



THE CORRELATION BETWEEN PERSONALITY DISORDERS IN SECOND-YEAR FEMALE STUDENTS AND THEIR PERFORMANCE IN SELECTED FLOOR EXERCISES IN ARTISTIC GYMNASTICS

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Abstract

The study intends to ascertain the disturbed personality of female students in their second and third year at Al-Mustansiriya University's College of Basic Education, Department of Physical Education and Sports Science, as well as the degree to which these students perform in certain floor exercises in accordance with their disturbed personalities. Understanding the connection between the research sample's performance on floor exercises and troubled personalities is another goal of the study. The researcher employed survey and correlational approaches in conjunction with the descriptive method, which she thinks to be consistent with her research criteria and effective in accomplishing the study's goals.

Sixty-four second-year female students from Al-Mustansiriya University's Department of Physical Education and Sports Science, College of Basic Education, were included in the research population and sample. Stratified random sampling was used to pick the fifty-four students who made up the research sample, or 87.09% of the total population. The 2008 Zerwal Personality Disorder Scale, which consists of ninety items and is categorized into nine personality disorder types—schizoid, schizoic, antisocial, avoidant, borderline, narcissistic, dependent, and hysterical—was employed by the researcher. With a score of 0.91 for scientific validity and 0.88 for reliability, the scale exhibits strong reliability.

In addition to the overall performance score for each student completing the floor exercises taught within the second-year curriculum in the Department of Physical Education and Sports Science, College of Basic Education, Al-Mustansiriya University, the researcher also created an evaluation form for floor exercises based on the primary, preparatory, and final movement classifications. The data was processed, and the key findings were extracted by the researcher using the Statistical Package for the Social Sciences (SPSS), which included:

1. The Department of Physical Education and Sports Science at Al-Mustansiriya University's second- and third-year female students are typified by hysterical, avoidant, and dependent unstable personalities.
2. Front roll and handstand motions were significantly correlated negatively with the hysterical personality index, according to the results.
3. All floor exercises and the avoidant personality index had a substantial positive link, according to the results.

The study suggests that when admitting female students to the Department of Physical Education and Sports Science, the emphasis should be on disturbed personality assessments. Additionally, research should be done to investigate the connection between disturbed personality and performance on other gymnastics apparatus.

Keywords: Disturbed Personality, Floor Exercises, Artistic Gymnastics



Introduction and Significance of the Research

1-1 Introduction and Significance

Abrupt mood swings and behaviors are indicative of a troubled personality. These people frequently display compulsive behaviors or erratic, frequent outbursts of rage. Their inability to fit in causes them to lose ground in social and emotional interactions. They might struggle with impulse control, emotional emptiness, and self-instability. To lessen the negative effects of their personality disorder and enhance their quality of life, these people need proper psychological therapy as well as emotional support.

Girls' ability to perform artistic gymnastics moves skillfully can be adversely affected by disturbed personalities. A girl's ability to concentrate and do tasks with accuracy and professionalism can be affected by the mood swings of a disordered personality. Furthermore, social communication and interpersonal adjustment issues might have a negative impact on group artistic gymnastics results. Furthermore, people with unstable personalities may find it difficult to restrain their impulses. This can have an impact on the accuracy and correctness with which motions are executed as well as emotional equilibrium, all of which can damage an individual's capacity to deal with and interact with training and competitions. Consequently, to address their psychological difficulties and improve their technical performance in artistic gymnastics, girls with troubled personalities must obtain the essential professional treatment and assistance, in addition to the emotional and psychological care they require.

Teaching and learning in the field of physical education and sports sciences can benefit from the classification of students based on their disordered personalities. With a greater understanding of the students' personality and how they perform in rolls, handstands, jumps, and other floor exercises in artistic gymnastics, this classification helps trainers prepare classes more effectively. Teachers at Al-Mustansiriyah University's Department of Physical Education and Sports Sciences can assess their ability to do these motions by conducting a personality-based study on their female students and categorizing them. Through the connection to personality types, this classification can help students become more proficient in these actions. As a result, this research is crucial to assisting in the teaching and learning process in the fields of sports sciences and physical education.

1-2 Research Problem

To succeed at an elevated level in the fields of physical education and sports sciences, one must put aside personal judgment and work hard and make excellent plans based on scientific principles. Female students' entrance into the College of Basic Education - Al-Mustansiriyah University's Department of Physical Education and Sports Sciences is frequently determined by their physical attributes and fundamental athletic capabilities. Even though these sessions are rare, they frequently have an impact on students' performance, particularly when it comes to learning techniques and using gymnastics equipment. Lack of these equipment and instruction on them makes it difficult for female students to develop gymnastics abilities and routines, which presents problems for teachers and students alike. It is imperative for academic scholars and gymnastics instructors to investigate the impact of disturbed personalities on students' performance during floor exercises. Through a clearer knowledge of the relationship between female students' troubled personalities and their performance in gymnastics movements, this study seeks to provide a modest scientific contribution. This study is regarded as a significant contribution to knowledge and science.

1-3 Research Objectives

1. To determine which female students in the second and third years of the College of Basic Education at Al-Mustansiriyah University's Department of Physical Education and Sports Sciences have troubled personalities.
2. To assess how well female students execute on specific floor exercises based on their troubled personalities.



3. To comprehend the connection between the research sample's performance on floor workouts and disturbed personality.

1-4 Research Hypotheses

The performance of second- and third-year female students in the Department of Physical Education and Sports Sciences at Al-Mustansiriyah University shows a statistically significant correlation with disturbed personality.

1-5 Research Fields

1. Human Field: For the academic year 2023–2024, second-year female students in the College of Basic Education, Al-Mustansiriyah University, Department of Physical Education and Sports Sciences.

2. Temporal Field: April 3, 2024 – April 25, 2024.

3. Spatial Field: The locked gymnasium of Al-Mustansiriyah University's Department of Physical Education and Sports Sciences, College of Basic Education.

3. Research Methodology and Field Procedures

3-1 Research Method

The researcher used the descriptive method with survey and correlational techniques, as it aligns with the specifications and requirements of her study.

3-2 Research Population and Sample

The study population comprised sixty-four female students in their second year of study at Al-Mustansiriyah University's Department of Physical Education and Sports Sciences, College of Basic Education. Stratified random sampling was used to pick the fifty-four students who made up the research sample, or 87.09% of the total population.

3-3 Research Tools and Equipment Used

1. Sources and references.

2. Observation.

3. Floor exercise evaluation form.

4. Device for measuring weight and height.

5. Mats.

6. Casio electronic calculator.

7. DELL computer.

3-4 Procedures for Determining Study Variables

3-4-1 Procedures for Determining Disturbed Personality¹

The 2008 Zerwal Personality Disorder Scale, which consists of ninety items and is categorized into nine personality disorder types—schizoid, schizoic, antisocial, avoidant, borderline, narcissistic, dependent, and hysterical—was employed by the researcher. With a score of 0.91 for scientific validity and 0.88 for reliability, the scale exhibits strong reliability. Each student's disturbed personality was identified following the standardization of the scale for the research sample of second-year female students in the College of Basic Education, Al-Mustansiriyah University, Department of Physical Education and Sports Sciences, for the academic year 2023–2024.

During the academic year 2023–2024, the researcher gave the scale to fifty-four second-year students in the closed gymnasium of the Department of Physical Education and Sports Sciences, College of Basic

¹ Ben Zeroual, Fatiha. "Personality Patterns and Their Relationship with Stress: Levels, Symptoms, Sources, and Coping Strategies." Published PhD Dissertation, Faculty of Humanities and Social Sciences, University of Mentouri Constantine. Anglo Egyptian Bookshop for Publishing and Distribution, Cairo, Egypt, 2088, pp. 67-69.



Education, Al-Mustansiriyah University. Three disturbed personality types were identified in the students after they completed the scale: hysterical (12 students), avoidant (32 students), and dependent (10 students).

3-4-2 Procedures for Determining Floor Exercises

In addition to the overall performance score for each student completing the floor exercises taught within the second-year curriculum in the Department of Physical Education and Sports Sciences, College of Basic Education, Al-Mustansiriyah University, the researcher created an evaluation form for floor exercises based on the primary, preparatory, and final movement classifications:

1. Front roll with legs apart.
2. Back roll.
3. Handstand.

3-4-3. The Pilot Study

Five students were chosen at random from the research population to participate in a pilot study that the researcher conducted on 2024/4/2. The aim was to determine the validity and reliability of the floor exercise evaluation form from a scientific standpoint, as well as to identify any challenges and roadblocks that the researcher might encounter.

3-4-4. Scientific Foundations of the Evaluation Form

First: Validity of the Form:

When the floor exercise assessment form under examination was shown to a panel of experts and specialists, they confirmed that it was appropriate for calculating each student's floor exercise score, thereby achieving content validity.

Second: Reliability of the Form:

The researcher evaluated the performance of the sample students using assessments from three judges for their floor exercises to ascertain the inter-rater reliability, which is a source of variance in scores for exams depending on evaluators' judgments rather than a right key. Subsequently, the investigator computed the Spearman correlation coefficient pertaining to the assessments of the initial and subsequent judges, as well as the initial and subsequent judges. Table 2 presents the findings.

Table (2) Spearman Correlation Coefficient Values (Correction Reliability Coefficient) for the Floor Exercise Performance Evaluation Form

Floor Exercise	Spearman Correlation Coefficient between Judge 2 and Judge 3	Spearman Correlation Coefficient between Judge 1 and Judge 3	Spearman Correlation Coefficient between Judge 1 and Judge 2
Front Roll with Legs Apart	0.794	0.832	0.812
Back Roll	0.836	0.869	0.859
Handstand	0.791	0.833	0.841

3-5. Main Experiment

The researcher started the experiment with the research sample of second-year students from the Department of Physical Education and Sports Sciences, College of Basic Education, Al-Mustansiriyah University, after completing the procedures required for conducting the main experiment, verifying the validity of the floor exercise performance evaluation form under study, and ensuring that the devices for measuring weight and height were ready. Fifty-four students made up the sample, and the experiment was conducted on April 10 and 11, 2024. The researcher then went on to enter data and do statistical analysis.



3-6. Statistical Methods Used

The researcher used the Statistical Package for Social Sciences (SPSS) to process the data and extract the following statistics:

1. Percentage
2. Mean
3. Standard Deviation
4. Pearson Correlation Coefficient
5. Spearman Correlation Coefficient

4. Research Results: Presentation, Analysis, and Discussion

To achieve the study's objectives and test its hypotheses, the researcher undertook several procedures, including:

4-1. Preparation of Initial Data for Research Variables

The researcher examined the students' personalities and their performance in floor exercises after gathering the study's data. Three personality types were identified in the students: reliant, avoidant, and hysterical. It was discovered that thirty-two students had an avoidant personality, ten had a dependent personality, and twelve had a hysterical personality. Furthermore, personality types were considered while calculating the mean values and standard deviations of the students' performance in each activity. This made it possible to accomplish the study's two main goals: to determine the disturbed personality types of second- and third-year students in the Department of Physical Education and Sports Sciences at Al-Mustansiriyah University's College of Basic Education, and to comprehend how these students performed floor exercises. Table demonstrates this (3).

Table (3) Shows the Disturbed Personality Types, Sample Size, and Mean and Standard Deviation Values for Floor Exercises

Floor Exercise	Personality Type	Sample Size	Mean	Standard Deviation
Front Roll with Legs Apart	Dependent Personality	10	5.84	0.834
	Avoidant Personality	32	6.32	0.814
	Hysterical Personality	12	4.71	0.904
Back Roll	Dependent Personality	10	6.14	1.07
	Avoidant Personality	32	8.2	0.712
	Hysterical Personality	12	5.62	0.942
Handstand	Dependent Personality	10	4.7	0.940
	Avoidant Personality	32	6.9	0.359
	Hysterical Personality	12	2.96	0.645

4-2 Relationship Between Disturbed Personality and Floor Exercises

The researcher employed statistical methods such as Pearson correlation coefficients and Spearman's rank correlation coefficients to identify the association between disturbed personality and floor exercise performance among the research sample, which is the study's main objective. Students' performance ratings on floor activities for those with a dependent or hysterical personality type were compared to disturbed personality markers using Spearman's correlation coefficient. The association between students' performance scores on floor exercises for avoidant personality types and markers of disordered personality was examined using Pearson's correlation coefficient.

4-2-1 Relationship Between Hysterical Personality Indicators and Floor Exercises: Analysis and Discussion



Positive correlations were found between each personality indicator and the front roll, back roll, and consecutive side wheel exercises, as determined by statistically analyzing the data on disturbed hysterical personality and using Spearman's rank correlation coefficient to examine the relationship between each personality indicator and the students' performance scores in floor exercises. On the other side, there were negative connections found between the personality indicator and front rolls with legs apart and handstands. Table (4) serves as an example.

Table (4): Spearman's Rank Correlation Coefficients Between Hysterical Personality Indicators and Floor Exercise Performance

Floor Exercises	Hysterical Personality Indicator
Consecutive Side Wheel	0.263
Handstand	-0.711
Back Roll	-0.694
Front Roll with Legs Apart	0.314
Front Roll (Tucked)	0.334

The critical value of the correlation coefficient for a sample size of twelve is 0.497.

It is clear from looking at Table (4) that the activities of front rolls with legs apart and handstands have a substantial negative connection with the hysterical personality characteristic. This suggests that the ability to perform gymnastic floor exercises is inversely correlated with markers of hysterical personality. Given that performing skills and motions on gymnastic equipment demands a non-disordered personality, the researcher argues that one of the most essential factors for selecting gymnastic athletes is a stable and non-disordered personality. Previous research has connected hysterical personalities with gymnastic abilities. A person's performance in gymnastics may be impacted by a hysterical personality due to characteristics including extreme emotionality, attention seeking, and motor habits. Gymnasts may perform worse due to excessive worry, external appearances, or distractions caused by a histrionic nature. For this reason, it is critical to comprehend how a hysterical personality affects gymnastic performance and to design training plans that improve these people's performance. Therefore, further research may shed more light on the connection between professional gymnastics abilities and hysterical personalities and offer suggestions for enhancing the performance of those who fit this personality type.

4-2-2 Relationship Between Schizoid Personality Indicators and Floor Exercises:

The results demonstrated significant positive correlations between the schizoid personality indicator and all floor exercises, based on statistical analysis of schizoid personality data and an examination of the relationship between each student's schizoid personality indicator and their scores on floor exercises using Pearson correlation coefficients. A table (5) shows this.

Table (5) shows the Pearson correlation coefficients between schizoid personality indicators and floor exercises performance.

Variable	Sequential Sidewheel	Arm Stand	Back Roll	Front Roll (Open)	Front Roll (Tucked)
Schizoid Personality Index	0.779	0.687	0.784	0.749	0.632

The table value for the correlation coefficient for a sample size of (32) is (0.325).

A further look at Table (5) reveals a strong positive link between the students' performance ratings on floor activities and the schizoid personality index. This suggests a direct correlation between the schizoid personality score and floor exercise performance. The researcher thinks that because gymnastics depends on strength, movement, agility, coordination, balance, and dynamic activity, a gymnast needs to be non-schizoid



in nature. The hallmark of schizoid personality disorder is excessive anxiety when interacting with others and forming social bonds. Several factors can influence how well females accomplish artistic gymnastics skills when they have this disorder:

- Communication difficulties with peers and coaches: People with schizoid personalities may find it difficult to communicate with peers and coaches, which can have a detrimental effect on their experience practicing artistic gymnastics.
- Low self-confidence: People with schizoid personalities may have low self-confidence, which can impair their ability to do floor exercises and training.
- Emotional dysphoria: People who struggle to communicate their sentiments and emotions may find it difficult to engage with others in a group setting.²

4-2-3 Relationship Between Dependence Personality Indicators and Floor Exercises:

Positive correlations between the dependent personality disorder index and arm stand movements were found through statistical analysis of the dependent personality disorder data and Spearman correlation coefficient correlation of the disorder index with the students' performance scores on floor exercises. The dependent personality disorder index and the tucked and open front roll movements also showed substantial negative relationships. As seen in Table (6):

Table (6) shows the Spearman correlation coefficients between the indicators of dependent personality and performance in floor exercises.

Variables	Sequential Side Wheel	Handstand	Back Roll	Forward Roll (Open)	Forward Roll (Curled)
Dependent Personality Indicator	0.319	0.211	0.388	-0.648	-0.564

The tabular value of the correlation coefficient for a sample of (10) is (0.523)

Table (6) makes it evident that the dependent personality disorder indicator and the students' performance scores in the open-ended and closed-ended forward roll activities have a statistically significant negative link. This suggests that the performance in the forward roll (open) and the curled forward roll is inversely correlated with the dependent personality disorder. According to Abdul Salam et al. (2020), "Dependent personality disorder is a psychological condition characterized by a profound need for self-confirmation and reliance on others to feel comfort and security," which is something the researcher concurs with.³ This personality may occasionally show up when female students are performing artistic gymnastics. The students' performance in gymnastics may suffer because of their reliant personality traits. A girl's self-confidence and independence might be impacted by an over-reliance on outside affirmation. If they do not receive ongoing affirmation, a dependent person may become anxious and stressed out as well as experiencing self-doubt.⁴

² Mohammed Qasem Abdullah: "Introduction to Mental Health," Amman: Dar Al-Fikr Al-Arabi for Printing and Publishing, 2004, p. 29.

³ Rashid Helmy Abdul Salam et al.: "The Personality Traits of Sports Coaches as Perceived by Gymnastics Youth," Published Research, Special Issue on Research Derived from Master's and Doctoral Theses, Volume 90, Scientific Journal of Physical Education and Sports Sciences, Faculty of Physical Education for Boys, Helwan University, 2020, p. 7.

⁴ **Muhannad Omar & Awad Bdeir:** *Personality Traits and Their Relationship with Sports Achievement Motivation among Football Coaches in the West Bank, Palestine.* Published research, *Journal of Al-Istiqlal University for Research*, Volume 5, Issue [number], 2018, p488.



Students with dependent personalities require a lot of help and encouragement to build their own skills and sense of independence. Rather than depending too much on their trainers or peers, they can be encouraged to embrace gymnastics as a tool to develop their mental health and self-confidence.

The results of the study confirm that a student's personality type plays a significant role in how effectively they do artistic gymnastics floor exercises. This relationship may be affected by technique, patience, self-assurance, discipline, and other personality traits. These qualities might aid athletes in learning and refining their motor skills for gymnastics.

People who experience significant amounts of stress and anxiety may find it difficult to accomplish tasks accurately because psychological strain impairs thinking and focus. Individuals possessing a high capacity for positive thinking and concentration may find it easier to accomplish floor exercise abilities with accuracy and skill. It could be simpler for people with psychologically adaptable personalities to advance their artistic gymnastics abilities because they can adjust to a variety of stresses and challenges.⁵

Coaches can better support and guide athletes in developing their floor movement skills by having a better understanding of their personality types.⁶ Athletes can also receive psychological counseling and support to help them reach their artistic gymnastics goals and enhance their performance. Gymnasts have rich personalities that are well-suited to mentoring and inspiring their peers.⁷

During performances, a strong leader displays her artistic talent and inventiveness while delivering precise and beautiful moves and helping the group achieve goals. She works hard to develop her skills and perform better, which is what makes her a disciplined and resolute athlete. She also continually tries to build distinctive routines that distinguish her from others by inventing new and inventive moves.

Because personality patterns have such a profound effect on how people behave and perceive themselves in reaction to different stimuli, they are among the most important parts of psychology that need to be thoroughly studied. Personality qualities have a significant impact on performance in sports. This is seen by the way athletes respond to diverse circumstances while playing, demonstrating the impact of their personalities in a range of contexts."⁸

5 - Conclusions and Recommendations:

5-1 Conclusions:

Based on the procedures and data analysis of the research, the following conclusions were reached:

1. Characteristics: Female students in the second and third years of Al-Mustansiriya University's Physical Education and Sports Sciences Department had disturbed personalities, such as dependent, hysterical, and avoidant kinds.
2. Hysterical Personality: The performance of forward rolls and handstands was significantly correlated negatively with the hysterical personality indication.
3. Avoidant Personality: All floor workouts showed a substantial positive connection with the avoidant personality trait.

⁵ Zahra Shahab Ahmad: *A Comparative Study of Personality Traits Among Artistic and Rhythmic Gymnasts*, Published Research, *Journal of Physical Education*, Vol. 11, Issue 20, 2020, p. 158.

⁶ Boughazi El Habib & Nouari El Antari: "A Study of Personality Traits and Their Comparison According to School Sports Activity and Academic Specialization Among Physical Education and Sports Students," Published Research, *Journal of Sciences and Techniques of Physical and Sporting Activities*, University Center of Amar Toman, El Oued, Algeria, 2015, p. 87.

⁷ Mokhtar Amin et al.: "Personality Traits and Their Relationship with Achievement Motivation in Gymnastics Youth". Published research, *Beni Suef Journal of Physical Education and Sports Sciences*, Volume 1, Issue 1, March Part 1, 2018, p. 22.

⁸ Ahmed Qasem Mohamed and Jan Walat Mahmoud: *Disturbed Personality Patterns Among Volleyball Players in Sports Clubs in the Kurdistan Region*, Published Research, *Journal of Sports Education Sciences*, Volume 16, Issue 6, 2023, p. 365.



4. Dependent Personality: The performance of forward and backward rolls was significantly correlated negatively with the dependent personality indicator.

5-2 Recommendations:

Based on the study results, the researcher recommends the following:

1. Assessment Focus: When admitting students to the Department of Physical Education and Sports Sciences, place special emphasis on the assessment of disordered personality features.
2. Additional Research: Investigate the connection between the execution of additional gymnastic routines on gymnastic equipment and disturbed personality features.
3. Wider Research: Employing bigger sample sizes, investigate the connection between deviant personality traits and the execution of maneuvers and abilities in alternative sports.

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