

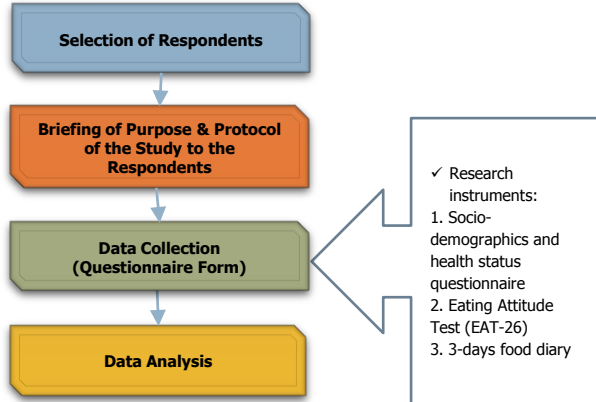


INTRODUCTION

- Eating disorder is a psychological illness characterized by unusual or disturbed eating habits which can be associated with emotional stress (Rikani *et al.*, 2013).
- It is well documented that eating disorders have a negative impact on health and athletic performance (Melin *et al.*, 2015; Mehler, 2017) and athletes are high risk for eating disorders (Rodriguez *et al.*, 2015; Blair *et al.*, 2017)
- Nutrition plays an important role in athletic performance as it helps athletes to enhance sports performance and faster recovery after exercise (Beck *et al.*, 2015). To date, there is still scanty information on eating disorders and nutritional status among young athletes in Sabah.
- Therefore, the objectives of this study was to investigate eating disorders risk and total energy intake among young athletes in Sabah.

METHODS

- Study design : Cross-sectional study
- Participants : Athletes (n=104)
- Location : Kota Kinabalu, Sabah



CONCLUSION

These current findings reflected that both male and female athletes were at high risk for eating disorder especially in the aesthetic and weight category sports.

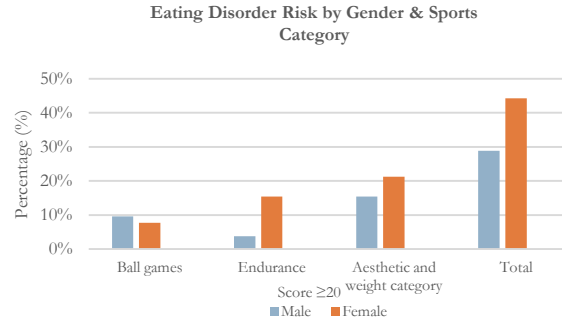
RESULTS & DISCUSSION

Table 1. Socio-demographic characteristics

| Characteristics | Male (n=52) | Female (n=52) | Total (n=104) |
|---|---------------------------|---------------|---------------|
| | Mean ± SD / Frequency (%) | | |
| Age (year) | 23.0 ± 2.5 | 22.9 ± 2.4 | 23.0 ± 2.5 |
| Race | | | |
| Kadazan Dusun Murut | 22 (42.3) | 29 (55.8) | 51 (49.1) |
| Malay | 13 (25.0) | 10 (19.2) | 23 (22.1) |
| Others | 17 (32.7) | 13 (25.0) | 30 (28.8) |
| Type of Sport | | | |
| Ball games | 25 (48.1) | 18 (34.6) | 43 (41.3) |
| Endurance | 16 (30.8) | 16 (30.8) | 32 (30.8) |
| Aesthetic & weight category | 11 (21.2) | 18 (34.6) | 29 (27.9) |
| Level of Involvement | | | |
| University / College | 14 (26.9) | 17 (32.7) | 31 (29.8) |
| District | 8 (15.4) | 14 (26.9) | 22 (21.2) |
| State | 12 (23.1) | 4 (7.7) | 16 (15.4) |
| National | 10 (19.2) | 10 (19.2) | 20 (19.2) |
| International | 3 (5.8) | 4 (7.7) | 7 (6.7) |
| Others | 5 (9.6) | 3 (5.8) | 8 (7.7) |
| Disease (e.g.: hypertension, diabetes, heart disease, lung disease) | | | |
| Yes | 0 (0) | 0 (0) | 0 (0) |
| No | 52 (50.0) | 52 (50.0) | 104 (100.0) |

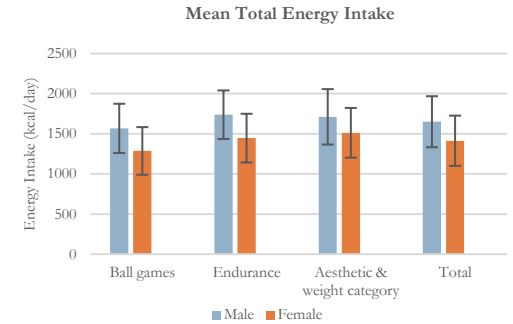
- Table 1 presents the socio-demographic characteristics of respondents.
- A total of 104 athletes (male=52 subjects; female= 52 subjects) participated in this study.
- Ball game sports was the majority types of sports participated in this study and followed by endurance, aesthetic and weight category sports.
- All respondents are healthy and without any chronic diseases.

Figure 2. Eating disorder risk



- Aesthetic and weight category sports for both male and female athletes were the highest risk of eating disorder in comparison with endurance and ball game categories. This finding was agreement with several previous studies also found that weight and aesthetic sports had a higher risk of eating disorder compared to the endurance and ball game categories (Chatterton & Petrie, 2013; Thiemann *et al.*, 2015; Teixidor *et al.*, 2021)
- The risk of eating disorders was higher in female athletes than male athletes, but statistically showed no significant difference ($p \geq 0.05$) between their eating disorders score.

Figure 3. Energy intake



- The mean total energy intake in ball game, endurance, and aesthetic and weight category sports did not achieve the recommended energy intake. Other previous studies also found athletes have a lower energy intake compared to the recommended nutrient intake (Zapolska *et al.*, 2014; Baranuskas *et al.*, 2015; Santos *et al.*, 2015).

REFERENCES

- Baranuskas, M., Stukas, R., Tubelis, L., Zagminas, K., Surkiene, G., Svedas, E., & Abaravicius, J. A. 2015. Nutritional habits among high-performance endurance athletes. *Medicina*, 51(6): 351-362.
- Beck KL, Thomson JS, Swift RJ, Von Hurst PR. 2015. Role of nutrition in performance enhancement and post exercise recovery. *Open Access J Sports Med*, 6: 259-267.
- Blair, L., Aloia, C. R., Valliant, M. W., Knight, K. B., Garner, J. C., & Nahar, V. K. 2017. Association between athletic participation and the risk of eating disorder and body dissatisfaction in college students. *International journal of health sciences*, 11(4): 8.
- Chatterton JM, Petrie TA. 2013. Prevalence of disordered eating and pathogenic weight control behaviors among male collegiate athletes. *Eating Disorder*, 21:328-41.
- Mehler, P. S. 2017. *Eating disorders: A guide to medical care and complications*. JHU Press.
- Melin A, Tomberg AB, Skouby S, Moller SS, Sundgot-Borgen J, Faber J, et al. 2015. Energy availability and the athlete triad in elite endurance athletes. *Scand J Med Sci Sports*, 25(5):610-622.

- Rikani, A. A., Choudhry, Z., Choudhry, A. M., Ikram, H., Asghar, M. W., Kajal, D., & Mobassarah, N. J. 2013. A critique of the literature on etiology of eating disorders. *Annals of neurosciences*, 20(4), 157.
- Rodriguez, A. M., Salar, N. V., Carretero, C. M., Gimeno, E. C., & Collado, E. R. 2015. Eating disorders and diet management in contact sports: EAT-26 questionnaire does not seem appropriate to evaluate eating disorders in sports. *Nutrición hospitalaria*, 32(4): 1708-1714.
- Santos, D. D., Silveira, J. Q. D., & Cesar, T. B. 2016. Nutritional intake and overall diet quality of female soccer players before the competition period. *Revista de Nutricao*, 29: 555-565.
- Teixidor-Battle, C., Ventura, C., & Andres, A. 2021. Eating Disorder Symptoms in Elite Spanish Athletes: Prevalence and Sport-Specific Weight Pressures. *Frontiers in Psychology*, 11: 3612.
- Thiemann, P., Legebauer, T., Vocks, S., Platen, P., Auyeung, B., & Hergertz, S. 2015. Eating disorders and their putative risk factors among female German professional athletes. *European Eating Disorders Review*, 23(4): 269-276.
- Zapolska, J., Witczak, K., Manczuk, A., & Ostrowska, L. 2014. Assessment of nutrition, supplementation, and body composition parameters on the example of professional volleyball players. *Roczniki Państwowego Zakładu Higieny*, 65(3),