

Az orthorexia nervosa előfordulása a fitnessiparban, különös tekintettel az egészségkultusz jelenségére – irodalmi áttekintés

The presence of orthorexia nervosa in the fitness and health practice – review



Bevezetés és célkitűzések:

Az orthorexia nervosa, más néven egészségétel-függőség jelensége először 1997-ben került említésre. Ha az egyén kényszeresen és rögeszmésen gondolkodik a táplálkozásról, s emellett önbüntető és megszorító szokások uralják mindennapjait, akkor kórossá is válhat ez a viselkedés, bár diagnosztikai rendszerek még nem tartják számon evészavarként. Jelen cikk célja azon cikkek összegyűjtése és áttekintése, amelyek a fitnessipar környezetében

és az orthorexia nervosa prevalenciája közötti kapcsolatvizsgálattal foglalkoznak.

Eredmények:

A Pubmed, ScienceDirect and Web of Science adatbázisok segítségével nyolc lektorált tudományos cikk került elemzésre. Megállapíthatjuk, hogy az egészség eszményképe egy erkölcsi imperatívusként van jelen a modern nyugati társadalmakban, gyakran félrevezető információkra alapozva. Az ennek való kényszeres megfelelés a szorongást, egészséges-

nek vélt ételekkel való megszállottságot vagy ebből fakadó beszűkülést hozhat elő.

Következtetések:

A fitnessiparban dolgozóknak tudatosítani kell munkaterületük magas evés- és testképzavarokra hajlamosító rizikófaktorát. Az erre való felkészítés és további kutatómunka fontos feladat tehát a jövőre nézve.

Kulcsszavak:

orthorexia nervosa, szubklinikai evészavar, irodalmi áttekintés, testkép



Background and aims:

Orthorexia nervosa, also known as health food addiction was first described in 1997. Although it is not part of the DSM as an eating disorder, it may become pathological if obsessive thinking, compulsive behavior, self-punishment and escalating restriction take over the individual's everyday thoughts. The aim of this study is to provide an overview and synthesis of the current body of literature about the relationship between fitness environments

and the prevalence of orthorexia.

Results:

We used the online academic databases of Pubmed, ScienceDirect and Web of Science to obtain the selected eight peer reviewed, scientific articles then analyzed them descriptively. We found that health as a moral imperative is present in western culture, often presented in the form of misleading information. This can bring anxiety because of obeying the socioculturally dictated rules,

preoccupation with health food, or narrowed thinking.

Discussion and Conclusions:

The employees of the industry should be aware that they work in a high-risk environment of body image issues and eating disorders. Thus, raising awareness and further prospective research is essential

Keywords:

orthorexia nervosa, subclinical disordered eating, review article, body image

Introduction

The rise of eating disorders (anorexia nervosa, bulimia nervosa and binge eating disorder) in Western culture has been described as a modern epidemic. As broader subclinical eating disorder symptoms for other specified feeding or eating disorders (OSFED) keep appearing, proposals for diagnostic criteria by researchers are coming from both medical and non-medical fields. Descriptions and explorations of orthorexia nervosa (ON), also known as health food addiction are part of this emerging academic literature.

The term ON was first mentioned in a non-scientific journal by physician Steven Bratman in 1997, defining it as “the health food addiction”, or the obsession with proper food and developing extremism towards certain eating habits. It is not yet accepted as a genuine mental disorder and still waiting for decision whether or not it should be part of the next diagnostic systems. Being a “health-junkie” will only become pathological if further progression takes place: obsessive thinking, compulsive behavior, self-punishment and escalating restriction may become central drivers of life, while hindering other important areas (Bratman, 2017). According to systematic review results (Varga et al., 2013), the average prevalence rate for ON was 6.9 % for the general population and 35–57.8

% for high-risk groups (healthcare professionals, artists).

Around the same time of first coining ON, the fitness industry has become a powerful part of the economy. Gyms and recreation centers provide great opportunities to be physically active. Many people have benefited from being a member of the fitness community and pursuing healthy lifestyle, however, it has been observed anecdotally that healthy behaviors can progress to extreme degrees and may consequently become unhealthy by developing orthorexic behaviors. The purpose of this review is to collect the scientific papers that link these habits to the fitness environment. The “fitness lifestyle” associated with gyms and sport clubs is highly represented in various social media platforms, encouraging their members to take part in healthy lifestyle changes. Due to this popularity, we found it essential to summarize the current findings about this hypothesized correlation. This would move the field of eating disorder research further in a way that it could potentially point at a major issue that would validate some changes to be done in the fitness industry.

Measurements and assessment

Bratman's orthorexia test (BOT) consists of ten yes/no questions (Bratman and Knight, 2000). A few years later, Italian researchers created ORTO-15 to identify ON based on Bratman's theories (Donini et al. 2004), investigating the obsessive attitude of the subjects in choosing, buying, preparing and consuming food. Most of the reviewed articles was based on statistics using ORTO-15.

In 2013, Gleaves et al. developed the 21-item Eating Habits Questionnaire. Judging three internally consistent ON components (healthy eating habits, problems resulting from those behaviors and positive feelings linked to those behaviors), it demonstrated high internal consistency. The re-

cently developed Düsseldorf Orthorexia Skala (DOS), which is currently available only in German, has also been used (Barthels et al. 2015).

Healthism

The notion of healthism was termed to describe individual responsibility for achieving and maintaining health (Crawford, 1980). While striving for a healthier body and preventing illness through sports and good nutrition has endless benefits, healthism and thinness is presented as a moral obligation that may serve as a risk of also developing addictive and disordered eating behaviors in gym communities. Exercise and diet are the main tools of health practice: instead of food being “just food”, it has become a quest and destination (McCartney, 2016).

The emergence of social media can also help us understand the moral obligation of clean eating and healthism., and whether it is linked to the topic of body shape and weight. Social networks such as Facebook, Instagram or Pinterest are the main stage for the ethos of food awareness. The fitness industry and the media are both largely responsible as gatekeepers of possible disordered eating habits.

Methods

Selection criteria of our search was to find articles that examined directly ON among fitness industry participants. For this, we first used the keyword “orthorexia nervosa” OR “orthorexic” and among the 87 studies found, we screened the results that are relevant to fitness: measuring athletes' or recreational exercisers health-induced eating habits. We found that were fifteen articles applicable but had to exclude one because of language barriers, four because it dealt more about describing behavioral addictions regarding exercise and only mentioned eating disorders marginally. The literature collection, that resulted in ten



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finally included papers, was performed using the academic databases PubMed and Science direct. Image 1 shows the PRISMA flowchart about the selection process.

athletes' ON was examined four years later as well (Segura-Garcia et al. 2012), and high rates (one-third) of the condition were found among athletes compared to sedentary controls. Shape

complex context, finding it difficult to draw the line between healthy and unhealthy behaviours. They tend to consider their client's different circumstances and norms, but they are in uncertainty regarding assessing the right or wrong eating behaviors.

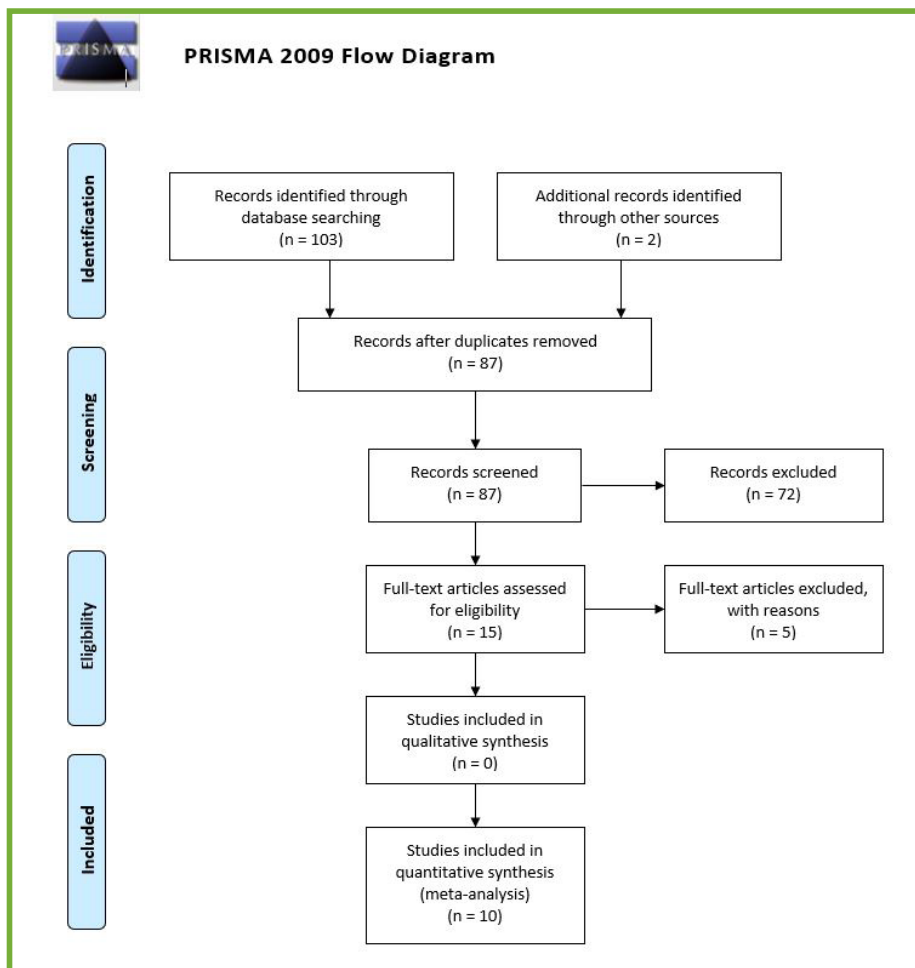


Image 1: article selection process

Results

Table 1 summarizes the key concepts, methodology, sample size and the conclusions for each study.

Two studies were found taking place on social media, looking for the connections between using this communication tool and developing orthorexic symptoms. Tiggemann and Zaccardo (2015) focused on “Fitspiration” (amalgamation of “fitness” and “inspiration,” providing people with motivation to exercise and pursue a healthier lifestyle) and health food images on Instagram. After being exposed to the “Fitspo” images, the participants took surveys to measure mood and body dissatisfaction, inspiration levels, and social comparison. The findings show that when motivated by appearance-based reasons (e.g., achieving a completely flat stomach), adopting disordered eating habits is more likely (Tiggemann – Zaccardo, 2015). Findings highlight the implications social media can have on psychological wellbeing, as healthy eating community on Instagram has the highest prevalence for ON symptoms (Turner – Lefevre, 2017).

Health preoccupation has a massive focus in the sport settings. Research results about ON’s prevalence in active fitness center clients (Eriksson et al. 2008) indicated that women’s high scores on BOT can be explained by the results they had shown on exercise frequency, anxiety levels and internalization of the socioculturally approved appearance. The occurrence of

and clothing preoccupations were more present among the control group, but all other hypotheses about weight preoccupation and obsessively rigid dietary rituals were confirmed in case of the athletes. In a 2016 study a Swedish group concluded that business and exercise science students have differences in ON tendencies (Malmberg et al. 2016) and exercise students demonstrated higher results in ORTO-15. However, it was unexpected to see that they measured lower health status and no significant difference in overall physical activity. Higher ON traits were measured in a yoga-practitioner sample among vegetarians whose particular care of their diet and might push their attention to it to potentially orthorexic limits (Valera et al. 2014). Two of the newest studies (Oberle et al. 2017, Rudolph, 2017) had shown that addictive exercise habits could be a link to ON symptoms as well.

An Australian study measured the health behavior of physical education teachers. Findings indicated that certain misinformation about weight control and nutrition knowledge might be transferred from teachers to students. In some cases, what causes this is a pre-existing eating disorder or inappropriate dietary behaviors from the instructor’s side (O’dea – Abraham, 2006). The same questions have not been measured quantitatively yet among recreational fitness instructors, outside the public school system, but Haman et al. (2017) conducted focus group study in this population. The attitudes of personal trainers towards ON shows that they view these behaviors in a

Discussion

Exercise and recreation professionals aim to improve the population’s health behavior; thus, they are expected to have broad-ranging knowledge about the topics of weight control, eating disorders and body image issues. This is important for health education purposes, for preventing recreational exercisers to come out of balance. However, the results of this review show that excessive exercise and disordered eating often go hand in hand.

The studies we have reviewed mostly demonstrate that the values of healthism (e.g., cultural ideal of thin and fit body, rigidities of consuming food, the judgement of values and self-worth) may serve as stressors in everyday life and the coping mechanisms that can be damaging. The normative practices of healthism are evolving into a private religion, carrying the structure and origins of spiritual-magical beliefs. Assigning responsibility and control are disproportionately big towards the individual: overestimating the imperatives of strength and willpower can lead to self-loathing, anxiety and risk behaviors (such as restriction and purging). The continuous publicity of fitness-themed social media posts can become a form of pressure, under which many individuals become ‘trapped’ without realizing it. Specific vulnerability traits (e.g., social comparison, self-objectivation) can vary the effects of internalizing these messages, i.e., their impact is largely dependent on the receiver’s personality.

The error of labeling disordered eating prematurely can lead to consequences such as stigma (Nevin – Vartanian, 2017), or bioethical debates about medicalizing an issue that is part of everyday health habits (Crawford, 1980). While aspiring for health and even experiencing some pressure to change to our maintain a healthy lifestyle is extremely valuable, recreation and health professionals should be aware that the coping methods oftentimes lead to disordered eating.

Limitations

As ON has no diagnostic criteria, its symptoms are difficult to assess and quantify properly. Also, the number of the articles that directly focus on fitness participants’ behavior is quite small and needs further investigation. Using more qualitative and exploratory methods could broaden the perspective more whether health food addiction can be pathologized or not.

Conclusion and perspectives

It is important for fitness centers to promote healthy habits and attitudes toward body ideals. The employees of the industry should be aware that they work in a high-risk environment of body image issues and eating disorders. Constantly reinforcing their clients that the ideals they see are neither healthy nor realistic is extremely important, because striving for a healthy lifestyle can easily turn out to be counterintuitive when it is accompanied with anxiety. As seen in the reviewed studies, there are clear indicators of both somatic and psychological dangers of such behaviors. This all proves the validity for raising awareness and further prospective research on the ON phenomenon.

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Authors and year	Objectives	Participants	Methods	Conclusions
Tiggemann – Zaccardo, 2015	To measure the effect of fitspiration imagery on women's body image.	n=130, female undergraduate students	Experiment: participants were randomly assigned to view either a set of Instagram fitspiration images or a control set of travel images, then they were tested by the dependent variables such as mood, body dissatisfaction, state appearance self-esteem and state-appearance comparison.	Acute exposure to fitspiration images led to increased negative mood and body dissatisfaction, and decreased state appearance self-esteem relative to travel images.
Turner – Lefevre, 2017	To investigate links between Instagram use and ON symptoms.	n=680, social media users	Correlation analysis: The authors used questionnaires that measured social media use, eating behaviours, and ORTO-15 results.	Higher Instagram use was associated with a greater tendency towards ON.
Eriksson et al. 2008	To measure social physique anxiety and review sociocultural attitudes towards appearance and its impacts on ON tendencies in fitness participants.	n= 251 (166 women and 85 men), Swedish participants in fitness center activities	Correlation analysis between the results of social physique anxiety scale (SPAS) and the sociocultural attitudes towards appearance questionnaire (SATAQ), relating to BOT scores with regard to age, sex, and self-reported exercise frequency.	SATAQ subdomain internalization could itself explain the variation in BOT results. Women's exercise frequency, followed by SPAS score and the SATAQ subdomains internalization and awareness, could together explain the variation in BOT results.
Segura-Garcia et al. 2012	To examine the occurrence of ON in athletes and to verify the relationship between ON and eating disorders.	n=577 athletes and n=217 matched controls.	Logistic regression analysis was performed to find out the predictors of ORTO-15 outcome. Independent variables were results of the eating attitude test-26 (EAT-26), body uneasiness test (BUT) and Yale-Brown-Cornell eating disorder scale.	High positivity to ORTO-15 (28%) and EAT-26 (14%) emerged in athletes, whereas a high rate of BUT positivity was evident among controls (21%).
Malmberg et al. 2016	To measure whether business and exercise science students have any differences in orthorexic tendencies.	University students enrolled in an exercise science program (n=118) or a business program (n=89).	Student's t-test was used to compare differences in mean values, and chi2 tests were applied for comparisons of proportions between groups. Short form-36 health survey (SF-36), the international physical activity questionnaire (IPAQ), and ORTO-15 were used.	ON in combination with a high level of physical activity was most often seen in men in exercise science studies and less often in women in business studies.
Oberle et al. 2017	To measure the relationship between exercise activity and addiction, exercise motivations and orthorexic tendencies.	n=411, university students from the USA.	Correlation analysis, using the EQ and alongside Leisure-Time Exercise Questionnaire, the Exercise Addiction Inventory, the Compulsive Exercise Test, and various exercise motivations using Behavioural Regulations in Exercise Questionnaire and the Exercise Motivations Inventory-2.	High ON individuals are internally driven to exercise for the purposes of improving their physical and mental health, but these strong motivations also lead to exercise addiction.
Rudolph, 2017	To measure the relationship between exercise addiction and orthorexic tendencies.	n=1008, active members of three fitness studios in Germany.	Correlation analysis, between the results of the Exercise Addiction Inventory (EAI) and the DOS.	There was a significant relationship between orthorexic individuals and those who scored high on EAI.
O'dea – Abraham, 2006		n=216, trainee home economics and physical education teachers.	Survey research was undertaken using a self-report questionnaire. Height and weight were measured.	Dangerous methods of weight loss (admitting eating disorder, skipping meals, abusing laxatives) and poor nutrition advice giving was observed among the participants.
Valera et al. 2014	To investigate ON's prevalence in an ashtanga yoga group.	n=582, alumni of the Ashtanga Yoga Madrid center's database (Madrid, Spain).	Correlation analysis using data about BMI, eating and practicing habits, and ORTO-15.	The finding reinforces the notion that several ashtanga practitioners embrace diets over which they might obsess.
Haman et al. 2017	To unveil personal trainers' understanding s of healthy and unhealthy exercise and eating behaviours in relation to ON in a fitness gym context.	n=14, Swedish personal trainers.	Focus group interviews and interpretative qualitative content analysis.	Trainers maintain that extreme behaviours are legitimized by an aggressive exercise trend in society and tents of being pathological.

Table 1: Study details of the journal papers used in the literature review