Summary

The examination of athlete's responses to elite sport stressors in the competition environment has developed into a focal area of sport psychology with many researchers interested in assessing anxiety responses of athletes to competitive events.

Competitive state-anxiety usually follows a pattern of subjective feelings of tension and inadequacy, combined with heightened arousal of the autonomic nervous system. The intensity and duration of the anxious state alternates according to; the amount of stressful stimuli the athlete encounters, and the period of subjective threat created by the stimuli.

This study was designed aiming at evaluation the competitive state anxiety in junior athletes in many sports prior to a competition, highlighting how important is that test in pre participation screening of competitive athletes, investigating any possible differences between male and female players and detecting any virtual relation to the physical fitness of the participants.

This study included one hundred and twelve junior athletes aged 15 to <19 attending the Sport Medicine Center in Madinat Nasr during the period from the start of September , till the end of November , 2009.

Athletes are classified according to age into two groups: the first group includes athletes in the age brackets 15 to < 17 whereas the second group includes athletes in the age bracket 17 to < 19. The participants will include both genders (males and females).

(Males number =87 and females number =25)

- They were interviewed with the use of designed questionnaire Sport Competition Anxiety Test SCAT to assess the competitive state anxiety prior to a competition for each participating athletes, it included the following items: ethical component, personal data and questions to determine anxiety score.
- Every athlete was subjected to measurements for evaluation of his/ her physical fitness (anthropometric measure, heart rate values and oxygen consumption values).
- Also they were investigated for their pulmonary functions including Vital capacity (VC in liters), Forced Vital Capacity (FVC in liters), Forced Expiratory Volume in first second (FEV_1 in liters), FEV_1/FVC ratio (%), Peak Expiratory Flow (PEF in liters/min) and $MEF_{25-75\%}$.

Also, males had higher height **(178.67±3.98)** and body mass index **(22.92 ±2.55)** than females' height **(176.66±2.28)** and body mass index **(20.97 ±2.58)**.

Heart rate values were nearly the same between the two age groups, but females had higher resting heart rates **(85±6.70)** than males' rates **(83±5.33).**

Oxygen consumption values were nearly the same between the two age groups, and between the two sexes.

Also, it was revealed that the younger group had higher values than the older group in both FVC **(4.12 ± 0.30),** FEV1 **(3.99±0.76)** But the FEV1/FVC ratio is higher in the older group **(89.26±2.13).**
Females have higher values of FVC **(4.78±0.11)** than males' values **(4.29±0.82).**
Results revealed the negative correlation **(- 0.034)** between the score of competitive anxiety test among the studied athletes and their age, as younger group **(67.86%)** is more anxious than older group **(32.14%)**
Also it was found that males are more anxious **(77.68%)** than females **(22.32%).**

There was found that Contact sports athletes are more competitively anxious **(83.92%)** than non-contact sport athletes **(16.08%).**

There was a significant positive correlation between the score of the anxiety test and the heart rate values among the studied group:

It was **(+0.036)** for resting heart rate (b/min), **(+0.215)** for Maximum heart rate (b/m) and **(+0.009)** for Recovery heart rate (b/m).

Also, there was a significant negative correlation between the score of competitive anxiety test and some of the oxygen consumption values among the studied group:

It was **(- 0.211)** for VO2 max (ml/kg/min), **(- 0.250)** for Anaerobic threshold (ml/kg/min) and **(- 0.232)** for Time for anaerobic threshold (Minutes)

There was significant negative correlation between VC, FVC, FEV1, PEFR, MEF25-75 competitive anxiety level:

It was **(-0.056) for** (VC), **(-0.391)** for FVC, **(-0.299)** for FEV1, **(-0.254)** for PEFR and **(-0.418)** for MEF25-75.

Hence, it could be concluded that the higher physical fitness, the least the competitive state anxiety level, and the higher pulmonary functions, the least the competitive state anxiety level. So, these results support the role of continuous exercise training to lessen the pre-competitive anxiety.