

Research Article

# UNDERSTANDING THE INFLUENCE OF FAMILY DYNAMICS AND SPORTS PSYCHOLOGY ON YOUTH ATHLETE NUTRITION

*Abdullah Ghurm Alshehri\**, *Sulaiman Omar Aljaloud\*\**, *Ahmed Mohamed Abdel Salam Mohamed\**,  
*Abdulmalek K. Bursais\*\*\**, *Ghareeb O. Alshuwaier\*\*#*

\*Department of Biomechanics and Motor Behavior, College of Sport Sciences and Physical Activity, King Saud University, Riyadh, Saudi Arabia;

\*\*Department of Exercise Physiology, College of Sport Sciences and Physical Activity, King Saud University, Riyadh, Saudi Arabia;

\*\*\*Department of Physical Education, College of Education, King Faisal University, Al-Ahsa, Saudi Arabia

## Abstract

This study delves into the realm of sports psychology, aiming to investigate the intricate relationship between family dynamics and athlete nutrition within the context of the Saudi youth national team. Employing a descriptive research approach, a comprehensive questionnaire was administered, comprising three core dimensions: dietary intake assessment, the psychological impact of family dynamics, and individual beliefs regarding their influence on athlete nutrition. The questionnaire encompassed 28 statements and was administered to a sample of 90 players selected from the Saudi youth national team. From a sports psychology perspective, the study uncovers valuable insights. Firstly, it highlights the moderate impact of family dynamics as a social system on the dietary habits of Saudi youth national team players. It is evident that designated mealtimes serve as a crucial social gathering, wherein the family underscores the significance of adequate water consumption and the selection of nutritious foods. Remarkably, this study discerns no statistically significant differences at the 0.05 level concerning the relationship between family dynamics and sports nutrition, even when considering variables such as age and economic status among the Saudi youth national team players. In light of these sports psychology-oriented findings, it is recommended that future research endeavors within this domain explore the psychological aspects of how families support and influence athletes in maintaining their health, fitness, and physique through specific dietary regimens. This may include examining the familial dynamics and their psychological impact on athletes' adherence to nutritional guidelines. Moreover, it is imperative to consider the role of familial support in mitigating psychological stressors related to nutrition and its impact on athletic performance. The integration of sports psychology principles into nutritional counseling and education for athletes and their families could prove highly beneficial. By enhancing understanding and communication within the family unit, athletes may better navigate the challenges of adhering to optimal nutrition strategies. Consequently, this approach has the potential to bolster not only athletic performance but also the overall psychological well-being of athletes, ensuring they are better equipped to handle the pressures of competitive sports. *ASEAN Journal of Psychiatry, Vol. 24 (10) October, 2023; 1-7.*

**Keywords:** Family Dynamics; Nutrition Knowledge; Behaviors; Soccer; Players; Athletes

## **Introduction**

In the domain of sports psychology, the family unit emerges as a potent force shaping the comprehensive development of young athletes. Acknowledged for its profound impact on a wide array of behaviors, habits, preferences, and choices, the family stands as the bedrock of a child's formative years [1]. This influence extends seamlessly into the sphere of nutrition, encompassing not only food choices and portion sizes but also the nuances of flavor that grace the palate. In essence, the family constitutes the primary arena in which a child's nutritional foundation is laid, with parents orchestrating this symphony through their dietary preferences and behaviors [2].

Furthermore, family involvement transcends the confines of the kitchen, encompassing the realm of physical activity. Within these supportive family environments, children find fertile ground to cultivate their engagement in sports [3,4]. Understanding the intricate motivations that drive children's participation in sports has become a paramount concern for researchers, coaches, and parents alike [5]. Consequently, nurturing an environment conducive to physical activity during these formative years stands as a pivotal factor in fostering early engagement in sports [6].

Family members don multiple hats, serving as role models who profoundly influence a child's initiation into sports and physical activity [7]. Positive relationships forged between young athletes, their families, coaches, and educators provide fertile soil for their development within the sports arena [8]. This familial involvement extends its grasp into the realm of sports program participation, where it exerts a significant influence [9]. The familial impact, both within sports and education, remains particularly pronounced during critical transitional phases in a child's life [10]. Eating behaviors, crucial components of a child's development, are profoundly shaped by a myriad of social and family factors. These encompass cultural values, food availability, portion sizes, mealtime rituals, feeding styles, and parental beliefs [11]. The emergence of food acceptance patterns begins early in life, with childhood marking a sensitive period for the formation of food preferences [12]. These preferences, once ingrained, often persist into adulthood [13], with adolescents frequently citing food availability as a pivotal influence on their dietary choices [14].

Notably, parents' own preferences, beliefs, and attitudes toward food wield substantial sway over their children's eating styles, preferences, consumption habits, and nutritional knowledge [15].

During adolescence, a pivotal phase marked by significant transitions, individuals begin laying the foundation for lifelong dietary and physical activity habits [16]. This period often witnesses a decline in physical activity coupled with an increase in independence in food choices [17,18]. As adolescents experience rapid growth, adequate nutrition becomes paramount [19]. Habits formed during this critical juncture continue to reverberate, influencing health and susceptibility to chronic diseases in adulthood [20]. However, studies exploring the relationship between family meals and body weight have yielded conflicting results, with some indicating that family meals may not be predictive of adolescent overweight status, while others have pointed to a connection between fewer family meals and an increased risk of overweight [21-23].

In the specific context of youth athletes, limited research has ventured into the realm of sport nutrition knowledge, behaviors, and beliefs, with few studies considering factors such as sex, race/ethnicity, and socioeconomic status [24]. The majority of research has been centered on elite athletes, focusing primarily on energy and nutrient intakes, with none of these studies specifically examining variations based on sex, race/ethnicity, or socioeconomic status [25-28]. Furthermore, family food systems and socioeconomic status have the potential to significantly impact food choices within the home environment [29].

The realm of soccer, one of the most beloved sports on a global scale, offers a distinctive yet understudied perspective. Despite its widespread popularity, there is a notable dearth of information concerning the dietary habits and nutritional behavior of soccer players, particularly in Saudi Arabia [30]. Cultural influences wield substantial power in shaping the dietary choices of soccer players, with habits cultivated during childhood carrying forth into adulthood [31]. Research examining the intricate interplay between family food systems, Body Mass Index (BMI), and nutrition knowledge and behavior remains limited, particularly within the Saudi Arabian context. To address this significant gap in knowledge and illuminate the multifaceted connections at play, this study embarks on an exploration of these

intricate dynamics among Saudi youth soccer players. In doing so, it endeavors to unearth the unique factors and relationships that characterize this specific context, shedding light on the nexus between family dynamics, sports psychology, and nutrition within the world of youth soccer.

## Materials and Methods

A descriptive survey methodology was employed for this study. The study was implemented during the Saudi Youth League for Under-19 Youth in the 2020/19 season. Ethical approval for this study was granted by the research ethics committee at the College of Sport Sciences and Physical Activity, King Saud University, Riyadh. The main purpose of the study, protocol, and procedures were described to all the football players prior to the preliminary measurements. All players signed the written consent form in which they agreed to participate and were informed of the main purpose of the study and risks of participating during the measurements.

### Participants

Total of 90 young Saudi football players mean aged  $18.06 \pm 2.16$  participated in the study. Total of 14 clubs competing in the Saudi Youth League, the participants were recruited from five clubs, comprising three from Riyadh, one from Jeddah, and one from Medina, consented to participate in this study.

### Anthropometric measurements

Anthropometric assessments were conducted on separate days from players attending the clubs before the collection of urine samples. Measurements of body weight were obtained using a digital scale to the nearest 0.1 kg (Seca 813, Germany), and height was obtained by a stadiometer to the nearest 0.01 cm (Seca 213, Germany). The participants' Body Mass Index (BMI) was used as a continuous variable or categorized based on the World Health Organization (WHO) criteria (BMI: height in Meters squared/body weight in Kilograms).

### Questionnaire

An Arabic questionnaire was developed by the authors. This questionnaire comprises 48 items, these items were categorized into three sections: family food system (11 items), player nutritional knowledge (11 items), and player nutritional

behavior (11 items). To assess the questionnaire's reliability and internal consistency, Cronbach's alpha was computed. The results indicated high reliability, with values of 0.86 for the family diet system, 0.97 for body mass index, 0.81 for player nutritional knowledge, and 0.88 for player nutritional behavior, with an overall average value of 0.85, affirming the questionnaire's reliability. To construct the questionnaire, the authors drew upon previous studies addressing similar topics, extracting six sections and 66 sentences. These sections and sentences were then reviewed by eight experts in the field to assess their relevance to the study's subject matter and to obtain feedback and suggestions for questionnaire improvement. As a result, three sections, namely "diet and friends" and "food temptations in society" were excluded, and amendments were made to 18 sentences.

### Statistical analysis

Data were analyzed using the Statistical Package for the Social Sciences 19.0 ((SPSS), Chicago, IL). Descriptive statistics, including frequency, percentage, mean, standard deviation, relative importance, and data summarized as mean  $\pm$  SD, were employed. Statistical significance was defined at  $p < 0.05$ . The relationship between family diet system and player nutritional knowledge, player nutritional behavior was assessed using Pearson correlation coefficients. Cronbach's alpha was also utilized to confirm the reliability of the measurements.

## Results

Ninety male football players, representing the Saudi premier league for Under-19 youth, participated in this study. The physical characteristics of the participants are summarized in Table 1. The mean age was  $18.06 \pm 1.52$  years, with an average weight of  $70.3 \pm 5.34$  kg, height of  $175.41 \pm 6.71$  cm, and a BMI of  $22.38 \pm 3.6$  kg/m<sup>2</sup> (Table 1).

**Table 1. Physical characteristics of participants (N=90).**

Physical characteristics	Mean	SD
Age (years)	18.06	2.16
Weight (kg)	70.3	5.34
Height (cm)	175.41	6.71
Body mass index (BMI) (kg/m <sup>2</sup> )	22.38	3.6
BMI percentile for age (boys)		$\geq 98^{\text{th}}$ *

**Note:** \*BMI percentile was calculated from the UK 1990 reference chart for children and adolescents (boy chart) (Cole et al.,).

Table 2 presents the mean and standard deviation for both family food systems ( $3.03 \pm 1.56$ ) and BMI ( $22.38 \pm 3.6$ ). Notably, a significant relationship was observed between BMI and the family food system ( $r>0.42$ ) (Table 2).

**Table 2. The relationship between family food system and body mass index (N=90).**

Variable	Mean	SD	r	p
Family food system	3.03	1.56	0.41	<0.01
BMI	22.38	3.06		

In Table 3, the mean and standard deviation for family food system ( $3.03 \pm 1.56$ ) and nutritional knowledge ( $2.44 \pm 1.28$ ) are displayed. Pearson correlation tests revealed statistically significant associations between family food system and nutritional knowledge ( $r>0.38$ ) (Table 3).

**Table 3. The relationship between family food system and Knowledge (N=90).**

Variable	Mean	SD	r	p
Family food system	3.03	1.56	0.38	<0.01
Knowledge	2.44	1.28		

Table 4 showcases the mean and standard deviation for family food system ( $3.03 \pm 1.56$ ) and nutritional behavior ( $2.71 \pm 1.12$ ). The results demonstrated a significant correlation between family food system and nutritional behavior ( $r>0.29$ ). Statistical significance was established at  $p<0.01$  (Table 4).

**Table 4. The relationship between family food system and behavior (N=90).**

Variable	Mean	SD	r	p
Family food system	3.03	1.56	0.29	<0.01
Behavior	2.71	1.12		

**Discussion**

Within the domain of sports psychology, our study set out to investigate the intricate relationship between the family’s dietary patterns and critical variables, namely BMI, knowledge, and behavior, within the context of Saudi youth soccer players competing in the Saudi Premier League for Under-19 Youth during the 2020/19 season. Our findings have unveiled a noteworthy and positive correlation between the family’s dietary patterns and these pivotal dimensions, corroborating prior research in this field.

The observed favorable linkage between the family’s dietary patterns and BMI, meticulously detailed in Table 2, aligns with a substantial body of prior studies. Notably, Utter et al., delved into the connections between the frequency of family meals and BMI within a diverse student population, revealing a significant albeit moderate association between family meals and BMI [32]. Expanding on this foundation, Das et al., conducted an extensive decade-long cohort study that underscored the significance of communal family dining. Their research demonstrated that adolescents who consistently engaged in family meals were less likely to grapple with issues related to excess weight or obesity, underscoring the role of family meals in fostering healthier weight outcomes. Moreover, Nascimento et al., supported this perspective by documenting that a reduction in the consumption of non-homemade foods was linked to lower BMI and enhanced nutritional quality in children. Collectively, these findings underscore the influence of family meals in shaping dietary choices and positively affecting BMI among young athletes.

Table 3 further enriches our understanding by disclosing a positive association between the family’s dietary patterns and knowledge, a discovery that seamlessly aligns with prior scholarship. Eminent studies, such as the work by Buscemi et al., have underscored the significance of family meals and culinary experiences as pivotal opportunities for acquiring knowledge about food and the broader food system. Furthermore, across various studies, the family consistently emerges as a primary source of food-related knowledge [33-39]. This is corroborated by research conducted by Manore et al., revealing that high school soccer players frequently sought nutritional guidance from family members or medical professionals. These findings collectively underscore the pivotal role of the family in shaping nutritional knowledge, particularly within the realm of sports.

Moreover, our study advances our comprehension by revealing a positive link between the family’s dietary patterns and behavior, as evident in Table 4. This alignment with the research conducted by Utter et al., reinforces the notion that family meals are associated with various positive facets of the home food environment and encourage favorable nutrition-related behaviors. This resonance is further mirrored in the results of other studies Nascimento et al., all of which highlight the influential role of parental behaviors, dietary

characteristics, food preferences, and intake regulation in shaping their children's dietary behaviors [40,41].

## **Conclusion**

In this study, we embarked on an exploratory journey within the field of sports psychology, with the aim of uncovering the intricate relationship between the family's dietary patterns and essential dimensions, including BMI, knowledge, and behavior among Saudi youth soccer players. Based on a rigorous analysis of data obtained from 90 male participants during the Saudi Premier League for Under-19 Youth in the 2020/19 season, our findings have illuminated a substantial and positive association between the family's dietary patterns and these key aspects of well-being and performance.

This study not only deepens our comprehension of the family's role in the athletic development of youth but also underscores the significant influence of families on the body mass, knowledge, and behavior of adolescent athletes, particularly within the context of competitive sports. It underscores the notion that family meals and the broader family dietary patterns play a pivotal role in shaping dietary choices, enhancing nutritional knowledge, and fostering favorable nutritional behaviors among young athletes.

As we look to the future, it is imperative that the field of sports psychology continues to explore and dissect the nuanced dynamics of family involvement in athletic development. Future research should strive to consider intermediate variables that may influence athletes' perceptions of the role and significance of family in their lives. These variables could include educational values instilled at home, the composition of the family unit, the socio-economic and educational backgrounds of family members, and the quality of past sports experiences of parents. Furthermore, researchers should endeavor to employ more precise and rigorous methods of data collection to enhance the reliability and robustness of their findings.

Longitudinal studies, as suggested, are crucial in uncovering causal relationships between various factors, such as gender, quality of life, time dedicated to playing, the economic status of the club, and travel days or competitions outside the city. These investigations promise to

provide a comprehensive understanding of the intricate interplay between family dynamics, sports psychology, and the holistic development of adolescent athletes. Such knowledge not only benefits young athletes but also informs strategies and interventions aimed at optimizing their athletic performance and overall well-being, ultimately enriching the field of sports psychology.

## **Acknowledgments**

The authors extend their thankfulness to all. The authors would like to thank participants, coaches, and clubs' managers for facilitating the project. In addition, they would like to thank King Faisal University for the participation of their faculty members in enriching this manuscript.

## **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## **Funding**

This research project was supported by a grant from the research center for the college of sport science and physical activity and Deanship of scientific research, King Saud University.

## **References**

1. Lee GH. Human behavior and the social environment. Seoul: Gong Dong Che. 2006.
2. Story M, Kaphingst KM, Robinson-O'Brien R, Glanz K. Creating healthy food and eating environments: Policy and environmental approaches. *Annual Review of Public Health*. 2008;21(29):253-272.
3. Torregrosa M, Cruz J, Sousa C, Viladrich C, Villamarín F, et al. Fathers and mothers influence on sport commitment in youth footballers. *Revista Latinoamericana De Psicología*. 2007; 39:227-237.
4. Wuerth S, Lee MJ, Alfermann D. Parental involvement and athletes' career in youth sport. *Psychology of Sport and Exercise*. 2004;5(1):21-33.
5. Keegan RJ, Harwood CG, Spray CM, Lavallee DE. A qualitative investigation exploring the motivational climate in early career sports

- participants: Coach, parent and peer influences on sport motivation. *Psychology of Sport and Exercise*. 2009;10(3):361-372.
6. Weiss MR, Ferrer-Caja E. Motivational orientations and sport behavior. *Advances in Sport Psychology*. 2002:101-183.
  7. Sallis JF, McKenzie TL, Kolody B, Lewis M, Marshall S, et al. Effects of health-related physical education on academic achievement: Project SPARK. *Research Quarterly for Exercise and Sport*. 1999;70(2):127-134.
  8. Dorsch TE, Smith AL, Wilson SR, McDonough MH. Parent goals and verbal sideline behavior in organized youth sport. *Sport, Exercise, and Performance Psychology*. 2015;4(1):19.
  9. Verardi CE, De Marco A. Sports initiation: The influence of parents, teachers and coaches. *Files on the Move*. 2008;4(2):102-123.
  10. Samulski DM, Moraes LC, Ferreira RM, Marques MP, da Silva LA, et al. Analysis of career transitions of former high-level athletes. *Journal of Physical Education. UNESP*. 2009 Jun 25:310-317.
  11. Nicklas TA, Baranowski T, Baranowski JC, Cullen K, Rittenberry L, et al. Family and child-care provider influences on preschool children's fruit, juice, and vegetable consumption. *Nutrition Reviews*. 2001;59(7):224-235.
  12. Cashdan E. A sensitive period for learning about food. *Human Nature*. 1994;5:279-291.
  13. Skinner JD, Carruth BR, Bounds W, Ziegler PJ. Children's food preferences: A longitudinal analysis. *Journal of the American Dietetic Association*. 2002;102(11):1638-1647.
  14. Story M, Neumark-Sztainer D, French S. Individual and environmental influences on adolescent eating behaviors. *Journal of the American Dietetic Association*. 2002;102(3):S40-51.
  15. Birch LL, Fisher JO. Development of eating behaviors among children and adolescents. *Pediatrics*. 1998;101(Supplement\_2):539-549.
  16. Baranowski T, Cullen KW, Baranowski J. Psychosocial correlates of dietary intake: Advancing dietary intervention. *Annual Review of Nutrition*. 1999;19(1):17-40.
  17. Nader PR, Bradley RH, Houts RM, McRitchie SL, O'Brien M. Moderate-to-vigorous physical activity from ages 9 to 15 years. *Jama*. 2008;300(3):295-305.
  18. Nelson MC, Story M, Larson NI, Neumark-Sztainer D, Lytle LA. Emerging adulthood and college-aged youth: An overlooked age for weight-related behavior change. *Obesity*. 2008;16(10):2205.
  19. Das JK, Salam RA, Thornburg KL, Prentice AM, Campisi S, et al. Nutrition in adolescents: Physiology, metabolism, and nutritional needs. *Annals of the New York Academy of Sciences*. 2017;1393(1):21-33.
  20. Rasmussen KM, Yaktine AL. Adolescent health services: Missing opportunities. 2009. National Academies Press.
  21. Sen B. Frequency of family dinner and adolescent body weight status: Evidence from the national longitudinal survey of youth, 1997. *Obesity*. 2006;14(12):2266-2276.
  22. Taveras EM, Rifas-Shiman SL, Berkey CS, Rockett HR, Field AE, et al. Family dinner and adolescent overweight. *Obesity Research*. 2005;13(5):900-906.
  23. Gable S, Chang Y, Krull JL. Television watching and frequency of family meals are predictive of overweight onset and persistence in a national sample of school-aged children. *Journal of the American Dietetic Association*. 2007;107(1):53-61.
  24. Manore MM, Patton-Lopez MM, Meng Y, Wong SS. Sport nutrition knowledge, behaviors and beliefs of high school soccer players. *Nutrients*. 2017;9(4):350.
  25. Nascimento M, Silva D, Ribeiro S, Nunes M, Almeida M, et al. Effect of a nutritional intervention in athlete's body composition, eating behaviour and nutritional knowledge: A comparison between adults and adolescents. *Nutrients*. 2016;8(9):535.
  26. Spendlove JK, Heaney SE, Gifford JA, Prvan T, Denyer GS, et al. Evaluation of general nutrition knowledge in elite Australian athletes. *British Journal of Nutrition*. 2012;107(12):1871-1880.
  27. Spronk I, Heaney SE, Prvan T, O'Connor HT. Relationship between general nutrition

- knowledge and dietary quality in elite athletes. *International Journal of Sport Nutrition and Exercise Metabolism*. 2015;25(3):243-251.
28. Francisco R, Narciso I, Alarcao M. Individual and relational risk factors for the development of eating disorders in adolescent aesthetic athletes and general adolescents. *Eating and Weight Disorders*. 2013;18:403-411.
29. Buscemi J, Beech BM, Relyea G. Predictors of obesity in Latino children: Acculturation as a moderator of the relationship between food insecurity and body mass index percentile. *Journal of Immigrant and Minority Health*. 2011;13:149-154.
30. García-Rovés PM, García-Zapico P, Patterson ÁM, Iglesias-Gutiérrez E. Nutrient intake and food habits of soccer players: Analyzing the correlates of eating practice. *Nutrients*. 2014;6(7):2697-2717.
31. Ono M, Kennedy E, Reeves S, Cronin L. Nutrition and culture in professional football. A mixed method approach. *Appetite*. 2012;58(1):98-104.
32. Utter J, Scragg R, Schaaf D, Mhurchu CN. Relationships between frequency of family meals, BMI and nutritional aspects of the home food environment among New Zealand adolescents. *International Journal of Behavioral Nutrition and Physical Activity*. 2008;5:1-7.
33. Santich B. The study of gastronomy: A catalyst for cultural understanding. *International Journal of the Humanities*. 2007;5(6):53-58.
34. Chan K, Prendergast G, Grønhøj A, Bech-Larsen T. Adolescents' perceptions of healthy eating and communication about healthy eating. *Health Education*. 2009;109(6):474-490.
35. Cooke L. The importance of exposure for healthy eating in childhood: A review. *Journal of Human Nutrition and Dietetics*. 2007;20(4):294-301.
36. Hays J, Power TG, Olvera N. Effects of maternal socialization strategies on children's nutrition knowledge and behavior. *Journal of Applied Developmental Psychology*. 2001;22(4):421-437.
37. Lessard J, Greenberger E, Chen C. Adolescents' response to parental efforts to influence eating habits: When parental warmth matters. *Journal of Youth and Adolescence*. 2010;39:73-83.
38. Pfeifer G. Factors in food choice. *The Psychologist*. 2009;22(7):588-589.
39. Snoek HM, van Strien T, Janssens JM, Engels RC. Longitudinal relationships between fathers', mothers', and adolescents' restrained eating. *Appetite*. 2009;52(2):461-468.
40. Pike KM, Rodin J. Mothers, daughters, and disordered eating. *Journal of Abnormal Psychology*. 1991;100(2):198.
41. Lau RR, Quadrel MJ, Hartman KA. Development and change of young adults' preventive health beliefs and behavior: Influence from parents and peers. *Journal of Health and Social Behavior*. 1990:240-259.

**Corresponding author:** *Abdullah Ghurm Alshehri, Department of Biomechanics and Motor Behavior, College of Sport Sciences and Physical Activity, King Saud University, Riyadh P.O. BOX 145111 ZIP 4545, Saudi Arabia*

**E-mail:** aalsheeri@ksu.edu.sa

**Received:** 29 September 2023, Manuscript No. AJOPY-23-115236; **Editor assigned:** 02 October 2023, PreQC No. AJOPY-23-115236 (PQ); **Reviewed:** 16 October 2023, QC No AJOPY-23-115236; **Revised:** 23 October 2023, Manuscript No. AJOPY-23-115236 (R); **Published:** 30 October 2023, DOI: 10.54615/2231-7805.47337.