



THE INFLUENCE OF THE ENVIRONMENT OF ORIGIN ON MORAL DEVELOPMENT ASSESSED BY KOHLBERG'S THEORY

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ABSTRACT

Moral development is a complex problem for the solution of which many theories have been proposed. This aspect has multiple social implications being responsible for social behaviour, especially in crises such as pandemics, wars, or borderline situations. The assessment of moral discernment is a common practice in forensic science because it determines whether a person who has committed a crime is capable of being responsible for his or her actions and thus can be held accountable. The use of ethical models to assess moral development is a common method. We used Heinz's dilemma to assess the degree of development of a population group. We tried to determine whether different individual factors influence how subjects respond to ethical issues. Factors such as education level, gender, and religion do not have a statistically significant impact on moral problem-solving. Factors such as gender and education level do not seem to influence how subjects respond to moral dilemmas. The environment of origin seems to have a statistically significant influence on the moral development of the participants. Further studies are needed to determine the cause of these statistical correlations and to determine other possible factors influencing moral decisions.

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Introduction

In accordance with Kohlberg's theory, morality matures during the course of adolescence at three levels, commencing with the pre-conventional stage (which includes stages 1 and 2), moving on to the conventional stage (which includes stages 3 and 4), and finally reaching the post-conventional stage (which includes stages 5 and 6). Moral assessment in the pre-conventional stage is dependent on the direct effects of behavior, such as punishment or reward. On adherence to the standards of external groups, assessment is made at the customary level. At the post-conventional level, moral judgment is predicated on a staunch adherence to a few universally true principles [1].

Although Kohlberg suggested that moral development is positively influenced by age, this has been contradicted by empirical studies which have shown that it is more strongly influenced by education [2]. Kohlberg's theory is derived from Piaget's 1930s theory of children's development by stages. His theory was developed over 30 years of research on child development. In the 1960s he proposed a theory of the development of moral judgment divided into 3 levels and 6 stages [3].

One explanation for this phenomenon could be that in order to act morally a person must first be disappointed and then act morally in the absence of motivation. It has been suggested that very often a behavior is caused by an emotion and/or an impulse and not by a moral motive. Another possibility is that illegal driving and cheating in academia are not considered morally charged acts [4].

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Stages of moral judgment also have implications in industrial areas, where the aim is to be moral and be able to make a profit. In the organisational field, a very important term is legitimacy which refers to the authority of a structure to exercise control. This is of three kinds; moral legitimacy, cognitive legitimacy, and pragmatic legitimacy [5].

It has been observed that older individuals are higher on the scale of moral judgment, and in terms of its development, there is a cumulative process in that a person at a certain stage understands the lower stages but not the higher ones. Each individual will pass through the same stages of development of moral judgment, but the rate of development will vary [6].

Heinz's dilemma is what is most used to understand the developmental stages of moral judgment [7].

Heinz's Dilemma "A woman was in danger of dying from a very serious illness. A medicine was invented that could cure her. It was based on radium for which the inventor charged a very high price. The sick woman's husband, Heinz, did not have enough money. He asked the inventor for less money. The inventor refused. Heinz robbed the pharmacy to get the medicine. What was Heinz supposed to do?

At the first level, children lack internalization of the idea of value. Their moral thinking is controlled by external factors such as punishment and reward. In the first stage, children obey their parents to avoid being punished. In the second stage, they do good to receive good in return. At the second, conventional stage, social norms and values shape morality, punishment is not counted. The third stage is that of the good boy and girl. Children at this stage want to act in accordance with society's expectations. The fourth stage is law and order-oriented. Understanding laws, order, and justice are the main elements of this stage. At the post-conventional level moral thinking is internalised and unaffected by external factors [8-10]. The fifth stage refers to the social contract. And the sixth is a universal law, when a law contradicts a fundamental right, the law must be changed [11].

The study aims to assess various personal and environmental factors that influence the way ethical issues assessed using the Heinz dilemma are resolved.

Materials and Methods

The study is experimental, in which participants are presented with a moral judgment problem, Heinz's Dilemma, and must answer Yes or No to the ethical dilemma. Other data on age, background, education, religion, etc. are also assessed. Sampling was by age, gender and background.

The subjects for the study were chosen at random from the general Romanian population over the age of 18 between the years of 2019 and 2021. There were 50 competitors in the lot.

Age above 18, fluency in Romanian or English, and a minimum of normal interpersonal abilities were requirements for study admission. Exclusion criteria were age under 18 and poor comprehension or communication skills.

IBM SPSS Statistics version 26 and Excel 2016 were used to statistically analyze the data.

Results and Discussion

The answer to Heinz's dilemma shows that 56% answered Yes and 44% answered No

Hi-square test for Heinz's dilemma in relation to gender. The null hypothesis states that there is no statistically significant relationship between participants' gender and Heinz's conundrum. The alternative theory is that there is a statistical relationship between Heinz's conundrum and the gender of participants. Since the number is 0.945, it is not statistically significant when compared to the alpha standard of 0.05, which is the observed value. Thus, it is acknowledged that there is no statistical relationship between the gender of participants and Heinz's conundrum, which is the null hypothesis. The degree of certainty is 95%.

The Hi-Square test for the Heinz dilemma in relation to age. As the number is 0.428, it cannot be considered statistically significant when compared to the alpha criterion of 0.05, which is the accepted value. The null hypothesis states that there is no statistically significant relationship between participants' ages and Heinz's conundrum. The alternative hypothesis is that there is a statistical correlation between Heinz's dilemma and the age of participants. The result of the statistical test is 0.428 higher than the accepted value for the statistical level of 0.05. As a result, it is believed that there is no statistical relationship between age and Heinz's conundrum.

Hi-square test for association between educational attainment and Heinz's dilemma. The dependent variable is Heinz's dilemma and the independent variable is educational attainment. The null hypothesis states that Heinz's conundrum and educational attainment do not statistically correlate. The Heinz conundrum may be related to educational attainment, according to a competing theory. The result of the Hi-square test is statistically insignificant, the value is 0.224. The null hypothesis is thus accepted.

The Heinz conundrum and religious correlation using the Hi-Square test. The null hypothesis states that there is no connection between religion and the solution to Heinz's conundrum. The alternative hypothesis is that there is an association between religion and Heinz's dilemma. The Hi-square result is 0.585 which is not statistically significant compared to the standard value of 0.05. The alternative hypothesis that there is no statistical correlation between religion and Heinz's dilemma is thus accepted.

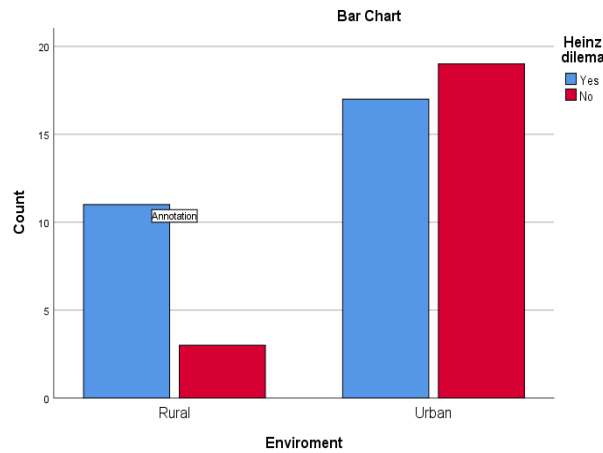


Figure 1. The response to Heinz's Dilemma.

Hi-square test for the association between Heinz's dilemma and environment. The null hypothesis is that there is no association between the environment and Heinz's dilemma. The alternative hypothesis is that there is an association between the environment and the Heinz dilemma. Urban subjects answered 47% yes and 63% no, rural subjects answered 78% yes and 22% no (Figure 1). The Pearson Chi-Square test had a p-value of 0.045 which is statistically significant. This is under the 0.5 alpha value, so we reject the null hypothesis.

Table 1. Phi Cramer's V Test

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.284	.045
	Cramer's V	.284	.045
N of Valid Cases		50	

The Phi and Cramer test had a value of .285 showing a weak correlation (Table 1).

Table 2. Odds Ratio Risk

Risk Estimate			
	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Environment (Rural / Urban)	4.098	.976	17.202
For cohort Heinz's dilemma= Yes	1.664	1.071	2.585
For cohort Heinz's dilemma = No	.406	.142	1.160
N of Valid Cases		50	

The Odds Ratio value had a value of 1.664 for the Yes answer to the Heinz dilemma for the Rural respondents (Table 2). Heinz's dilemma is frequently used concerning the level of moral development in both adults and children [12]. No statistically significant differences were observed in the gender of the participants [13]. There are no differences in the moral development of children as they become adults [14]. Some differences were observed in the ethnicity of some populations [15]. Some cultural analyses have proposed other levels of moral devolution [16].

Moral decisions are highly correlated with emotional states [17, 18]. No statistically significant differences were observed in subjects' religiosity and moral development [19].

For the coronavirus pandemic, a modified version of Heinz's dilma has been developed to gauge individuals' reactions to various ethical dilemmas [20]. Moral dilemmas are methods for testing moral judgments in various fields such as wars, medicine, cultural customs historical traditions, etc. Some authors suggest using more varied dilemmas updated to current events to determine how different test subjects judge discernment [21]. As far as studies on teenagers are concerned, it seems that boys are more likely to be more morally developed than girls, but this may be due to other causes such as economic factors or incomplete development [22]. Some authors have observed a difference in the development of the moray in white versus black subjects in South Africa [23]. Modified forms of Heinz's dilemma have been used to test other medical issues, such as attitudes toward people with AIDS. According to statistical analysis, there were no statistically significant differences between these ethical challenges, supporting the idea that respondents' moral judgments are unchanging when tested with ethical

dilemmas [24, 25]. Mental operations are elusive to conscious evaluation, and interviews depend on conscious understanding, people are not aware of the contents of their mind. Also, people know more than they say and so their verbal skills should not limit them, in terms of expressing judgments. They may not remember their knowledge but when they encounter the same problem they can solve it effectively [26].

It has been observed that from 14 months, children can help, for example, to open the door or help reach an object that is too far away, or to offer a hidden object that is needed to continue an activity. Children's sensitivity to earning a reward does not appear until 5 years of age, e.g. improving reputation or earning reciprocity. Around 3 years of age, children tend to help friends more than non-friends [27].

It is important to remember that moral development is both contextual and rational, requiring judgments and social situation analysis. Both adults and children make sense of the world by applying morals and other ideas [28].

Conclusion

The study of moral discernment is a widely used method, a complex issue with benefits for society. Heinz's dilemma is the most widely used method for studying moral discernment. Response to Heinz's dilemma showed a statistically significant correlation with the environment. Rural people are more likely to answer Yes to Heinz's dilemma. Further research is required to demonstrate the lack of a strong association. Studies in the area of moral decision-making must be continued in light of the epidemic occurrences of today.

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References

1. Sandor S, Gürvit H. Development of somatic markers guiding decision-making along adolescence. *Int J Psychophysiol.* 2019;137:82-91.
2. Pircher Verdorfer A, Weber WG. Examining the link between organizational democracy and employees' moral development. *J Moral Educ.* 2016;45(1):59-73.
3. Zhang Q. Research on Kohlberg's theory and practice in China. *OALib.* 2018;05(08):1-11.
4. Xu F, Caldwell C, Anderson V. Moral implications of leadership - Transformative insights. *Int J Bus Soc Res.* 2016;6(3):76.
5. Mathes EW. An evolutionary perspective on Kohlberg's theory of moral development. *Curr Psychol.* 2021;40(8):3908-21.
6. Lewis G, Palacios S, Valenzuela MA. An integrational framework of organizational moral development, legitimacy, and corporate responsibility: A longitudinal, intersectoral analysis of citizenship reports. *Bus Soc Rev.* 2016;121(4):593-623.
7. Chang CLH. The effect of an information ethics course on the students' information ethics values: A Kohlberg's CMD model's perspective. *Int J Inf Syst Change Manag.* 2017;9(4):278-99.
8. Mekeruş F, Voiţă GF, Mekeruş GM, Bodog FD. Psychosocial impact of scars in evaluation of aesthetic prejudice. *Rom J Leg Med.* 2017;25:435-8.
9. Voiţă-Mekeres F, Buhaş CL, Mekeruş GM, Tudoran C, Racovita M, Faur CI, et al. Mekeruş' psychosocial internalization scale: a scale for the evaluation of aesthetic prejudice in victims of accidents and violence. *InHealthcare* 2021 Oct 26 (Vol. 9, No. 11, p. 1440). MDPI.
10. Mekeruş GM, Voiţă-Mekeres F, Tudoran C, Buhaş CL, Tudoran M, Racoviţă M, et al. Predictors for estimating scars' internalization in victims with post-traumatic scars versus patients with postsurgical scars. *InHealthcare* 2022 Mar 16 (Vol. 10, No. 3, p. 550). MDPI.
11. Zhao Y, Xia Y, Chen X, Miao X. Ideological education of college students in China: Based on the distribution characteristics of moral development. *Educ Sci: Theory Pract.* 2018;18(5).
12. Jose O. Stages of moral reasoning among university students in papua new guinea. *J Hum Values.* 2013;19(1):55-64.
13. Keefer MW, Olson DR. Moral reasoning and moral concerns: An alternative to Gilligan's gender based hypothesis. *Can J Behav Sci.* 1995;27(4):420-37.
14. Donenberg GR, Hoffman LW. Gender differences in moral development. *Sex Roles.* 1988;18-18(11-12):701-17. Available from: <https://pdfs.semanticscholar.org/2c9e/b867c06ac99685b162a095dabc298b865c07.pdf>
15. Cortese AJ. The interpersonal approach to morality: A gender and cultural analysis. *J Soc Psychol.* 1989;129(4):429-42.
16. Iwasa N. Postconventional reasoning and moral education in Japan. *J Moral Educ.* 1992;21(1):3-16.

17. Kaplan U, Tivnan T. Multiplicity of emotions in moral judgment and motivation. *Ethics Behav.* 2014;24(6):421-43.
18. Mekereş GM, Buhaş CL, Tudoran C, Csep AN, Tudoran M, Manole F, et al. The practical utility of psychometric scales for the assessment of the impact of posttraumatic scars on mental health. *Front Public Health.* 2023;11:1103714.
19. Didyoung J, Charles E, Rowland NJ. Non-theists are no less moral than theists: Some preliminary results. *Secul Nonreligion.* 2013;2(0):1.
20. Schiffer AA, O'Dea CJ, Saucier DA. Moral decision-making and support for safety procedures amid the COVID-19 pandemic. *Pers Individ Diff.* 2021;175:110714.
21. Körner A, Deutsch R. Deontology and utilitarianism in real life: A set of moral dilemmas based on historic events. *Pers Soc Psychol Bull.* 2022;014616722211030.
22. Farooq U, Maqbool MA, Shah MA, Ayoub MT, Tariq MJ. Gender differences in moral reasoning of secondary schools students. *PalArch's J Archaeol Egypt/Egyptol.* 2022;19(3):1576-81.
23. Snarey J, Keljo K. Revisiting a "Study of moral development in the south African context" by Smith and Parekh. *Psychol Rep.* 1996;79(3):1089-90.
24. Bush AJ, Krebs DL, Carpendale JI. The structural consistency of moral judgments about AIDS. *J Genet Psychol.* 1993;154(2):167-75.
25. Pop GN, Bodog FD, Christodorescu R, Voita-Mekeres F, Tudoran C, Tudoran M, et al. Psychosocial factors and patterns of alcohol consumption in young adults from Western Romania. *Rom J Leg Med.* 2020;28:269-77.
26. Sanders CE. stages of moral development | Definition & Framework. In: *Encyclopædia Britannica* [Internet]. 2019. Available from: <https://www.britannica.com/science/Lawrence-Kohlbergs-stages-of-moral-development>
27. Giammarco EA. The measurement of individual differences in morality. *Pers Individ Dif.* 2016;88:26-34.
28. Huniadi A, Sorian A, Iuhas C, Bodog A, Sandor MI. The effect of cannabis in the treatment of Hodgkin's lymphoma in a pregnant patient-extensive case report and literature review. *J BU ON.* 2021;26(1):11-6.