Psychiatric morbidity in female athletes

Submitted for partial fulfillment
Of master degree of neuropsychiatry

By:

Nahwet Adel Al Madani

Supervised by:

Prof. Mohamed Hamed Ghanem
Professor of psychiatry
Faculty of medicine-Ain shams university
Chair man of the neuropsychiatric department

Dr. Mohamed Fekry Eissa
Assistant professor of psychiatry
Faculty of medicine-Ain shams university

Dr. Marwa Abdel Meguid Hamed
Lecturer of psychiatry
Faculty of medicine-Ain shams university

Faculty of medicine
Ain shams university
2010

Athletics brings out a side of you that is wonderful. It brings out so many good attributes like competing, intensity and playing at the highest level.... If you never lose, then you can never appreciate the victories."

Julie Foudy

Acknowledgement

I am deeply grateful for the support and constructive guidance of many people, whose valuable assistance made this study possible.

First and foremost I would like to express my profound gratification to Prof. Mohamed Ghanem, professor of neuropsychiatry, Faculty of Medicine, Chair person of the neuropsychiatric department & Institute of psychiatry in Shams University for suggesting this topic. Without his assistance and fatherly attitude, this work would not have been possible. It is great honor to work under his guidance and supervision.

I am eternally grateful to Ass. Prof. Mohamed Fekry, Ass. Professor of Neuropsychiatry; Faculty of Medicine, Ain Shams University for his help and keen support. Without his help this work would have never been completed.

I would like to express my deep thanks and appreciation to Dr. Marwa Abel Meguid, lecturer of neuropsychiatry, Ain Shams University, for her patience, encouragement, valuable instructions and advice throughout the work.

I would like to thank all my colleagues for their real support and help.

Last but not least, I wish to extend my thanks to my great parents , my dear sisters; whom I love so much, without their help and support this work would have never been accomplished.

Contents

List of Abbreviations

AA	: Anorexia Athletica
AAS	: Anabolic androgenic steroids
ALT	: Alanine AminoTransferase
AMDQ	: Athletic Milieu Direct Questionnaire
AN	: Anorexia Nervosa
AST	: Aspartate AminoTransferase
BN	: Bulimia Nervosa
BZ's	: Benzodiazepines
CBT	: Cognitive Behavioral Therapy
CCR	: Cue-Controlled Relaxation
CHRIS	: College Health Related Information Survey
CPK	: Creatine Phospho Kinase
CRSDs	: Circadian Rhythm Sleep Disorder
D	: Drive
DSM IV	: Diagnostic and Statistical Manual of Mental disorders (Fourth Edition)
ED	: Eating Disorder
EDNOS	: Eating Disorders Not Otherwise Specified
EI	: Emotional Intelligence

EQ	: Emotional Quotient
FAST	: Female Athlete Screening Tool
FSH	: Follicle Stimulating Hormone
GDR	: German Democratic Republic
GnRH	: Gonadotrophic Releasing Hormone
H	: Habit
HPG	: Hypothalamic-Pituitary-Gonadal
HPT	: Hypothalamic Pituitary Thyroid
Ig A	: Immunoglobulin A
IOC	: International Olympic Committee
IQ	: Intelligence Quotient
LDH	: Lactate Dehydrogenase
LH	: Luteinizing Hormone
MBTI	: Myers-Briggs Type Indicator
MRI	: Magnetic Resonance Imaging
NCAA	: The National Collegiate Athletic Association
NSAID	: Non Steroidal Anti-Inflammatory Drugs
OTC	: Over-the-counter
P	: Performance
PCA	: Precompetitive Anxiety

PCS	: Post Concussive Symptoms
PES	: Performance-Enhancing Substances
PMR	: Progressive Muscle Relaxation
PMS	: Premenstrual Syndrome
PPE	: Pre- Participation Examination
REM	: Rapid Eye Movement
SEDA	: Survey of Eating Disorders among Athletes
SQ	: Systemizing Quotient
SSRI	: Selective Serotonin Reuptake Inhibitors

Protocol

Physical activity might be an effective measure for the treatment and even for the prevention of psychiatric diseases such as depressive and anxiety disorders. In addition; physical activity has increasingly been recommended to individuals with or without disease in order to improve their quality of life. On the other hand; physical activity can compromise mental health; especially when performed in a more intense manner ***(Pate et al; 1995).***

For some individuals; physical activity becomes an obsession; resulting in an exaggerated preoccupation with exercise and excessive training even in the presence of medical counter indications; which can interfere with personal and occupational relationship ***(Bamber et al; 2000).***

Women are a major power in competitive sports. More than 3000 female athletes participated in the 1992 Olympics. A 27% increase occurred at the 1996 Games; with more than 3800 female athletes participating. The Atlanta 1996 Olympics saw a large amount of media coverage focused on female events. World-class female athletes are now appearing on modeling runways. This media attention and success of female athletes has shown that athletic women can

be attractive and feminine and yet be strong; powerful; and fiercely competitive ***(Doreen et al; 1997).***

Ever-increasing participation of women in competitive sport has created a requirement for more gender-specific sport medicine knowledge. In particular; physicians and other health care professionals should be aware of the triad of disordered eating; amenorrhea and osteoporosis collectively described as the female athlete triad (***Rumball et al; 2004).***

Women have been trying to make themselves an equal force in athletics for the past decade; women athletes are under increasing pressure not only to be strong competitors but also to have the perfect body type and weight for their chosen sport. Any female athletes is at risk for this triad; but women who participate in endurance and performance sports where an athlete is judged on appearance or where low body fat is an advantage; are at higher risk for extreme weight-control behavior (***Murray et al; 1995).***

Participation in sport and physical activity is said to contribute substantially to the development of moral values and to the building of character .For example; participants may benefit from sport by learning to compete; overcome obstacles; cope with stress; persist in the face of defeat; develop self control. However; many well-known negative occurrences in elite sport such as violence; racism and cheating raise the question of whether sport participation

does indeed build character; and if so; what role; if any; can sport psychologists play in athlete's character development ***(Smith et al; 2007).***

Exploration of some of the most serious challenges athletes face not only in their competitive lives but in the real world as well is very important. Physical harm; responding to pressures to excel; and the sometimes abrupt ending of an athletic career can present athletes with difficulties that threaten their physical and mental health. A full understanding of these issues by researchers; consultants; coaches; and athletes themselves is essential to ensure that athletes respond to these challenges in a constructive and a life-enhancing way. Athletic injuries are more than just a physical trauma; rather; injuries have significant psychological; emotional; social; and career related implications in the lives of athletes. Recovery from injury places substantial physical demands on athletes and has a powerful psychological component that hinders or facilitates the process by kinds of reactions and strategies to facilitate a healthy a return to sport. The role of the sport psychiatrist consulting to a professional sports team is complex; challenging; and varied ***(Taylor et al; 2005).***

Sport psychiatrists enhance the psychosocial development of the athlete by removing obstacles and by

facilitating lines of communication that support exchange of information and sharing of feelings ***(Calhoun et al;1998).***

Moreover they diagnose and treat problems; symptoms and disorders associated with an athlete; improve athletic performance; and manage psychiatric symptoms or disorders. The training includes medical training to provide knowledge and skills unique to physicians; and training and/or experience in sport psychiatry to provide knowledge and skills about psychiatric aspects of sports ***(Glick et al; 2009).***

Psychiatrists bring something to the table that sport psychologists don't have; being more adept with the biopsychosocial model; they can diagnose underlying disorders and treat them with psychotherapy and medication; as well as using the cognitive-behavioral techniques of the sports psychologists. They are the specialists who most naturally interface with other medical personnel in the care of athletes; orthopedic surgeons; physical therapists; and sports medicine specialists ***(Moren; 2003).***

Hypothesis

Female athletes may face a lot of psychiatric problems that affect their performance and also their lives

Rational

To explore the psychiatrist's role in sport medicine and identify the comorbidities of psychiatric illnesses in female athletes

Aim of the work

1) To review the available studies on " females athletes psychiatric disorders".
2) To highlight the main psychiatric disorders that may face the females athletes.
3) To determine the effect of psychiatric interventions on the performance of females athletes.

Methodology

In order to fulfill the aim of the work; we will collect the available studies done on "females athletes psychiatric disorders from the following databases

1. Library of faculty of medicine-Ain Shams University.
2. Library of faculty of medicine-EL Azhar University.
3. Library of faculty of medicine-Cairo University
4. Different scientific sites on the internet
5. Review the articles and researches related to this issue

Issues about women

Female physiology

Women's participation in sports has greatly expanded over the past 25 years. With this has come an increased awareness of new conditions and pathologies unique to this population **(Lebrun et al; 2002).**

Although special attention has been focused on both young and older female athletes as they face additional stressors. These include pressure to perform or to meet unrealistic weight or body fat goals from demanding coaches, peers, and family. The personality traits that aid an athlete to reach the top of her sport-perfectionism, compulsiveness, and high achievement expectations are also risk factors for development of some disorders **(Lebrun et al; 2002).**

For most of these female athletes, sports participation is a positive experience, providing improved physical fitness and better health and well being. Yet for some, the desire for athletic success combined with the pressure to achieve a prescribed body weight can lead to the development of disorders **(Katherine and Joperd; 2000).**

Cortical differences between male and female

Aside from external anatomical and primary and secondary sexual differences between male and female, scientists know also that there are many other differences in the way the brains from men and women process language, information, emotion, cognition, etc. One of the most interesting differences appear in the way men and women estimate time, judge speed of things, carry out mental mathematical calculations, orient in space and visualize objects in three dimensions, etc. In all these tasks, women and men are strikingly different, as they are too in the way their brains process language. This may account for the fact that there are many more male mathematicians, airplane pilots, bush guides, mechanical engineers, architects and race car drivers than female ones **(Wilson; 1992).**

On the other hand, women are better than men in human relations, recognizing emotional overtones in others and in language, emotional and artistic expressiveness, esthetic appreciation, verbal language and carrying out detailed and pre-planned tasks. After many careful controlled studies where environment and social learning were ruled out, scientists learned that there may exist a great deal of neurophysiological and anatomical differences between the brains of males and females **(Kimura; 1999).**