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Moral development and its relation to inhibition

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Background

- Morality: an individual's respect for the rules of social order and his sense of justice (**Piaget, 1932**).
- justice being “a concern for reciprocity and equality among individuals” (**Hoffman, 1970**).
- Moral development requires understanding the values of society and regulating behavior accordingly.

Background

- Development of moral reasoning depends on the development of cognition (Piaget, 1932 & Kohlberg, 1969).
- Development of moral behavior depends on the development of moral reasoning and the ability to inhibit actions that are disapproved by society (Berk, 2007).

Background

Inhibition: the ability to resist interference from inappropriate stimuli and to withhold inappropriate behavior (Bjorklund and Harnishfeger, 1990) .

Poor inhibition as can be seen in children and Frontal lobe patients, often results in the generalized decline in the ability to control overt behavior, hyperactivity, increased sexual and aggressive behavior. They may seem to have little regard for rules and social conventions (Fuster, 1989).

This lack of restraint may persist even when these individuals clearly realize that their behavior is unacceptable and that it may lead to punishment (Fuster, 1989).

Questions

Does superior moral reasoning necessarily lead to superior moral behavior?

- Does moral behavior depend on moral reasoning and inhibition ability?
- Does moral reasoning and behavior increase with age?

Aims

- Examining the relationship between:
 - **Moral behavior and moral reasoning**
 - **moral reasoning and inhibition**
 - **moral behavior and inhibition**and their differences among Iranian children and adolescents.

Subjects & Materials

- 54 children at age 9 years
- 30 adolescents at age 15 years
- **Kohlberg's** moral dilemma related to cheating, for assessing moral reasoning
- **Theodore-Simon-test** for assessing moral behavior
- **Stroop-test** for assessing inhibition
(Stroop test is widely viewed as markers of frontal lobe dysfunction (Dempster and Corkill, 1999)).

Results

age-group differences

- Difference between age-groups in **Kohlberg Task**:
 - $t=4.2, df=68.8, p<0.001$
 - adolescents got higher scores in Kohlberg Task
- Difference between age-groups in performing **Teodor-Simon Task**:
 - $t = 2.1, df=66.07, p=.03$
 - adolescents cheated more

Results

age-group differences

- Difference between age-groups in performing **Stroop-test**:

errors in reading words: no significant difference

errors in naming colors: no significant difference

errors in naming color-words:

- $t = -5.4, df = 77.4, p < 0.001$
- Children had more errors than adolescents

Results

age-group differences

Interference effect 1 = time in naming color of color-words – time in reading words:

$t = -5.7, df = 81.8, p < 0.001$

Children had higher interference effect

Interference effect 2 = time in naming color of color-words – time in naming colors:

$t = -6.7, df = 81.9, p < 0.001$

Children had higher interference effect

Results

Correlations

- Spearman correlations between moral reasoning and moral behavior:

Children: $r = .12$, $p = .43$

Adolescents: $r = -.52$, $p = .003$ (2-tailed).

The higher scores in moral reasoning the more cheating

Results

Correlations

- Spearman correlations between moral reasoning and Stroop-test:

Children: null result

Adolescents: null result

- Spearman correlations between moral behavior and Stroop-test:

Children: $r = -.23$, $P = 0.045$

Adolescents: null result

Results

Logistic Regression

- **Criterion:** Cheating (0) or not cheating (1)
- **Predictors:** Kohlberg scores and Stroop Interference effect
- Separately for adolescents and children

Adolescents

■ **Step 1: Kohlberg**

- $B = -1.98$, $S.E. = .79$, $Wald = 6.2$, $df = 1$, $p = .01$, $Exp(B) = .14$
- Model chi-square = 9.3, $df = 1$, $p = .002$
- % correct percentage = 86.2
- Cox and Snell $R^2 = .28$
- Hosmer and Lemeshow Test chi-square = .59, $df = 1$, $p = .4$

■ **Step 2: Kohlberg and stroop interference 1**

- $B = -3.4$, $S.E. = 1.3$, $Wald = 6.5$, $df = 1$, $p = .01$, $Exp(B) = .03$
- $B = -.07$, $S.E. = .03$, $Wald = 4.8$, $df = 1$, $p = .02$, $Exp(B) = .93$
- Model chi-square = 17.5, $df = 2$, $p < 0.001$
- Block chi-square = 8.1, $df = 1$, $p = .004$
- % correct percentage = 82.8
- Cox and Snell $R^2 = .45$
- Hosmer and Lemeshow Test chi-square = 7.5, $df = 8$, $p = .5$

Children

■ **Step 1: Kohlberg**

- $B = .3$, $S.E. = .3$, $Wald = .9$, $df = 1$, $p = .3$, $Exp(B) = 1.3$
- Model chi-square = 1.02, $df = 1$, $p = .3$
- % correct percentage = 58.0
- Cox and Snell $R^2 = .02$
- Hosmer and Lemeshow Test chi-square = 1.4, $df = 3$, $p = .7$

■ **Step 2: Kohlberg and stroop interference (errors)**

- $B = .25$, $S.E. = .3$, $Wald = .6$, $df = 1$, $p = .4$, $Exp(B) = 1.3$
- $B = -.04$, $S.E. = .05$, $Wald = .6$, $df = 1$, $p = .4$, $Exp(B) = .96$
- Model chi-square = 1.7, $df = 2$, $p = .4$
- Block chi-square = .6, $df = 1$, $p = .4$
- % correct percentage = 54.0
- Cox and Snell $R^2 = .45$
- Hosmer and Lemeshow Test chi-square = 9.2, $df = 8$, $p = .3$

Conclusion

Does moral reasoning increased with age?

- adolescents were better than children in giving moral reasons for the dilemma; consistent with Kohlberg's view.
- Their responses to moral dilemma were mainly in stages 2 and 3, considering social rules.
- Children's responses to moral dilemma were mainly in stages 1 and 2, considering punishment and satisfying needs.

Conclusion

Does moral behavior increased with age?

- adolescents more than children cheated in performing Teodor-Simon Task.

Conclusion

Does superior moral reasoning necessarily lead to superior moral behavior?

- For children moral reasoning and moral behavior were not related to each other.
- For adolescents, the relationship was in contrast to what was predicted: those with high ability in moral reasoning cheated more! They less likely followed the rule they were asked to do.

Conclusion

Does moral behavior and reasoning depend on inhibition ability?

- Children with less ability to inhibit inappropriate response cheated more, however this relationship disappeared when in regression (cheating as criterion) the variance of moral reasoning were accounted for.
- That is neither inhibition nor moral reasoning could predict the moral behavior of children.

Conclusion

Does moral behavior depend on reasoning and inhibition ability?

- The results of regression suggested that adolescents with high ability in moral reasoning and less ability to inhibit inappropriate responses cheated more.
- Even though Adolescents know right from wrong, they were unable to regulate behavior.

- The disparity between knowing and doing can be emphasized by the results of the current research (Narvaez, Vaydich, 2008).
- No matter how high our moral principles may be, when the time comes to act on them, our behavior may not reflect our thoughts or beliefs.
- Even the most able individuals in moral reasoning will not be able to act morally unless other abilities such as inhibition is also appropriately developed.

References

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