

## The effect of educational gymnastics skills on five facet mindfulness

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### Abstract:

The cartwheel, round off, handstand, front handspring and front handspring on vault are the fundamental gymnastics skill -based skill-based program incorporating all apparatus and disciplines gymnastic courses (2) . This study examined whether mindfulness increased through participation in gymnastics skills -based courses(2). college female students (N = 48, M age = 20.1 years) reported mindfulness Questionnaire in the 2013-2014 academic year after 16 weeks .

Methods: The Five Facet Mindfulness Questionnaire (FFMQ) Arabic version was used to assess mindfulness. Results indicated that gymnastics skills (cartwheel, round off, handstand, front handspring and front handspring on vault ) can increase female mindfulness.

**Key Words:** Mindfulness, gymnastics skills , (FFMQ)Arabic version

### Introduction

Researchers have reported that sports promote healthy development in many areas with positive effects on physical and psychological growth . It also contributes to overall health and well-being, sports promote psychological outcomes by reducing depression and anxiety (Pizzo & Poplack, 2006). Gymnastics is set of physical exercises, it intended to build and illustrate, strength, balance, and coordination and stamina . it is beneficial for improving concentration and mental focus.

Mindfulness is “paying attention in a particular way: on purpose, in the present moment and non-judgementally” (Kabat-Zinn 1990). Mindfulness is a way to improve the quality of life. It is a skill that is a combination of self-awareness and it means paying attention to your current experience instead of focusing on the past or the future ( Thomas, 2011 ). The Five Facets Mindfulness are as follows : First observing refers to noticing, sensing or attending to the experience occurring in present moment such as thoughts, and emotions. Second element is describing, that refers to labeling internal experiences with words. Lebow, J. (2008).The third is acting with awareness, that involves focusing on one’s activities at a given moment as opposed to behaving mechanically(Baer, et al., 2006) . Fourth element is Non judging of inner experience refers to taking a non-evaluative stance toward private experience. Fifth, non-reactivity to inner experience refers to noticing thoughts and feelings without showing a reaction towards them Baer, et al., 2006).

Performance in sport is greatly influenced by individual ability to be mindful to remain in the present. Mindfulness offer many benefits to focusing and athletic performance (Taylor, J. & Wilson, G. (2005). it can be useful to treat anxiety disorder and depression (Kabat-Zinn et al, 1992; Teasdale et al, 2000). studies conducted by Gardner & moore, 2004 ,2006 ; kee & wang, (2008) reported a good relationship between mindfulness and peak performance . Also A positive relationship were found between mindfulness and emotional intelligence, that are associated with positive life outcomes (Schutte, & Malouff, J.M. (2011). Mindfulness can improve emotion regulation by increasing awareness (Erisman & Roemer, 2010). Moreover researchers found a strong relationship between several dimensions of emotional intelligence academic performance.(Parker et al. 2004; Jaeger (2003) .

In addition to this, researchers revealed that physical activity such as Pilates and taiji quan training have beneficial effects on physical and mental characteristics( Caldwell et al 2009). Previous studies found that participation in yoga, meditation-based programs can increase mindfulness (Carmody 2008; Oman et al 2008 ; Shapiro et al 2008 ).

Very little research has focused on increasing mindfulness through participation in sport particularly in gymnastic. The purpose of this study was to examine whether mindfulness levels can increase among participants in gymnastics program skills (cartwheel, round off, handstand ,front handspring and front handspring on vault).

**Method***Participants and Procedure*

Study sample consists of college female students (N = 48, M age = 20.1 years height: 1.65± 0.14 m). Table (1) shows the demographic details of sample

Table 1. Participant Demographics

Characteristic	mean	SD
Weight <sub>kg</sub>	69.12	4.95
Height <sub>m</sub>	1.65	0.14
Age	21.10	1.50

Who were participated on educational gymnastics skills program courses (2) in the 2013-2014 academic year .

*Procedures and Research Instrument*

Research variants are the gymnastic program (cartwheel, round off, handstand ,front handspring and front handspring on vault as independent variant), The dependent variable for the current study was mindfulness.

The instrument was Five Facet Mindfulness Questionnaire (FFMQ). It is a 39-item Higher scores indicate greater levels of mindfulness (Baer, et al., 2006 ). The five facets are observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. A coefficient of internal consistency were used to determine the reliability of (FFMQ) Arabic version . According to the Cronbach-alpha result . The coefficient of the internal reliability of the (FFMQ) Arabic version indicated that the stability of the test was acceptable . The reliability values reached significant level(\*\*0.699). Table 2) shows the reliability results

Table 2: Internal consistency (Alpha and Split-Half) reliability for the total Five Facet Mindfulness scores

Mindfulness scale	Internal consistency		
	split half		Cronbach-alpha.
	Guttman	Spearman-Braun	
Observing	**0.484	**0.487	**0.559
Describing	**0.682	**0.684	**0.693
Acting with awareness	**0.596	**0.597	**0.806
Non-judging of inner experience	**0.606	**0.607	**0.603
Non-reactivity to inner experience	**0.462	**0.466	**0.569
Total score	**0.678	**0.679	**0.699

\*p < .05.

The educational gymnastic skills was designed by the researcher according to the gymnastics level 2 syllabus . It offered structured movement meaningful opportunities for female that allowed them to progress and move continuously according to their abilities. The purpose of this program was to improve fundamental gymnastics skills, the program held in the University of Jordan (Faculty of Physical Education hall) 3 days per week approximately 50 minutes'.

The fundamental gymnastics skills are introduced to the college female students courses (2). Gymnastic skills with spotter contents cartwheel, round off, handstand ,front handspring and front handspring on vault are the fundamental gymnastics skill using step by step progressions and with some mental skills training included Goal Setting, Imagery, Relaxation, Self-Talk, and Mental Plan with spotter on the floor, with Leap forward, Scissors leap, Side split jump, Cross spilt sit , Dive roll forward, Handstand roll forward and handstand to bridge skills.

## Results

Statistical analyses were conducted using the (SPSS). Results of the Chronbach's alpha and split half tests for internal consistency suggested that the FFMQ Arabic version was a reliable measure of mindfulness. Do levels of mindfulness increase among participants in gymnastics program skills (cartwheel, round off, handstand ,front handspring and front handspring on vault)?. To address this question, T-test coefficients were used to find the differences between 48 female before and after the program.

Results indicated that there were differences significant between pre and post five facet mindfulness Questionnaire (FFMQ) on (observing( $t=7.221$ ;  $p=.000$ ), describing( $t=5.763$ ;  $p=.000$ ), acting with awareness( $t=4.794$ ;  $p=.000$ ), non-reactivity to inner experience(  $t=5.611$ ;  $p=.000$ ). Only non-judging of inner experience (  $t=1.547$ ;  $p=.128$ ) demonstrated no significant result see table 3.

Table 3 : Five facets of mindfulness scores mean scores (M) and standard deviations (SD) for for female pre and post test

Mindfulness scale	Pre test		Post test		t	Sig
	M	SD	M	SD		
Observing	28.7	4.84	30.7	4.13	7.221	.000
Describing	28.3	4.9	30.0	4.1	5.763	.000
Acting with awareness	25.87	5.67	26.93	5.30	4.794	.000
Non-judging of inner experience	21.29	4.88	21.75	3.75	1.547	.128
Non-reactivity to inner experience	22.20	3.63	23.83	3.11	5.611	.000
Total score	124.03	5.78	130.11	4.45	10.476	.000

## Discussion

The current study has examined the educational Gymnastics Skills on Five Facet Mindfulness (observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience). The study has shown that college female students who participated in the gymnastics program made significant gains in Mindfulness. there was overall improvement in ( observing, describing, acting with awareness, non-reactivity to inner experience) elements. No improvement on non-judging of inner experience element. These findings are supported by researchers who found that sport such as Pilates and taiji quan have beneficial effects on physical and mental characteristics( Caldwell et al 2009). Others found yoga and meditation-based programs can increase mindfulness (Carmody 2008; Oman et al 2008; Shapiro et al 2008). But The study conducted by Belna (2008) did not found significant differences in mindfulness based on athletic status.

## Conclusions

To sum up it was hypothesized that participants in the gymnastics educational program level 2 will exhibit a significantly increased five facet mindfulness. The present study provides scientific support for the utility of educational gymnastics skills. In the future it may be suggested more carefully designed research (with larger samples and different demographic variables such as (athletes, non athletes, gender).

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