

Sensation Seeking and Addiction in Triathletes and Alcohol Dependents

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Introduction and Hypotheses

"I'm an addict, pure and simple. But my addiction has brought me five world championship crowns...like any addict, when I don't get my fix, I become like Cruella De Vil"

-- Chrissie Wellington Ironman World Record Holder, MBE

Triathlon is the fastest growing sport in the UK. Ironman races sell out around the world within hours of being open despite medical tents brimming post-race with athletes showing troponin levels at the same level as those associated with myocardial infarction.

This is a cross sectional study comparing the prevalence and association of sensation seeking scores between alcohol dependents, triathletes and controls.

Hypotheses:

1. Triathletes will score higher than controls on SSS and that there would be no significant difference compared to alcohol dependents
2. Scores on the Exercise Addiction Inventory (EAI) would show some relation to the SSS
3. There will be some triathletes who would be more addicted than others, and they could be compared to a similar group of highly addicted alcohol dependents.



Methods

An online survey was created and triathletes were approached through internet forums. Individuals were excluded from the triathlete group who scored highly on the AUDIT-C [1] (5 or more) as this is taken as an indication of harmful alcohol use and may represent an overlap in the groups.

Data including Sensation Seeking Score (SSS-V) [2] responses were collected from alcohol dependents interviewed face-to-face through the South London and Maudsley Trust in a parallel study. The control group was based on the "General Population" group from "Sensation seeking and Extreme Sports Participation" by Murray [4].

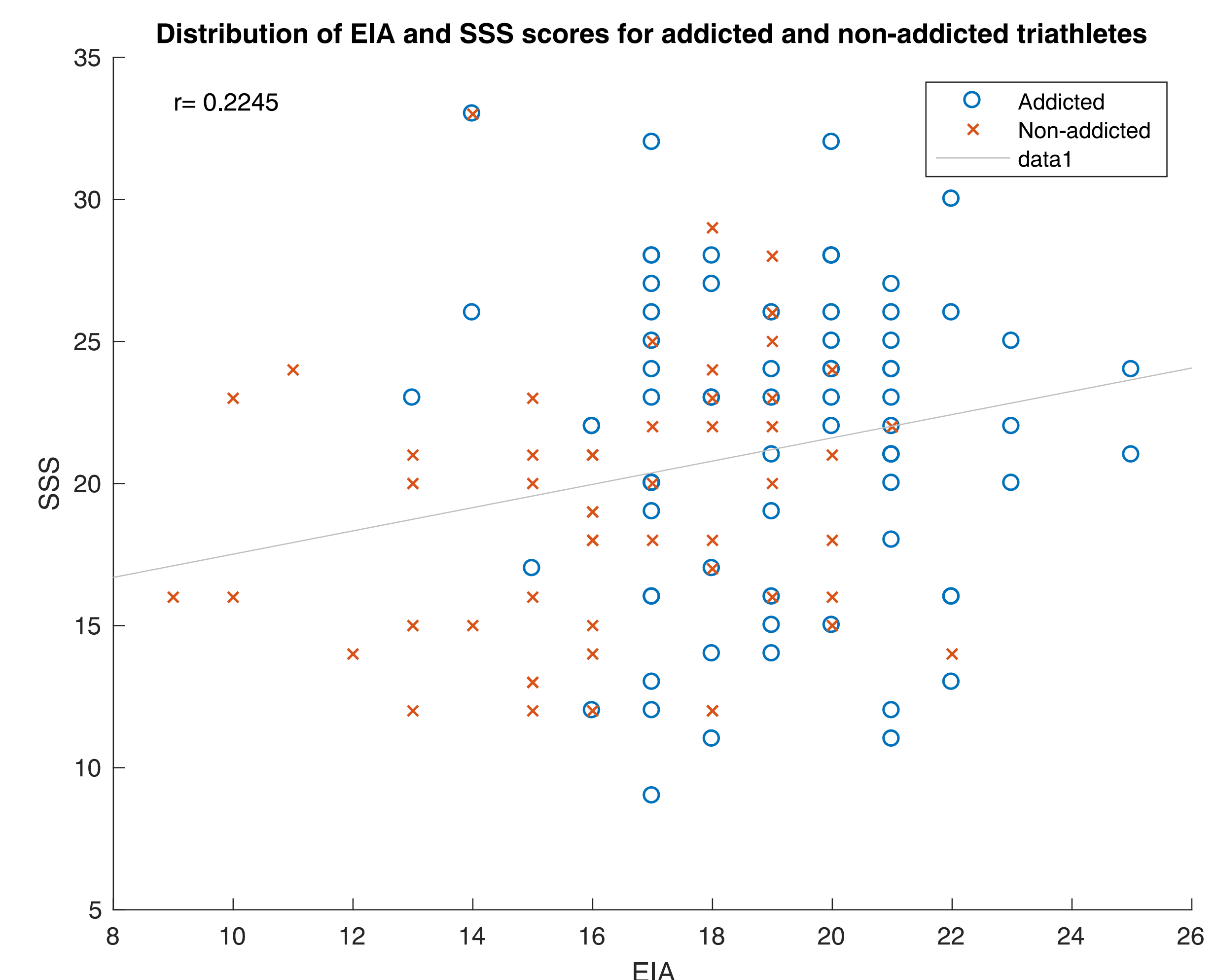
The 3 groups were divided into males and females, and the means and standard deviations were compared. Two-way Analysis of Variance (ANOVA) was performed to examine the relative differences between the groups and *post-hoc* analysis was carried out on the four subsets within the overall sensation seeking score.

241 people completed the online questionnaire. They were asked their age and gender, how many hours a week they trained, the longest distance race they had competed in. They were asked if they thought they were addicted, and they completed the Exercise Addiction Inventory (EAI) [3], the AUDIT-C and the SSS-V. 107 of the participants scored 5 or more on the AUDIT-C and were therefore excluded. This left a group of 134 triathletes who were included in the analysis. After exclusion there were 78 (58.2%) who reported themselves as addicted and 56 (41.8%) as not addicted. Most triathletes were competing at Ironman distance (40.3%).

Results

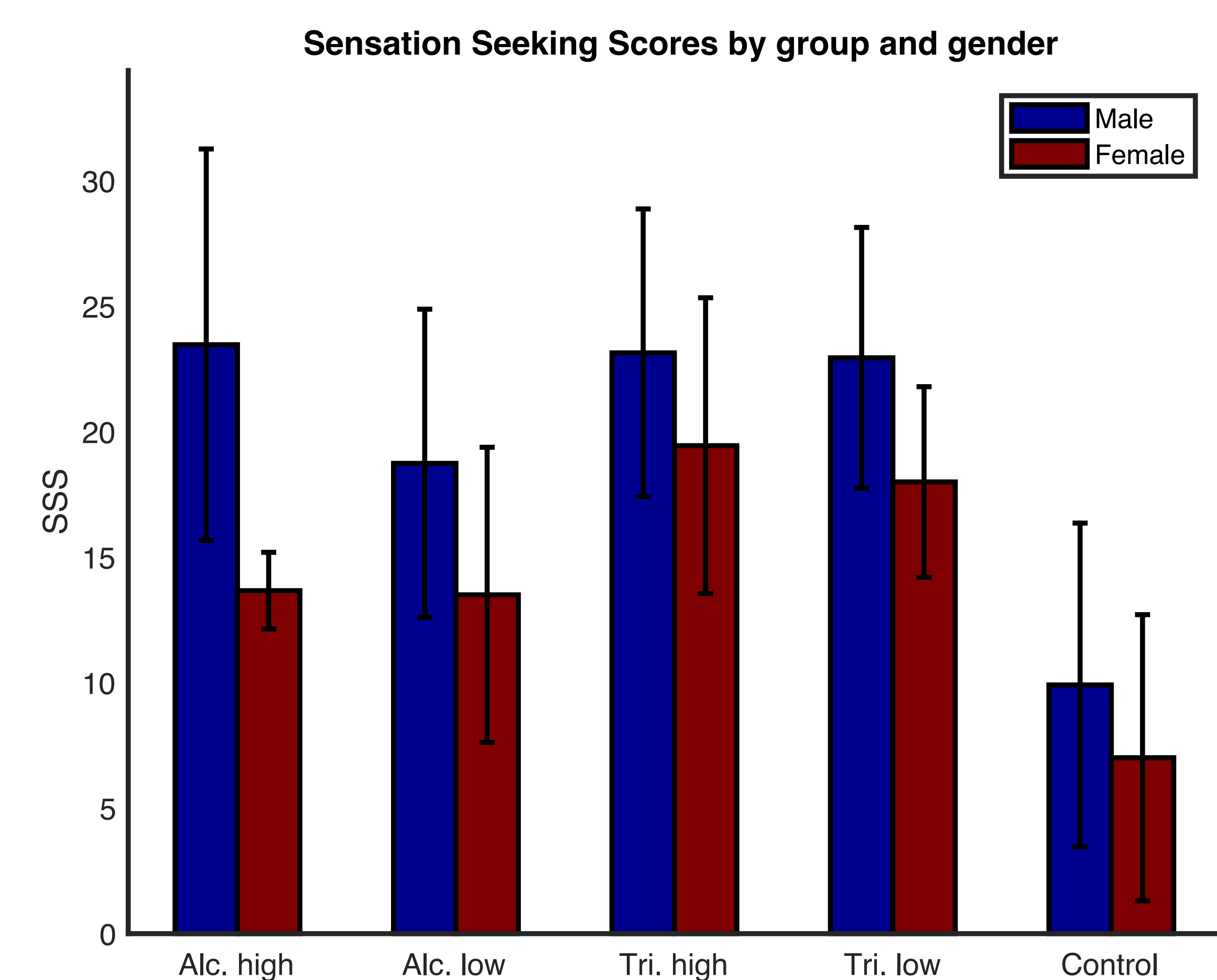
There was a significant difference between triathletes and controls, and between alcohol dependents and controls ($p < 0.001$) but not between alcohol dependents and triathletes on the overall sensation seeking score. There was a smaller but still significant difference between males and females ($p < 0.05$).

The triathletes and alcohol dependents scored significantly higher than controls over all 5 scores within the SSS and triathletes scored significantly higher than alcohol dependents on the TAS score.



The EAI and SSS showed a small ($r = 0.22$) but significant correlation ($p < 0.001$). This shows that exercise addiction relates to the personality trait of sensation seeking and that higher scores on the EAI correlate with higher sensation seeking scores.

An ANOVA performed on the triathletes alone showed significant differences between the SSS based on whether individual self-selected themselves as addicted or not.



Comparison	D.o.F.	F-Score	p-value	Significance
Tri-, Tri+, Alc-, Alc+	1	7.98	0.0001	***

Table 1: 1-way ANOVA for the main effect of group (Addicted triathletes = Tri+; Non-addicted triathletes = Tri-; Highly addicted alcohol dependents = Alc+; Less addicted alcohol dependents = Alc-)

To test hypothesis 3, two sub-groups were formed within the alcohol dependents and triathletes. Highly addicted alcohol dependents were selected as per Cloninger's [5] criteria: age of onset under 25, male, positive family history. To separate the triathletes into two groups, an initial analysis of the relationship between self-reporting and EAI was performed. 1-way ANOVA showed that triathletes who self-reported as addicted scored significantly higher on the EAI ($F = 34.6$, $p < 0.001$).

Conclusions

This study concludes that sensation seeking traits are seen in triathletes and therefore postulates that triathlon may be used as a therapy in treating other addictions. It warns however that there are a small group of people who are more vulnerable to developing a severe addiction and that athletes should be observed for signs of eating disorders, alcohol misuse or other addictions.

Selected References

[1] AUDIT-C as a brief screen for alcohol misuse in primary care. Bradley K., DeBenedetti A., Volk R., Williams E., Frank D., Kivlahan D., *Alcohol Clin. Exp. Res.* 2007, 7, pp 1208-1217.

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[4] Living life on the edge, Sensation seeking and extreme sports participation. Murray D., *PhD Thesis Dissertation*, 2003, University of Connecticut.

[5] Personality antecedents of alcoholism in a national area probability sample, Cloninger, C.R., Sigvardsson, S., Pryzbeck, T.R., Svarick, D.M., *European Archive of Psychiatric Clinical Neuroscience*, 1995, 245, pp. 239-244.