul, R., Khilji, G. 2021).

Implications

Findings of this study have potential implications for the design of training programs and curriculum to enhance students' physical wellness, it might be feasible to enhance their physical wellness by providing training

programs and curriculum designed to raise the awareness of these young adults by informing them that the physical wellness has impact on their entire life and accomplishment of activities.

The results of the present study are generalizable to the students of the age group 21 to 25, but only those populations who are studying in universities. Therefore, non-credit courses may be introduced in the universities to focus on students' wellness. In this regard, the cooperation of university management is vital for setting measurable goals for physical activity, nutrition education and other university-related activities designed to promote physical wellness. A wellness policy for the university needs to be formulated and implemented. It also needs to be properly communicated to build awareness and healthy choices need to be encouraged through marketing strategies. A stringent procedure also needs to be devised to measure the wellness policy implementation at the university.

Teachers need to use illustrations, examples, stories, anecdotes, scenario analysis and videos for a greater impact as well as organizing workshops conducted by health and fitness specialists.

Teachers also need to encourage students to set fitness goals and to schedule time for physical activity by using a planner or setting up reminders on the cell phone. For instance: scheduling such activities during the week as getting off one bus stop earlier and walking to the university; walking to the grocery store; taking the stairs as often as possible instead of the elevator; starting the weekend with yoga by learning from the videos available online; etc. Students also need to be advised to take up physical activities with friends to encourage them during a workout. Additionally, the nutritional quality of food available at the universities needs to be improved.

Conclusions

The pretest-posttest gain scores suggest that as a result of the personal enrichment experiences, students in the control and experimental groups were able to enhance their physical wellness. Furthermore, the experiences helped students in realizing the significance and value of physical wellness and thus improved their perception about it. Hence, it can be concluded that personal enrichment experiences (course) help students to embark on a journey to physical wellness and thereby increase it.

The three teaching methods have a more or less similar effect with regard to promoting change in students' physical wellness. Therefore, it can be concluded that the discussion method, reflective learning method and collaborative learning method are all appropriate for offering physical wellness education based on personal enrichment experiences to students at the bachelors' level. This is because students at this level are relatively mature and are able to decide what is beneficial for them, as they are more concerned with the relevancy and utility of the wellness content rather than how it is delivered.

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CONFLICT OF INTEREST

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Declaration of Interest

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