Connecting Eating Disorders and Sensory Processing Disorder: A Sensory Eating Disorder Hypothesis

Adrian Galiana-Simal1,3*, Victoria Muñoz-Martinez2,3 and Luis Beato-Fernandez2,3

1Clínica Centro de Desarrollo Infantil de Ciudad Real, Spain
2Hospital General Universitario de Ciudad Real, Servicio de Psiquiatría, Spain
3Grupo de Investigación en Trastornos del Neurodesarrollo de Ciudad Real, Spain

Submission: October 31, 2017; Published: November 09, 2017

*Corresponding author: Adrian Galiana-Simal, Clínica Centro de Desarrollo Infantil de Ciudad Real, C/ Eras del Cerrillo nº8, 13004, Ciudad Real, Spain, Tel: , Email: adrian.galiana@edicces

Introduction

Eating disorders are pathological conditions characterized by disturbed eating behaviors that affect mental and physical health. Among them, some Avoidant-Restrictive Food Intake Disorder (ARFID), Pica and Anorexia Nervosa (AN) studies have shown, at least in part, a sensory-related etiology. Sensory Processing Disorder (SPD) is a neurological condition that exists when the brain has an altered processing of sensory signals, resulting in non-adaptive motor and/or behavioral responses. Some of the SPD phenotypes include hyper or hypo-reactivity to one or more sensory channels, including tactile, olfactory, visual and oral that might have connections with the aforementioned eating disorders, like atypical responses from determined food colors, textures or smells which eventually lead to unhealthy eating behaviors, weight imbalance, malnutrition and psychosocial impairment. We have gathered and discussed some of the most relevant studies about the connection between eating disorders and SPD, proposing a general term called sensory eating disorder to define peculiar SPD cases that might evolve to an established eating disorder.

Keywords: Sensory processing disorder; Eating disorders; Sensory eating disorder; Avoidant-restrictive; Food intake disorder; Pica; Anorexia nervosa; Autism

Abbreviations: ARFID: Avoidant-Restrictive Food Intake Disorder; AN: Anorexia Nervosa; SPD: Sensory Processing Disorder

Abstract

Eating disorders are pathological conditions characterized by disturbed eating behaviors that affect mental and physical health. Among them, some Avoidant-Restrictive Food Intake Disorder (ARFID), Pica and Anorexia Nervosa (AN) studies have shown, at least in part, a sensory-related etiology. Sensory Processing Disorder (SPD) is a neurological condition that exists when the brain has an altered processing of sensory signals, resulting in non-adaptive motor and/or behavioral responses. Some of the SPD phenotypes include hyper or hypo-reactivity to one or more sensory channels, including tactile, olfactory, visual and oral that might have connections with the aforementioned eating disorders, like atypical responses from determined food colors, textures or smells which eventually lead to unhealthy eating behaviors, weight imbalance, malnutrition and psychosocial impairment. We have gathered and discussed some of the most relevant studies about the connection between eating disorders and SPD, proposing a general term called sensory eating disorder to define peculiar SPD cases that might evolve to an established eating disorder.

Keywords: Sensory processing disorder; Eating disorders; Sensory eating disorder; Avoidant-restrictive; Food intake disorder; Pica; Anorexia nervosa; Autism

Abbreviations: ARFID: Avoidant-Restrictive Food Intake Disorder; AN: Anorexia Nervosa; SPD: Sensory Processing Disorder
peculiar SPD profile, characterized by hyper or hypo-reactivity to certain type of foods. This kind of SPD profile, similar to that of some eating disorders like ARFID, Pica or AN, could be named “sensory eating disorders”.

Discussion

Both ARFID and Pica might have connections with SPD and the proposed sensory eating disorder subtype by sharing some aspects, like atypical reactivity (hyper or hypo) from determined food colors, textures or smells which eventually lead to unhealthy eating behaviors, weight imbalance, malnutrition and psychosocial impairment. For example, in ASD, where SPD is known to be present in 90% of cases [15, 16], ARFID and Pica eating disorders have been widely reported [17,18]. In the case of AN, published results are contradictory; it has been suggested that sensory hyper-reactivity may represent a trait related to AN above and beyond the influence of malnutrition [19] and that sensory sensitivity has been associated with body image disturbance [20], while other studies report that there is no systematic sensory-perceptual deficit in AN patients [6]. Most likely, these contradictory results may be due to the complexity and multi-factorial etiology of AN where some cases might have a clear sensory-related component while others not.

Conclusion

In conclusion, some eating disorders, especially sensory-related ARFID and Pica, may have a connection with SPD, especially with those profiles where important sensory systems for a complete eating multi-sensory experience are needed, such as tactile, olfactory, visual and oral ones. Mentioned SPD profiles are proposed to be sub-classified as a sensory eating disorder, due to its similarities to sensory-related ARFID and Pica. However, more research is needed in order to better define whether both diagnoses can exist individually or are essentially the same. Non-published results from our research team suggest that proposed sensory eating disorders may be a kind of pre-ARFID/Pica. If so, its diagnosis might have an impact on preventing the development of the eating disorder, further allowing earlier treatments.

References
