

EXERCISE REGULATIONS AMONG INDIVIDUAL GAME FEMALE ATHLETES

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ABSTRACT

The present study was designed to assess the Exercise Regulations among individual game female athletes. Three hundred female athletes (N=300) who had participated in inter-college competitions were selected as subjects through random sampling technique. They consist of one hundred (n=100) wrestling, one hundred (n=100) boxing, one hundred (n=100) judo female athletes. The age of subjects was ranged between 17 to 28 years. Behavioural Regulation in Exercise Questionnaire-2 (BREQ-2, 2004) developed by David A. Markland & Vannessa Tobin was used to collect the required data. One-way Analysis of Variance (ANOVA) was employed to see the significant differences among individual game (wrestling, boxing and judo) female athletes with regard to exercise regulations. Where 'F' value found significant, Least Significant Difference (LSD) Post-hoc test was employed to find out the direction and degree of differences. The level of significance was set at 0.05. The result showed significant differences among individual game female athletes on the sub-variables; amotivation, external regulation, introjected regulation, identified regulation, intrinsic regulation and on the variable behavioural regulation in exercise (total) ($p < 0.05$).

Key Words: Exercise regulations, Individual, Female, Athletes.

INTRODUCTION

A sport is an activity in which physical exertion takes place at high level. It also has some set of rules established by governing bodies. In sports, players play a match against their opponents to get some achievements. It is source of major competitions. Sport may improve the physical, mental, physiological and psychological health of an individual.

The repetition of the same exercise in routine may bring a boring attitude for their exercise but for some others this repetition exercise may be interesting (Gummerson, 1992). Regulation in exercise may enhance the level of fitness among the individuals. Level of motivation to participate in a regular exercise may not be equal among individuals due to their individual differences. Motivation varies in all individuals. It varies individual to individual as well as the nature of game/sport, physiological aspect. Exercise regulations demand a good level of physical fitness as well as psychological preparation. Markland (1999) found that exercising for the enjoyment and social affiliation reasons were related to greater self determination for exercise whereas exercising for weight management and externally imposed health pressure undermined self-determination.

According to Warren (2002), a good coach is a good motivator as well as a good teacher. Coaching in team sports is largely a matter of installing good playing habits and eliminating bad habits. Coach Jerry Tarkanian said that players are highly motivated before their training, at their pre season practice, before the hard work. So if a coach wants the player's best efforts in their practice then they must have to communicate with their players in terms they can understand exactly to coach, consistently reward good efforts and performances and enforce sanctions against mistakes.

Coaches have to provide various opportunities to teach and guide the athletes in a cordial environment so that the learners feel free to discuss each and every aspect of particular skill with their respective coaches. Coach should know the individual differences of their motivational perspectives; it is up to the coaches how they have to prepare their athletes for learning new things. Motivation and devotion to work is a behavioural aspect. Coach has to decide the best method for teaching/coaching the skills. It is also important for a coach that his players will remain with positive energy even after making a mistake. A good coach is also able to tackle the violations made by the athletes. He should be role model for the athletes. This positivity shows the coach's interest and believes in his players. Coaches try to

motivate their athletes in the direction to attain their full potential level. A coach should have to find out the athlete's past experiences before giving them new motivational techniques. He/she should be able to stay optimistic with athletes. Battistilli et al. (2004) reported that if people engage in an activity because it is interesting, enjoyable and pleasing, then they will be expected to be intrinsically motivated, whereas if they get involved in an activity in order to get tangible rewards or to avoid personal punishments they will be more likely to be extrinsically motivated.

There is an old saying "You can take the athlete to the game but you can't make him play." So the motivation plays an important role in athlete's life. Motivation is needed more in competitive sports, where athletes and players try their best to accomplish the goal of peak performance in their events and games (Singh, 2004). American Sports Education Program (2008) described that spoken words have strong and long-lasting effect. An enthusiastic voice also motivates athletes and tells them you enjoy being their coach and avoid dominating the setting with a booming voice that distracts attention from athlete's performances. Praising athletes when they have performed or behaved well is an effective way to get them to repeat that behaviour and positive feedback for effort is an especially effective way to motivate youngsters to work on difficult skills.

Therefore, the present study was designed to assess the Exercise Regulation among individual game female athletes.

OBJECTIVE

- To ascertain the significant differences among individual game female athletes on the variable Exercise Regulation.

METHODOLOGY

SAMPLE

Total three hundred female athletes (N=300) who had participated in inter-college competitions were selected as subjects through random sampling technique. They consist of one hundred (n=100) wrestling, one hundred (n=100) boxing, one hundred (n=100) judo female athletes. The age of subjects was ranged between 17 to 28 years.

TOOL

Behavioural Regulation in Exercise Questionnaire-2 (BREQ-2, 2004) developed by David A. Markland & Vanessa Tobin was used to study the Exercise Regulations among individual game female athletes.

STATISTICAL APPLICATION

One way Analysis of Variance (ANOVA) was applied to find out the significance of differences among individual game female athletes with regard to the variable Exercise Regulation. Further, Least Significant Differences (LSD) Post-hoc test was applied to study the direction and degree of differences where 'F' value was found significant.

RESULTS

Table-1

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the sub-variable amotivation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)
Between Groups	349.207	2	174.603	13.880*	.000
Within Groups	3736.140	297	12.580		
Total	4085.347	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been noticed from table-1 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .000 was found smaller than 0.05 level of significance ($p < 0.05$) with regard to the sub-variable amotivation.

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was employed to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the sub-variable amotivation. The results of LSD Post-hoc test have been presented in table-2.

Table-2

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the sub-variable amotivation

Means		Mean differences	P-value (Sig.)
Wrestling (9.43)	Boxing (6.84)	2.59*	.000
	Judo (8.59)	0.84	.095
Boxing (6.84)	Wrestling (9.43)	2.59*	.000
	Judo (8.59)	1.75*	.001
Judo (8.59)	Wrestling (9.43)	0.84	.095
	Boxing (6.84)	1.75*	.001

*Significant at 0.05

It has been observed from table-2 that mean difference between wrestling and boxing game female athletes was found 2.59. The P-value (Sig.) .000 showed that the wrestling game female athletes had demonstrated significantly better on the sub-variable amotivation than their counterpart boxing game female athletes.

The mean difference between wrestling and judo game female athletes was found 0.84. The P-value (Sig.) .095 revealed that wrestling and judo game female athletes had demonstrated almost equally on the sub-variable amotivation as statistically insignificant differences were found between the groups in question.

The mean difference between boxing and judo game female athletes was found 1.75. The P-value (Sig.) .001 exposed that judo game female athletes had demonstrated significantly better on the sub-variable amotivation than their counterpart boxing game female athletes. The graphical representation of mean scores with regard to the sub-variable amotivation has been exhibited in figure-1.

Figure-1

Graphical representation of mean scores with regard to the sub-variable amotivation among individual game female athletes (wrestling, boxing and judo)

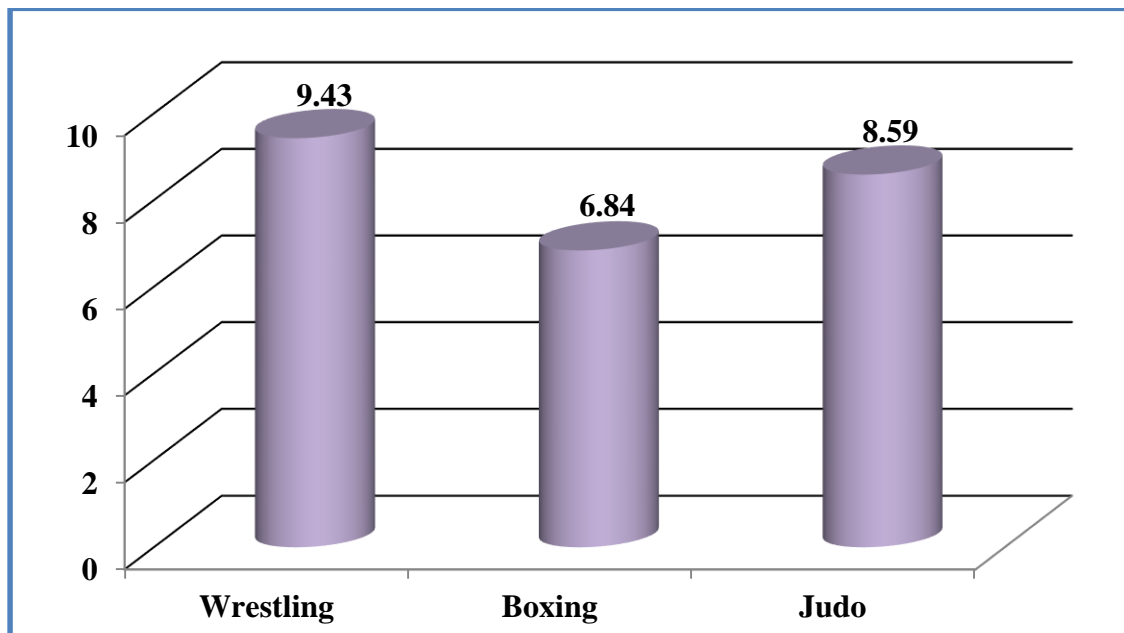


Table-3

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the sub-variable external regulation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)
Between Groups	334.980	2	167.490	11.610*	.000
Within Groups	4284.790	297	14.427		
Total	4619.770	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been from table-3 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .000 was found smaller than 0.05 level of significance ($p < 0.05$) with regard to the sub-variable external regulation.

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was applied to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the sub-variable external regulation. The results of LSD Post-hoc test have been presented in table-4.

Table-4

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the sub-variable external regulation

Means		Mean differences	P-value (Sig.)
Wrestling (9.56)	Boxing (6.98)	2.58*	.000
	Judo (8.09)	1.47*	.007
Boxing (6.98)	Wrestling (9.56)	2.58*	.000
	Judo (8.09)	1.11*	.040
Judo (8.09)	Wrestling (9.56)	1.47*	.007
	Boxing (6.98)	1.11*	.040

*Significant at 0.05

It has been observed from table-4 that mean difference between wrestling and boxing game female athletes was found 2.58. The P-value (Sig.) .000 showed that the wrestling game female athletes had demonstrated significantly better on the sub-variable external regulation than their counterpart boxing game female athletes.

The mean difference between wrestling and judo game female athletes was found 1.47. The P-value (Sig.) .007 revealed that wrestling game female athletes had demonstrated significantly better on the sub-variable external regulation than their counterpart judo game female athletes.

The mean difference between boxing and judo game female athletes was found 1.11. The P-value (Sig.) .040 exposed that judo game female athletes had demonstrated significantly better on the sub-variable external regulation than their counterpart boxing game female athletes. The graphical representation of mean scores with regard to the sub-variable external regulation has been exhibited in figure-2.

Figure-2

Graphical representation of mean scores with regard to the sub-variable external regulation among individual game female athletes (wrestling, boxing and judo)

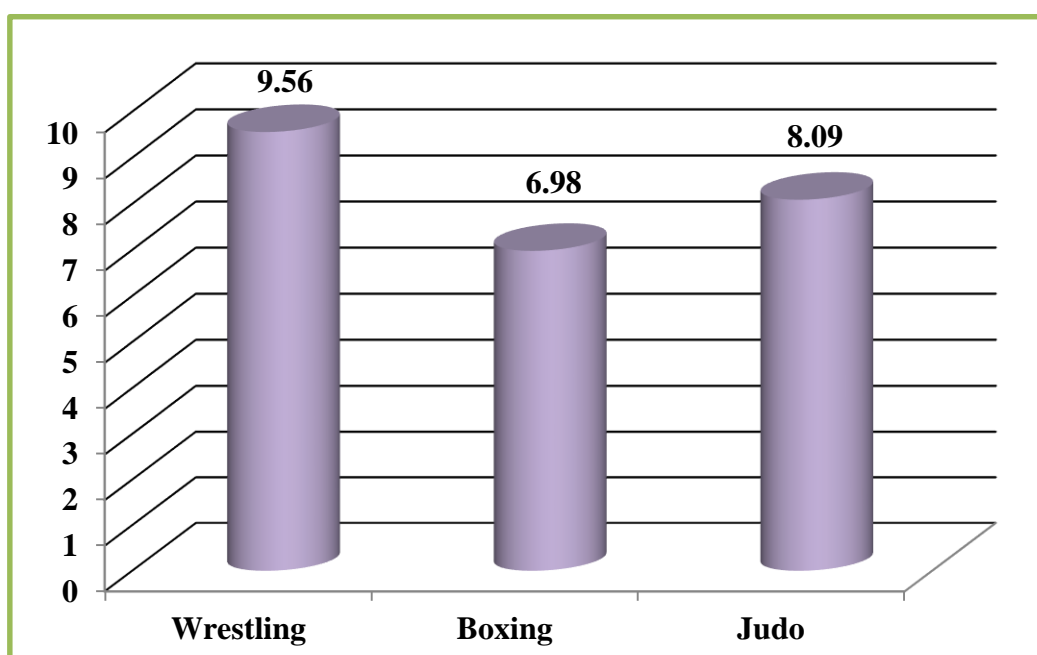


Table-5

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the sub-variable introjected regulation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)
Between Groups	82.127	2	41.063	5.716*	.004
Within Groups	2133.540	297	7.184		
Total	2215.667	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been observed from table-5 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .004 was found smaller than 0.05 level of significance ($p < 0.05$) with regard to the sub-variable introjected regulation.

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was employed to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the sub-variable introjected regulation. The results of LSD Post-hoc test have been presented in table-6.

Table-6

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the sub-variable introjected regulation

Means		Mean differences	P-value (Sig.)
Wrestling (7.06)	Boxing (7.33)	0.27	.477
	Judo (6.11)	0.95*	.013
Boxing (7.33)	Wrestling (7.06)	0.27	.477
	Judo (6.11)	1.22*	.001
Judo (6.11)	Wrestling (7.06)	0.95*	.013
	Boxing (7.33)	1.22*	.001

*Significant at 0.05

It has been observed from table-6 that mean difference between wrestling and boxing game female athletes was found 0.27. The P-value (Sig.) .477 showed that the wrestling and boxing game female athletes had exhibited almost equally on the sub-variable introjected regulation as statistically insignificant differences were found between both the groups.

The mean difference between wrestling and judo game female athletes was found 0.95. The P-value (Sig.) .013 revealed that wrestling game female athletes had demonstrated significantly better on the sub-variable introjected regulation than their counterpart judo game female athletes.

The mean difference between boxing and judo game female athletes was found 1.22. The P-value (Sig.) .001 exposed that boxing game female athletes had exhibited significantly better on the sub-variable introjected regulation than their counterpart judo game female athletes. The graphical representation of mean scores with regard to the sub-variable introjected regulation has been exhibited in figure-3.

Figure-3

Graphical representation of mean scores with regard to the sub-variable introjected regulation among individual game female athletes (wrestling, boxing and judo)

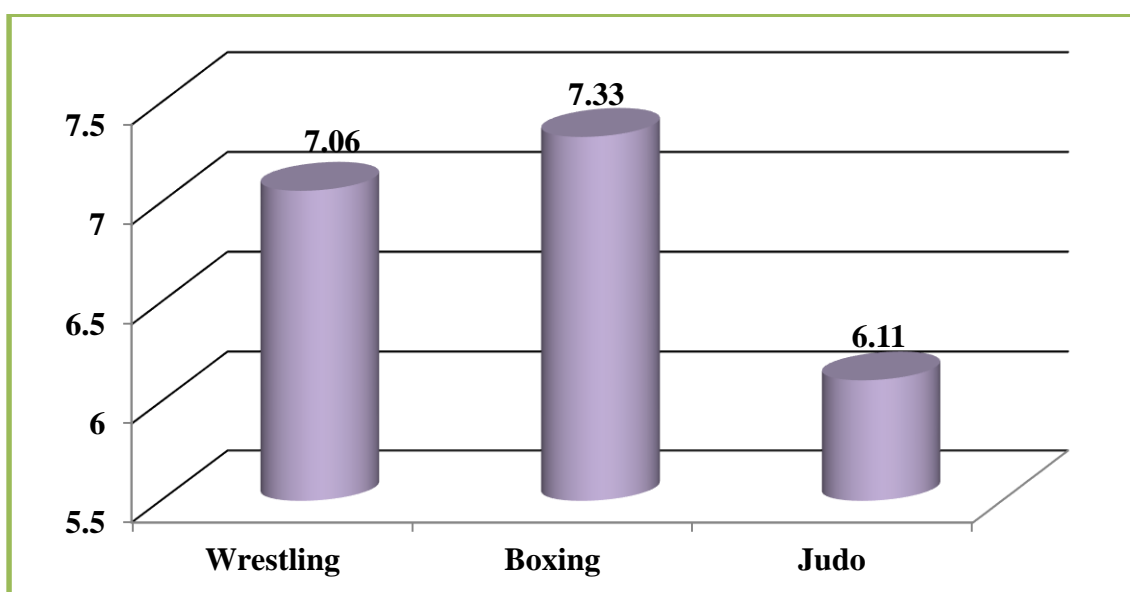


Table-7

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the sub-variable identified regulation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)
Between Groups	799.980	2	399.990	34.230*	.000
Within Groups	3470.590	297	11.685		
Total	4270.570	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been noticed from table-7 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .000 was found smaller than 0.05 level of significance ($p < 0.05$) with regard to the sub-variable identified regulation.

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was employed to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the sub-variable identified regulation. The results of LSD Post-hoc test have been presented in table-8.

Table-8

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the sub-variable identified regulation

Means		Mean differences	P-value (Sig.)
Wrestling (8.98)	Boxing (11.59)	2.61*	.000
	Judo (7.66)	1.32*	.007
Boxing (11.59)	Wrestling (8.98)	2.61*	.000
	Judo (7.66)	3.93*	.000
Judo (7.66)	Wrestling (8.98)	1.32*	.007
	Boxing (11.59)	3.93*	.000

*Significant at 0.05

It has been observed from table-8 that mean difference between wrestling and boxing game female athletes was found 2.61. The P-value (Sig.) .000 showed that the boxing game female athletes had demonstrated significantly better on the sub-variable identified regulation than their counterpart wrestling game female athletes.

The mean difference between wrestling and judo game female athletes was found 1.32. The P-value (Sig.) .007 revealed that wrestling game female athletes had demonstrated

significantly better on the sub-variable identified regulation than their counterpart judo game female athletes.

The mean difference between boxing and judo game female athletes was found 3.93. The P-value (Sig.) .000 exposed that boxing game female athletes had demonstrated significantly better on the sub-variable identified regulation than their counterpart judo game female athletes. The graphical representation of mean scores with regard to the sub-variable identified regulation has been exhibited in figure-4.

Figure-4

Graphical representation of mean scores with regard to the sub-variable identified regulation among individual game female athletes (wrestling, boxing and judo)

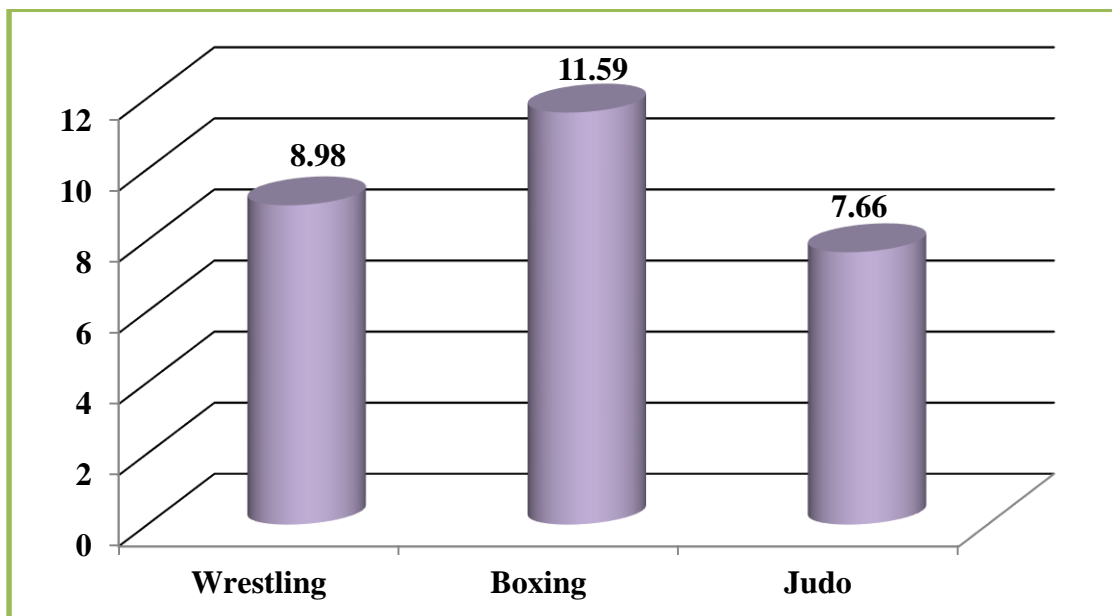


Table-9

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the sub-variable intrinsic regulation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)
Between Groups	436.460	2	218.230	19.977*	.000

Within Groups	3244.420	297	10.924		
Total	3680.880	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been seen from table-9 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .000 was found smaller than 0.05 level of significance (p<0.05) with regard to the sub-variable intrinsic regulation.

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was employed to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the sub-variable intrinsic regulation. The results of LSD Post-hoc test have been presented in table-10.

Table-10

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the sub-variable intrinsic regulation

Means		Mean differences	P-value (Sig.)
Wrestling (9.26)	Boxing (11.11)	1.85*	.000
	Judo (8.19)	1.07*	.023
Boxing (11.11)	Wrestling (9.26)	1.85*	.000
	Judo (8.19)	2.92*	.000
Judo (8.19)	Wrestling (9.26)	1.07*	.023
	Boxing (11.11)	2.92*	.000

*Significant at 0.05

It has been observed from table-10 that mean difference between wrestling and boxing game female athletes was found 1.85. The P-value (Sig.) .000 showed that the boxing game female athletes had demonstrated significantly better on the sub-variable intrinsic regulation than their counterpart wrestling game female athletes.

The mean difference between wrestling and judo game female athletes was found 1.07. The P-value (Sig.) .023 revealed that wrestling game female athletes had demonstrated significantly better on the sub-variable intrinsic regulation than their counterpart judo game female athletes.

The mean difference between boxing and judo game female athletes was found 2.92. The P-value (Sig.) .000 exposed that boxing game female athletes had demonstrated significantly better on the sub-variable intrinsic regulation than their counterpart judo game female athletes. The graphical representation of mean scores with regard to the sub-variable intrinsic regulation has been exhibited in figure-5.

Figure-5

Graphical representation of mean scores with regard to the sub-variable intrinsic regulation among individual game female athletes (wrestling, boxing and judo)



Table-11

Analysis of Variance (ANOVA) results among individual game female athletes with regard to the variable behavioural regulation in exercise (total)

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	P-value (Sig.)

Between Groups	1975.340	2	987.670	8.132*	.000
Within Groups	36070.380	297	121.449		
Total	38045.720	299			

*Significant at 0.05

F_{0.05} (2, 297)

It has been noticed from table-11 that significant differences were found among individual game female athletes (wrestling, boxing and judo) as the P-value (Sig.) .000 was found smaller than 0.05 level of significance ($p < 0.05$) with regard to the variable behavioural regulation in exercise (total).

Since the F-value found significant, therefore, Least Significant Difference (LSD) Post-hoc test was employed to study the direction and degree of differences between paired means among individual game female athletes (wrestling, boxing and judo) with regard to the variable behavioural regulation in exercise (total). The results of LSD Post-hoc test have been presented in table-12.

Table-12

Analysis of Least Significant Difference (LSD) Post-hoc test among individual game female athletes with regard to the variable behavioural regulation in exercise (total)

Means		Mean differences	P-value (Sig.)
Wrestling (44.29)	Boxing (43.85)	0.44	.778
	Judo (38.64)	5.65*	.000
Boxing (43.85)	Wrestling (44.29)	0.44	.778
	Judo (38.64)	5.21*	.001
Judo (38.64)	Wrestling (44.29)	5.65*	.000
	Boxing (43.85)	5.21*	.001

*Significant at 0.05

It has been observed from table-12 that mean difference between wrestling and boxing game female athletes was found 0.44. The P-value (Sig.) .778 showed that the wrestling and boxing game female athletes had demonstrated almost equally on the variable

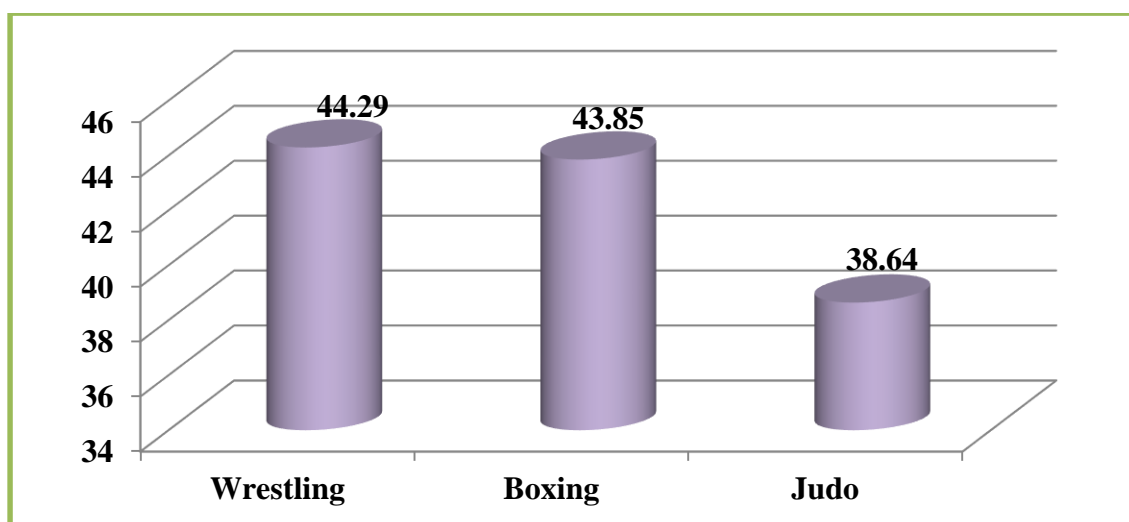
behavioural regulation in exercise (total) as statistically insignificant differences were found between both the groups.

The mean difference between wrestling and judo game female athletes was found 5.65. The P-value (Sig.) .000 revealed that wrestling game female athletes had demonstrated significantly better on the variable behavioural regulation in exercise (total) than their counterpart judo game female athletes.

The mean difference between boxing and judo game female athletes was found 5.21. The P-value (Sig.) .001 exposed that boxing game female athletes had demonstrated significantly better on the variable behavioural regulation in exercise (total) than their counterpart judo game female athletes. The graphical representation of mean scores with regard to the variable behavioural regulation in exercise (total) has been exhibited in figure-6.

Figure-6

Graphical representation of mean scores with regard to the variable behavioural regulation in exercise (total) among individual game female athletes (wrestling, boxing and judo)



DISCUSSION

It is evident from the results that significant differences were found among individual game female athletes on the sub-variables i.e. amotivation, external regulation, introjected

regulation, identified regulation, intrinsic regulation and behavioural regulation in exercise (total). Wrestling game female athletes demonstrated significantly better on the sub-variables i.e. amotivation, external regulation, behavioural regulation in exercise (total). These results might be due to the fact that the wrestling coach had extended motivation, concentration and control over wrestling female athletes which enabled them to do better than their counterpart boxing and judo game female athletes. Gillet et al. (2010) found that the more the athletes perceived their coach to be autonomy-supportive, the more their motivation for practicing their sport activity was self-determined. Results also demonstrated that situational self-determined motivation was significantly and positively predicted by athlete's self-determined motivation toward their sport activity. While comparing the mean scores of all the groups, it has been found that boxing game female athletes were found significantly better on the sub-variables; introjected regulation, identified regulation, intrinsic regulation than wrestling and judo game female athletes. Amorose and Horn (2000) revealed that athletes with higher intrinsic motivation perceived their coach to exhibit a leadership style that emphasized training and instruction and was high in democratic behaviour and low in autocratic behaviour. They also revealed that athletes with higher levels of intrinsic motivation perceived their coaches provided high frequencies of positive and informationally based feedback and low frequencies of punishment-oriented and ignoring behaviour. Hansen et al. (2003) described that challenging players verbally, informing athletes of their mistakes, and making changes at important moments during a game are important aspects of a good motivational environment. Some of the greatest coaches believe their leadership skills are a useful tool in motivating their athletes. Ames (1992) stated that a sports coach in team sports as well as in individual sports is in an unequal power situation with his athletes, which gives him the privilege of making decisions that effect the whole motivational climate. Amorose (2007) stated that intrinsically motivated individuals are more likely to choose to participate and work hard when extrinsic rewards or reinforcements are not available, experience lower levels of performance-related anxiety, and exhibit greater levels of skill learning relative to those with a more extrinsic motivational orientation.

CONCLUSION

It is concluded from the above results that significant differences were found among individual game female athletes on the sub-variables i.e. amotivation, external regulation, introjected regulation, identified regulation, intrinsic regulation and the variable behavioural

regulation in exercise (total) ($p < 0.05$). The wrestling game female athletes had demonstrated better on the sub-variables i.e. amotivation, external regulation and the variable behavioural regulation in exercise (total) than their counterpart boxing and judo game female athletes. Similarly, the boxing game female athletes had exhibited better on the sub-variables i.e. introjected regulation, identified regulation, intrinsic regulation than their counterpart wrestling and judo game female athletes.

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