



Mental health status and resilience of female prisoners with an interventional role of physical activity

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Abstract

Imprisoned people have usually a poor health status in comparison with the general population. The aim is to exploring. The current study is an applied research and aimed to exploring the relationship between mental health and resilience of 99 women prisoners who participated in recreational sport classes. The data were collected through goldberg's general health questionnaire, with reliability (0.93) and connor-davidson resilience scale with reliability (0.97). Results showed that 59.6% of participants were aged between 20-25 years old and 67.7% of them were between 12 and 36 months in prison. Furthermore, the mental health status of female inmates was as great as possible, but their resilience was insufficient and low. No relation existed between prisoners' age and mental status but was observed a significant correlation between the resilience and age of them. On the other hand, significant difference was noted between mental health status and resilience of female inmates by type of crime, and a negative significant relation was also found between mental health status and resilience due to the amount of conviction. However we didn't found significant relationship between prisoners' mental health status and resilience in this study but many women prisoners suffer from mental disturbances and physical activity and sport recreational facilities along with psychological and psychiatric care in prisons can be a shortcut to managing these illnesses.

Keywords: Females, Mental Health, Physical Activity, Resilience

Introduction

The problem of psychology and psychotherapy with physical activity and the impact of exercise on mental health has been given much attention in latest centuries. The results indicate a close connection between practice and mental improvement, including emotional states and self-knowledge [1]. On the other side, over the previous two centuries, the

connection between practice and mental health has been highlighted. Practicing intervention has considerable advantages in treating depression, excitement and dietary disorders [2]. This is while people have been punished in different ways in defense of their rights, freedom, life and property, offender and aggressor; and society has been punished

throughout history for maintaining order, calm and safety, and punishing others and offenders. But such penalties could not deter delinquency, particularly since the imposition of a prison sentence as a criminal procedure and as a change in the severity of the penalty after death was disclosed, the prison's losses, failures and issues became apparent [3]. It may be argued that such a result has been generated by the right application of corrective and therapeutic techniques in prisons; however, comprehensive examination of alternative techniques of penalty in prisons is necessary. The damaging effects of imprisonment on the inmate, his family, his work, social and family background have been challenged about the effect of imprisonment on stopping certain individuals from committing crime or reforming offenders [4].

The profound effect he has on his soul is one of the consequences of imprisonment on a prisoner. On the other side, the individual entering the prison feels caught in a scheme dominated by him and wants him to adapt as quickly as possible to the prison's internal conditions, particularly with its laws of behavior and social algebras [5]. First of all, together with this scheme, the inmate is encircled by a prison authorities and managers supervisory system. In some instances, both systems conflict, and in some instances it is also noted that only a prison system is a cognitive system and is the primary driver of the prisoner's behaviourbehavior. A newly imprisoned inmate who has not yet been engaged with other inmates in social relations and who has an unfamiliar and unknown presence among inmates. On the other side, it can go into isolation and decrease due to the anxiety and discomfort created by encountering this new environment. You may experience serious nostalgia and feel alert or have anxiety, anxiety and extreme anxiety [6]. The concern of newly arrived inmates is the fear of abortion that impacts one's reliance on ordinary people's standards. There are also many issues, such as the feeling of rejection by the society, family, friends and family, the concern for the family and the unhealthy manner of staying, whether they are concerned about their economic issues

or their mental and social issues, the fear of being rejected from the workplace and losing a job and lastly worrying about the issues that make up the prison atmosphere [6,7]. More than 75 percent of inmates have mental disorders, according to the studies, and mental disorders are much more common in prison than in society [8]. In this respect, researchers refer to sport and recreation and physical activity as an efficient approach [9,10]. Overall, given the risk this fragile stratum faces in prison, the investigator seeks to explore whether sport and recreation are linked to prisoners ' resilience and mental health. It appears that reforming the present prison status can help enhance prisoners ' mental health. Prisoners who have benefited from helpful activities have liked more services, such as access to mass media and more favorable acquaintances with more helpful hands, and in the positive direction of change during their prison term self-reflection [11].

Accordingly, in many studies [12-14], the effect of sports and recreational activities on the mental health of non-prisoners has been proven, it is now necessary to determine the effect of these types of exercises on prisoners. Given that most inmates have access to sports and recreational games, it can be readily used if beneficial impacts are confirmed. It is an undeniable requirement of this study to combine physical-motor techniques, cognitive therapy and determine its usefulness. The aim of this study was therefore to explore the mental health status of female inmates taking part in recreational sports classes and then to determine the connection between era, degree of conviction and their mental health, as well as the difference in research factors by type of crime.

Method

This correlational study was carried out due to the research objectives and regarding the temporal and spatial fields of the study, 99 participants were chosen by simple random sampling technique based on Morgan's table

[15] from 135 young women prisoners who participated in recreational sports courses. However, in order to avoid the reduction of the amount of participants and also to predict the completion of the necessary data based on the sample size, the sample size was regarded to be 105 persons from the statistical population of the distribution questionnaire who received 99 healthy questionnaires after collection of the data and removal of the faulty and incomplete questionnaires. Because when researching the place of inmates and the retention of inmates for offences, the number of convictions and distinct ages, the investigator was significantly limited in terms of homogeneity and the particular circumstances of the study site, the requirements for participants' entry into the study, age and physical condition were therefore regarded acceptable. The study is therefore focused on the young female with a maximum of 30 years old.

A three-part questionnaire was used according to the topic literature and the study background to obtain the necessary data. The first part included particular questions such as sex, age, type of crime, the number of

convictions, overall and demographic data of participants and the second part of the General Health Questionnaire (GHQ) public health questionnaire Goldberg and Williams. The questionnaire consisted of 28 issues in four sections and four choices based on the Likert scale. The third section concerns the questionnaire based on the Canner-Davidson questionnaire, which contains 25 questions in 4 sections based on the 5-point spectrum of Likert. To get the total score of the questionnaire, the total points of all questions are combined. This score is between 0 and 100. The higher the score, the higher the respondent's resilience, and vice versa. This questionnaire's cut-off point is 50 points. In other words, the greater the score, the greater the intensity of the individual, and vice versa. The validity of the questionnaire was assessed in this research using remarks from 12 respondents in the formal and content industries of sport management, psychology and social sciences. To verify the tool's reliability, was used to evaluate the study variables. The test (K-S) has the outcomes below.

Table 1 Cronbach Alpha Coefficients and Kolmogorov Smirnov Test

Row	Research variables	Alpha coefficient	Z (K-S) statistic	Significant level	Result
1	Mental health	0.9329	1.382	0.044	Abnormal
1-1	Physical symptoms	0.7139	2.609	0.0001	Abnormal
2-1	Anxiety	0.7057	1.902	0.001	Abnormal
3-1	Disruption of social function	0.8368	1.95	0.001	Abnormal
4-1	Depression	0.9433	1.921	0.001	Abnormal
2	Resilient	0.9772	2.163	0.0001	Abnormal

Descriptive and inferential statistics have been used to evaluate the information. In descriptive statistics, mean and standard deviations were used in frequency tables and percentages and inferential statistics regarding variables defects based on Table 1, sign test, spearman correlation coefficient and kruskal wallis test to respond to study hypotheses. The SPSS 16 was also used for data calculation and processing. Ethical factors at all phases of the job include participants' understanding of the participants matter and process of execution, informed consent, ensuring

that the topics are kept confidential, interpreting private outcomes for passionate people and not contradicting studies with the participants religious, cultural and societal aspects.

Results

The most significant descriptive results related to demographic features are: 20 to 25 years of age is the largest age group. It is also the most frequent form of drug offense, with maximum sentences of 2 to 5 years and most instances observed in Table 2.

Table 2 Demographic characteristics of the participants

	Demographic features	Frequency	Percentage
Age	Less than 20 years old	30	30.3
	Between 20 and 25 years	59	59.6
	Between 25 and 30 years	9	9.1
	Unanswered	1	1
The type of Crime	Drugs	46	46.5
	Burglary	36	36.4
	Debt	2	2
	Murder	8	8.1
	Kidnap	4	4
	Unanswered	3	3
The amount of Condemnation	Less than 2 years	11	11.1
	Between 2 and 5 years	27	27.3
	Between 5 and 10 years	26	26.3
	Over 10 years old	4	4
	Unanswered	31	31.3
The term stay at prison	Less than 12 months	17	17.2
	Between 12 and 36 months	67	67.7
	Between 36 and 72 months	12	12.1
	Above 72 months	2	2
	Unanswered	1	1
Degree of education	Diploma	96	97
	Associate Degree	1	1
	Bachelor	0	0
	Master's degree and higher	1	1
	Unanswered	1	1
Marital status	Single	50	50.5
	Married	47	47.5
	Unanswered	2	2
Total	99	100	

Table 3 Descriptive statistics of the research variables

Variable	Mean	Standard deviation	Median	Sig	Min	Max	Domain
Mental health	2.12	0.49	1.96	0.99	1.29	2.96	1-4
Physical symptoms	1.8	0.33			1.29	2.43	1-4
Anxiety	2.37	0.64			1.43	3.43	1-4
Disruption of social function	2.08	0.56			1	3	1-4
Depression	1.86	0.62			0.86	2.71	1-4
Resilient	1.97	0.82	1.96	0.99	1.12	4.16	1-5

As shown in Table 3, the mean of prisoners mental health status and resilience is 2.12 and

1.97, with a substantial point of 0.99 showing their inadequacy.

Table 4 Spearman correlation test

Variable		The correlation coefficient	Significance level
Age	Mental health	-0.189	0.063
	Resilient	0.222	0.028
The amount of conviction	Mental health	-0.387	0.001
	Resilient	0.41	0.001
Mental health	Resilient	0.006	0.935

As shown in Table 4, there is no significant relationship between the two variables of prisoners age and mental health, but a direct and fair relationship exists between the prisoners' ages and their resilience. There is also an adverse

important connection between mental health status and degree of condemnation, but on the contrary, there has been a favorable important connection between prisoner conviction and resilience.

Table 5 Comparison of the type of crime with mental health status and resilience of female prisoners

		Type of crime					Z Kruskal wallis statistic	df	Sig
		Drugs	Burglary	Debt	Murder	Kidnap			
Mental health	Average	2.15	2.35	1.57	1.51	1.56	29.484	5	0.001
	Standard deviation	0.25	0.59	0.2	0.37	0.017			
	Average rating	51.83	61.43	15.5	16.38	19.38			
Resilient	Average	1.7	1.6	3.52	3.83	2.68	40.468	5	0.001
	Standard deviation	0.31	0.56	0.001	0.93	0.001			
	Average rating	47.88	34.42	89.5	88.63	85.5			

As shown in Table 5, the mental health status of female inmates by type of crime is significantly different. With regard to the average results, it is evident that individuals with drug convictions and theft have a much weaker mental health status than others. The resilience of female inmates by type of crime was also significantly different.

Discussion

Obviously, sick prisoners' emotional and mental assistance can decrease many of the economic expenses and enhance their community and prison mental health indicators [16]. Some previous studies have shown that the frequency of personality disorders is generally greater than that of the general population [17]. Therefore, since many inmates suffer from mental illnesses and disturbances and because sport is a shortcut to these illnesses [3,18]. Research generally shows that the level of resilience and social support of juvenile delinquents is substantially smaller than that of adolescents.

Drug offenders also profit from resilience, social support, and less family support

compared to other perpetrators. Adequate steps should therefore be taken to boost the level of resilience of adolescents and to teach fundamental life skills, and supporting and judicial organizations should provide families with the needed incentives and preventive measures to safeguard their children. The need to develop and expand sports and recreation facilities in prisons together with psychological and psychiatric care in prisons is highlighted [19].

Because resilience has a substantial difference in the perpetrators of different offences and is a major factor in inmates, it seems necessary to pay attention to it. Many societies and organizations have now discovered it necessary to provide education after significant life occurrences, including natural disasters, imprisonment, etc... The elements included in these measures are that resilience. Furthermore, physical exercises not only enhance the cardiovascular system and certain physiological functions, but also boost mental health, particularly in stressed individuals. A research on economic convicts and inmates

shows in the same vein that physical activity has improved their mental health [20,21].

A notable point in this regard is that, considering that inmates were under sporting and recreational lessons provided by prison sports experts, they also showed low rates of resilience, which indicates that there is uncertainty about the efficacy of these trainings and prisoner resilience classes, an issue that needs severe researchers' attention.. However, since resilience can be a good defense mechanism and enable individuals to face the disadvantages of life, it can be regarded a significant objective in preventive and therapeutic measures [3,9,12,18].

There is an important direct correlation between the two factors of the position of resilience and the female inmates in recreational sports classes. This suggests that individuals are more influenced by this period's psychological elements at a young age. In these circumstances, their position in prison conditions can extend the disturbances of the course, which can sometimes be unintentional [4,14,18]. In such situations, people are in a psychological crisis that justifies the difference in the resilience of prisoners involved in prison sports and recreational activities and does not to some extent confirm the study [22].

Psychopathic personalities, who exhibit community anti-legal behaviors and traditions, often experience self-esteem weakness, and their criminal conduct is a defensive reaction to self-esteem [23]. We can therefore verify the connection between the mental health elements and the type of crime. With regard to the connection between antisocial personality disorder and low self-esteem, counseling and counseling can be regarded as a mechanism that seeks to assist customers communicate at all expenses with the setting and have a better life [24] to increase prisoners self-esteem.

The research findings showed that there was an important adverse connection between the two mental health statuses of women inmates taking part in recreational sports courses and their levels of condemnation. There was also an important relationship between the rate of resignation and the rate of conviction [2,9,10,13]. In

connection with this section of the research and in explaining the outcomes, it should be noted that likely because the individual sentenced will have a psychological result, it will also influence prisoners' resilience, and the elevated incidence of these illnesses can be ascribed to prison conditions, emotions of guilt and frustration among inmates. On this basis, exercise is likely to be an appropriate reaction to the assistance of incarcerated people and will work to enhance their mental and physical abilities by enhancing individuals' psychological procedures [25]. Before joining the prison, this syndrome may also exist in individuals. The problem that emphasizes the need for longitudinal studies.

In the current research, the absence of correlation between mental health and female inmates' persistence contrasts with some research [16]. Therefore, variations in sociological elements such as gender differences, age, academic status, crime type, quantity of penalty, etc. seem to be important variables. For example, the gender of individuals in different societies leads to sociological differences in the psychological components of individuals, which can form the basis for such contradictions, and in particular, in this study, the audience is women who have been studied in fewer studies.

As the research limitations we can emphasize to the gender and term of availability to the prisoners and rules of the jail. Furthermore, according to the outcomes of comprehensive studies on the impacts of physical activity and individuals' mental health, particularly in inmates, and in order to enhance their quality of life, it is suggested that development measures and programs should be implemented.

Conclusion

The findings showed that female inmates in recreational sports courses did not have excellent mental health and, contrary to the forecast of the research, involvement in sports and recreational operations did not have an important effect on the enhancement of this scenario. With regard to the contradiction

between the results of different studies, it appears that the quality of the prisons studied and their human resources, as well as the differences in sociological components, such as gender, level of education and age, can be considered as a factor justifying the difference in the results of different studies. In particular, however, it should be observed in explaining the outcomes that previous studies have shown that the frequency of personality disorders is generally greater than that of the general population.

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Authors' contributions

Study design: ME, MM

Data Collection and Analysis: ME, FM

Manuscript preparation: ME, MM

All authors have read and approved the final version.

Conflict of Interest

"The authors declared that they have no competing interests."

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Availability of data and materials

The datasets used and/or analyzed during this study are available from the corresponding author on reasonable request.

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