FACULTY OF PSYCHOLOGY AND EDUCATIONAL SCIENCES

DEPARTMENT OF DEVELOPMENTAL, PERSONALITY AND SOCIAL PSYCHOLOGY

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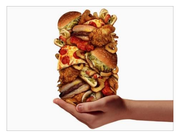
INHIBITORY CONTROL PROBLEMS IN LOSS OF CONTROL OVER EATING AMONG ADOLESCENTS

Background

Binge eating (BE) =



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Consumption of objectively large amount of food

Feeling of loss of control (LOC) over eating

Loss of control over eating (LOC) is **common among adolescents (16 – 40%)** (Goossens, Soenens, & Braet, 2009) and is associated with numerous negative physical and psychosocial outcomes: (Tanofsky-Kraff et al., 2011)

Eating/weight pathology

Weight gain

Clinical eating disorders

Other psychopathology

Mechanisms?

Recent evidence points to a role for poor inhibitory control (IC) in explaining loss of control over eating (LOC) (Manasse et al., 2016). However, most research to date has focused on (1) overeating without including the aspect of **loss of control** and (2) adults instead of **adolescents**. Moreover, research remains inconclusive on whether the inhibitory control difficulties are related to food-specific or rather general types of stimuli.

Aim

1) Examine whether adolescents with loss of control over eating have more inhibitory control problems compared to healthy controls + the role of moderating control variables (age, gender, adjusted BMI).
2) Investigate whether these inhibitory control problems are food-specific or rather general.

Method

Sample

A community sample of **133 adolescents** (63.2% female) between **10 and 16 years** old (*M* = 13.06 years; *SD* = 2.02) was recruited.

Instruments and procedure

From the total sample, 124 adolescents were questioned about the experience of loss of control over eating using a **clinical interview** (ChEDE-Q; Child Eating Disorder Examination) (Fairburn & Cooper, 1993). A total of 30 adolescents reported at least one loss of control over eating episode during the last month, while 94 adolescents did not.

To measure inhibitory control (IC), both a **self-report** measure (i.e. BRIEF, behavioural regulation index) (Smidts & Huizinga, 2009) and a **behavioural** measure (i.e. go/no-go task) (Houben & Jansen, 2011) was used.

Food-specific condition

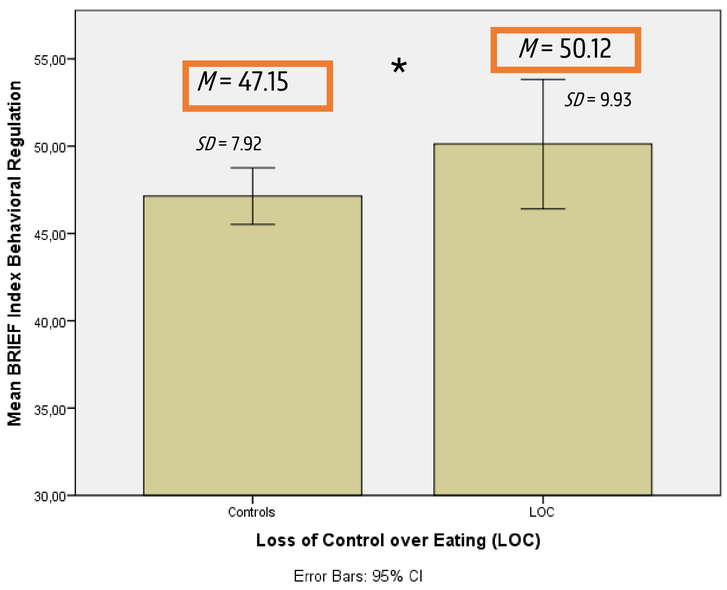
General/neutral condition

Analyses

Both binary logistic regression and ANOVAs were used to compare adolescents with and without loss of control over eating.

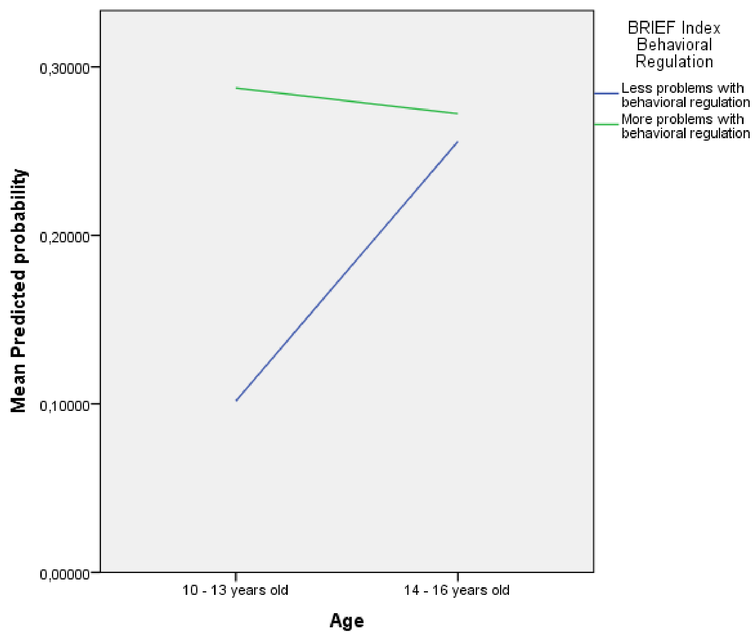
Results

Do adolescents who experience loss of control over eating have more inhibitory control problems compared to healthy controls?



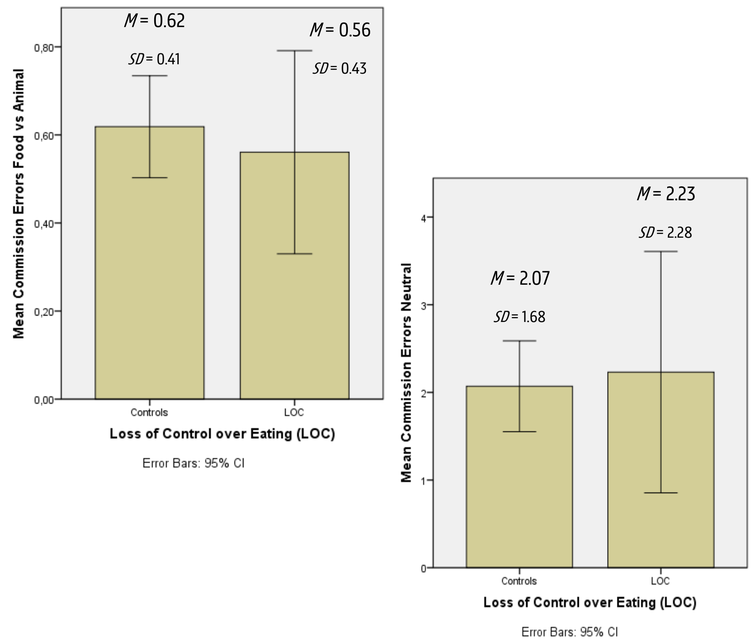
Adolescents who experience loss of control over eating (LOC) have significantly more self-reported problems with inhibitory control compared to healthy controls, $F(3, 120) = 4.97$, $p = .028$, $\eta_p^2 = .04$.

Are there moderating control variables (age, gender, adjusted BMI)?



Gender ($b = .078$, $SE = .439$, $p = .859$, $OR = 1.081$) and adjusted BMI ($b = .006$, $SE = .012$, $p = .644$, $OR = 1.006$) did not act as moderating control variables. However, there was a trend significant interaction effect with age ($b = -.180$, $SE = .105$, $p = .085$, $OR = .835$).

Are the inhibitory control problems food-specific or general?



There were no significant differences in commission errors between the loss of control group and the healthy controls: food-specific condition ($F(1, 64) = 0.238$, $p = ,627$, $\eta_p^2 = .004$) & neutral condition ($F(1, 54) = 0.077$, $p = ,782$, $\eta_p^2 = .001$)*.

*The food-specific task was negatively correlated with the BRIEF ($r = -,301$, $p = ,014$), whereas no significant correlation was found between the neutral task and the BRIEF ($r = ,202$, $p = ,136$).

Conclusions & Implications

1. Adolescents with loss of control over eating have more self-reported inhibitory control problems compared to healthy controls.
2. Only for young adolescents (10 – 13 years old), good inhibitory control tend to be a protective factor for developping loss of control over eating.
3. No differences were found in commission errors between the two groups using the go/no-go task as behavioral measure.

Future Research?

1. Role of other moderators (e.g. bottom-up processes)?
2. Other analytic methods with regard to the go/no-go task?
3. Other behavioral measures for inhibitory control?
4. Do self-report and behavioral measures capture different constructs?
5. Role of contextual information?

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