Extended Abstract Journal of Obesity and Metabolism 2020
Vol.3, Issue.2

Self-Regulation and the Management of Childhood Obesity

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Abstract

Failure in self-regulation has been proposed as a moderator in the development of overweight and obesity, primarily through its effects on deregulated eating behavior. As a result, it might cause regulatory problems in the energy balance, as well as rapid weight gain from early childhood through adolescence. Self-control is the exertion of control over the self by the self. Self-control occurs when a person (or other organism) attempts to change the way he or she would otherwise think, feel, or behave. Thus, self-control may be view as part of selfregulation. Parents and health care providers face the challenge of helping children practice regulation and develop coping skills alongside the ability to take care of their own well-being. This paper attempts to bridge the gap between self-control theories and interventions for the management of childhood obesity. The dietary restriction approach will be compared with the trust paradigm, which emphasizes children's internal hunger, satiety cues and a division of responsibilities between parents and children. The term self-regulation refers to the cognitive processes that govern drives and emotions [1]. Self-control refers to the ability to deliberately regulate one's emotions, urges and desires and can be viewed as aspect of self-regulation [2]. Several studies implicate difficulties in selfregulation in the development of overweight and obesity, primarily via deregulated eating behavior [3]. In a prospective longitudinal study, Duckworth et al. [4] found that selfcontrolled children are protected from weight gain in the transition to adolescence. Francis and Susman [5] found that children with low self-regulation had significantly higher body mass index (BMI) and more rapid weight gain from age 3-12 than other children. These findings suggest that in early childhood, selfregulatory problems are important longitudinal predictors of weight problems in early adolescence.

Children learn to practice self-control skills in the home environment by settling disagreements rationally rather than taking revenge, eating healthy food rather than junk, saving rather than spending, concentrating rather than disrupting the class, being careful rather than thrillseeking and considerate rather than greedy [6]. With significant burdens of disease attributable worldwide to the obesogenic environment and to weight-related problems, the role of parents has perhaps never been more important in the management of deregulated eating [7,8]. They must find a way to help their children internalize self-regulation, develop coping skills and become physically and emotionally independent. This paper will explore the relevance of self-control theories to the management of childhood obesity. The relationship of dietary restriction to self-control theories will be examined. The dietary restriction approach [9] will be compared with the trust paradigm, which emphasizes children's internal hunger, satiety cues and a division of responsibilities between parents and children [10]. **Keywords**: Childhood obesity; Self-control; Selfregulation. **Self-regulation**

"Self-regulation" often refers broadly to the capacity to alter thoughts, feelings, desires, and actions with respect to certain goals. It infers active agency and is vital, since without it we would be helpless spectators. Self-regulation involves self-observation, judgment, and self-reaction [11]. The ability to regulate and control feelings and behaviors is a major accomplishment of the human species, yet the psychological mechanisms involved are incompletely understood. The absence of self-regulation skills is often related to interpersonal difficulties, addictions, emotional eating and weight-related problems [2]. While the capacity to self-regulate may vary across situations, some studies suggest it is more trait-like than state-like [12].

This work is partly presented at Joint Event on 17th World Congress on Obesity & Nutrition, September21-22, 2018 Osaka, Japan

Selfregulation in early childhood has been linked to parental and teacher ratings of self-regulation or impulsivity later in life [13] and recent studies indicate it is both a trait and ability [14]. People with strong selfregulatory abilities can control their impulses much more easily than those without them, and are thus less prone to emotional eating and indulgence when tempted [12]. **Self-Control**

Self-control refers to the capacity to alter one's responses and align them with ideals, values, morals, and social expectations, and the capacity to pursue long-term goals. Whereas 'self-control' and 'self-regulation' are often used interchangeably, those who make a distinction typically consider self-control as a deliberate, conscious, aspect of self-regulation. Self-control facilitates the restraint of overriding of a response, enabling a different response.

Moderators of Self-regulation

Several moderators may be related to difficulties in selfregulation and thus to weight-related problems:

Individual differences and state variations Although self-regulation generally develops over the life span, people differ in their degree of impulsitivity when faced with temptation [17]. These individual differences no doubt result from genetic, pre-natal and postnatal environmental influences, as well as learning history and current need states.

Hierarchy of values and reward value A person strongly tempted to accept a piece of chocolate yet wanting to restrain caloric input will experience internal conflict between the value of pleasure and the value of restriction [35]. Immediate value is coded by the reward system. The value of sensory stimuli has been called reward value [36]. Higgins' regulatory engagement theory [36] related this concept to value estimations and engagement.

Emotional distress and ego depletion vs. ego strength Emotional distress may work against a general pattern of impulse control because it leads to a short-term focus, whereas impulse control requires a long-term focus. Emotional distress probably enhances the tendency to seek immediate sources of good feelings. Many of the common foci of self-regulatory restraints offer immediate pleasure: alcohol, drugs, high-calorie foods, illicit sex, extra sleep, shopping, and entertainment. In weightrelated problems, impulse control may fail because distress leads to affect regulation [37], which takes priority over the value of healthy eating.

Restrained eating

Self-regulatory resources also moderate the influence of restraint on eating behavior. Restraint standards normally guide behavior effectively in tempting situations, but not when participants' selfregulatory resources are depleted [43]. Both automatic affective reactions and approach–avoidance tendencies are affected by physical deprivation [33,44]. Dieters, who constantly seek to restrict food intake, therefore eat more when self-regulatory resources are depleted. In contrast, non-dieters, who eat freely according to internal hunger and satiety, do not eat more than usual when their self-regulatory resources are depleted

Exposure to temptations and tempters Exposure to temptation can undermine self-regulatory functioning [22] whereas preschool-age children can selfregulate energy intake in controlled laboratory conditions [23], this ability is easily disrupted by social and
situational factors

Development of Self-Control

Self-control is a psychological skill involving higher mental processes and attention-focusing abilities that can help prevent weightrelated problems or help manage them. Although biologically based, it can be learned. Research suggests that it develops with the repeated activation of relevant neural systems, just like a muscle.

Conclusion

Self-control and self-regulation can be developed and serve as buffers against emotional dysregulation and problematic eating behavior. There are no empiricallybased guidelines for effective parenting practices or for external interventions promoting weight control. Not all children need to moderate their energy intake, so the need for reductions in energy density should be "weighed" carefully. Neither inappropriate levels of trust nor extensive restriction of food intake are effective in fostering self-control and self-regulation in eating. Since restrictive feeding practices increase children's preferences for restricted and palatable foods [95] and promote overeating when restricted foods are freely available [4], parents should aim to control the environment rather than children's behavior. Moderate restrictions should be imposed on less nutritional foods. Social contexts promoting alertness (rather than vigilance) to long- versus short-term rewards should be provided to enhance self-

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regulation and self-control. This can be achieved without overt psychological control in most cultures via an authoritative parenting style and effective communication.

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