Development of MDII (Moral Development Interview Inventory)

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Abstract

Moral development has been a debatable construct. Several instruments have been made to measure this construct with limited usability. Therefore, on theoretical background of Piaget and Kohlberg, the researchers have developed a comprehensive structured interview inventory named as MDII (Moral Development Interview Inventory) for measuring moral development stages of children and adults. The inventory contains ten dilemmas based on distinct universal ethical values along with a comprehensive scoring key. Validity and reliability of the instrument has been determined by concurrent and test re test methods respectively. Chronback alpha and other correlation coefficients declared substantial validity and reliability for the interview inventory.

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Introduction

Moral psychology or science of morality, as an emerging branch of social psychology, is concerned with issues that lie at the intersection of psychology and ethics. It is a discipline of both intrinsic and practical interest; uncovering the determinants of moral judgment and behaviour. These determinants may help us to better understand what educational and policy interventions may facilitate good conduct and reconstruct bad behaviour (Doris & Stephen, 2006).

Birsch (2002) opined that morality plays a vital role in shaping the personality features of an individual. Strong beliefs, good values, altruism and pro-social behaviour determine the social status of an individual. Societies also develop and nourish relationships by dint of moral values. The values like justice, fairness, honesty, truth and courtesy are acceptable and favorable for all human beings irrespective of their cast and creed. According to Ahmed (2007, p. I), "Human ethics and ideals, concepts and values, are a way of revealing the interior regions of man and underlying dimensions of genuine life".

Puka (2005) elaborates that morality grows in human beings spontaneously alongside physical limbs, basic mental and social capacities. This statement is based on the theories of moral development presented by Piaget (1965), Kohlberg (1971) and Gilligan (1982) who provided empirical evidence that children evolve maturity in moral thinking with the growing age. Piaget (1965) presented the idea that any kind of intervention based on problem solving in moral situations, can foster the attainment of higher stage and suggests that the educator must provide students with opportunities with personal discovery through problem solving, rather than indoctrinating students with norms. Kohlberg (1984) proposed that children form ways of thinking through their experiences which include understandings of moral concepts such as justice, rights, equality and human welfare. He identified six stages of moral reasoning grouped into three major levels. Each level represented a fundamental shift in the social - moral perspective of the individual. Gilligan (1982) offered that morality of care could serve in the place of the morality of justice and rights espoused by Kohlberg.

Being a debatable construct, several indicators have been identified in the literature to elaborate moral ability of a person. Previous researches revealed that three major instruments had been used repeatedly for measuring moral reasoning or competence. Kohlberg (1969) formulated the first instrument called MJI (Moral

Judgment Interview) with the help of his colleague Colby. The MJI was developed in order to operationalize Kohlberg's theory of CMD (Cognitive Moral Development). The research procedure involved interviewing a subject after he or she had been presented with several imaginary situations involving moral dilemmas and then they were asked open-ended, probing questions which were designed to elicit the participant's construction of moral reasoning, assumptions about right and wrong, and the way these assumptions were used to make and justify moral decisions.

This method was referred to as 'Standard Issue Scoring'. One of the most famous dilemmas in the moral judgment interview was referred to as 'Heinz conflict'.

> Heinz's wife was dying from a rare kind of cancer and a very expensive drug had been discovered that may have saved her. The only druggist able to provide the medicine insisted on a high price that Heinz could not afford. Heinz strongly considered breaking into the drug store to steal the drug for his sick wife. Should he steal the drug? Heinz faced the moral conflict between preserving his wife's life and upholding the law (Elm & Weber, 1994).

Kohlberg's method produced material that could not be compared for each participant because several probing questions followed the original response and each response was open ended so the assessments were susceptible to interviewer and scorer biases and scoring the material involved complex interpretations and rather great inferential leaps from the data (Rest, Narvaez, Bebeau, &Thoma, 1999).

Several variations of MJI for measuring moral reasoning and judgment replaced the initial test. Most of these tools were objective in nature for better statistical analysis and interpretation. SRM (Social Reflection Measure) by Gibbs & Wildaman (1982), SORM (Social Reflection Objective Measure) prepared by Basinger & Gibbs (1987), DIT, & DIT2 (Defining Issues Test) introduced by Rest, et al. (1999) and MJT (Moral Judgment Test) by Lind (2004) are prominent in the list. All of these instruments were based on the presentation of moral conflicts, which the participants had to resolve and then to justify their decisions either through production of their own answers or recognition and ranking of the given arguments.

Article 31 of the Constitution of the Islamic Republic of Pakistan declares that our educational policy must ensure preservation, practice and promotion of Islamic ideology and principles as enshrined in the teachings of the Qur'an and the Holy Prophet Muhammad (SAW)" (National Educational Policy, 1998-2010, p. 9). Despite deliberate efforts to impart religious and moral education in educational institutions of Pakistan, a number of social disorders are visible in our society, which

indicate deficiencies in the moral development of our children and adults. Several national and international agencies are not satisfied with the moral behaviour of our students, as it is obvious from media reports of frequent alterations and eliminations in the curriculum of Islamic Studies by the Govt. of Pakistan (Frontline, 2002; McClure, 2009; Kronstadt, 2004). Even then, there are rare examples of investigating the reasons of such divergent moral behaviours and use of any instrument to measure the moral reasoning in Pakistan.

Extending the theoretical principles of above mentioned instruments for measuring moral development of people, researchers felt dire need to develop an inventory in Urdu language to cater the comprehension level of Pakistani Children and adults. The study will assist educationists, psychologists, sociologists and religious researchers to measure moral development stages to control social problems stemming from moral disorders and adopt appropriate strategies to inculcate moral values in students of different ages.

Justification of the new instrument

Researchers followed Kohlberg's MJI (Moral Judgment Issue) theoretically but prepared a Moral Development Interview Inventory (MDII) by themselves due to following reasons:

a. Kohlberg's instrument MJI (Moral Judgment Issue) follows a complex scoring system having 17 steps, which is very difficult to follow for a large sample (Lind 2004).
b. Lind (2004) confessed that MJT could only be administered to children more than eleven years of age.
c. Language and the nature of dilemmas in some instruments were not comprehensible for children in early age (Trevino, 1992).
d. All of the above standardized instruments covered a few moral indicators i.e. DIT2 by Lind (2004) had only two dilemmas while Kohlberg's instrument MJI had four dilemmas.
e. Ranking in Likert Scale as in D1T 1& D1T 2 (Defining Issue Test) and recognition of one response from several statements as in MJT by Lind (2004) was not clear for children in early childhood as well as for illiterate subjects.
f. None of the above instrument corresponds with the language and culture of Pakistani subjects (Urdu or any other native language).

Statement of the problem

Keeping in view the above shortcomings, researchers decided to construct a new interview inventory for measuring moral development of children and adults from age four to onward.

Objective of the Study

To prepare a comprehensive interview inventory in Urdu language for measuring moral development of children and adults above 4 years including scheme of scoring and interpretation.

Procedure for the construction of Moral Development Interview Inventory (MDII)

After exhaustive study of the previous instruments for measuring moral reasoning and moral development, researchers constructed an interview inventory comprising six steps:

Step 1 - The researchers formulated ten moral conflicts (dilemmas) representing ten universal moral concepts. Each dilemma represented one moral concept as: truthfulness, sincerity, patience, honesty, kindness to others, courage, just and generous behaviour towards parents and the elderly, poor and needy, enemies and mankind generally. Every dilemma ended with the option to favour the action presented in the end or not and why?

Step 2 - The participant had to select one of the options given in the last sentence of the story for each dilemma and present a reason briefly in one sentence.

Step 3 - This inventory was administered to 50 participants having age above 4 years randomly.

Step 4 - Twelve to twenty responses were selected for each dilemma showing maximum frequency by the subjects.

Step 5 - These responses were presented before twenty expert judges (scholars in University of the Punjab IER, Psychology department, and psychology department of MAO college Lahore) to score the answers for each dilemma according to their favorableness to the moral concept presented by Kohlberg and were given scores from I to 6 matching the levels of moral development presented by him. That is, number one was assigned to the answer of first stage of pre-conventional level of moral development and number six was assigned to the answer of the last stage of post conventional stage of moral development (See Annexure II for the scoring scheme).

Step 6 - The score for each response was determined by its maximum frequency assigned by the judges through central tendency (mode) for easy analysis procedure.

Specific characteristics of MDII (Moral Development Interview Inventory) are as:

a. It is a detailed inventory consisting of ten dilemmas encompassing ten moral aspects: truthfulness, sincerity, patience, honesty, kindness to others, courage, just and generous behaviour towards parents and the elderly, poor and needy, enemies and mankind generally. Every dilemma ends with the option to favour the action presented in the end or not and why?

b. The inventory can be used in the local languages for literate as well as illiterate participants in both urban and rural areas in written as well as in oral form because it consists of ten easy to understand moral stories.

c. It can be used for children of four years to adults of any age.

d. The inventory consists of diverse topics acceptable and comprehensible for participants of different cultures.

e. Ethical as well as psychological aspects of human nature have been incorporated in the stories.

f. The stories possess familiar concepts and characters of children.

g. The greater number of dilemmas (ten) reduces many factors as researcher's bias, error of estimation, low level of apprehension on the part of participant, that is, if a participant is confused for one dilemma, he has nine other options to answer correctly, and can give overall general and accurate score about his moral development.

h. The instrument is the easiest one to analyze of all the other tests and inventories constructed up till now for measuring moral development or judgment.

i. The scorer has just to match the answer statement of a participant to the key presented in the inventory for each dilemma and the stage of the participant is calculated by summing up the scores on all the ten dilemmas. The total score can range from zero to sixty. The stage of the participant can obviously be achieved by dividing the score by ten, for example, score 20 denotes the second stage of moral development.

j. The score between tens indicates the transformation of a participant to the next stage of moral development, for example, 43 indicates that the child still holds fourth stage of moral development even if he shows inclination towards human concern which is the fifth stage. Likewise, the score 48 indicates that the child is approaching towards the fifth stage while considering some issues still on laws and rules that belong to fourth stage of moral development.

k. The instrument takes 15 minutes to administer in written form and 30minutes to administer verbally for small children or illiterate subjects.

Sampling and data collection

Population of the study comprised children and adults of all ages above 4 years in District Lahore. Fifty participants of all ages above four years were selected for the procedure of face validity. The researchers presented dilemmas orally for small children and illiterate participants, while in written form for educated children and adults. One hundred and thirty five students of ninth and tenth classes, 60 boys and 75 girls were randomly selected for data collection in order to determine the concurrent validity and test-retest reliability of the instrument. Participants from schools were purposively selected due to limited applicability of MJT (Moral Judgment Test) which is in English language and can only be administered for children above eleven years. Both MJT and MDII were used in written form for students of ninth and tenth class students.

Validity of the instrument

The instrument was applied to 50 participants of all ages above 4 years randomly during its production and the answers were scored by twenty judges who were expert in pedagogy and psychology, therefore, its language and sequence of events were improved to enhance its face and construct validity in the light of participants' responses and opinions from judges to make it sound and comprehensible. Then the concurrent validity of the instrument was estimated during the period from 15 December 2007 to the last week of January 2008 by collecting data on both MDII (Moral Development Interview Inventory) developed by the researchers and MJT (Moral Judgment Test) developed by Lind (2004) simultaneously. Both instruments were administered to 135 participants of ninth and tenth class students in District Lahore, 60 boys and 75 girls randomly, because MJT could not be administered to children smaller than eleven years or illiterate children.

Cronbach Alpha and the correlation coefficient by Pearson'r, Spearman's rho and Kendall's tau_b were calculated for statistical evidence of concurrent validity of the present instrument.

Table 1

Cronbach's Alpha between MDII & MJT scores

Cronbach's Alpha	No of Items
.899	2

The table 1 reveals Cronbach's alpha value as α = .899 which shows that the

instrument is substantially valid.

Table 2

Pearson's r Correlations for MDII and MJT scores

		MDII score	MJT score
MDII score	Pearson Correlation	1	.867(**)
	Sig. (2-tailed)		.000
	N	135	135
MJT score	Pearson Correlation	.867(**)	1
	Sig. (2-tailed)	.000	
	N	135	135

**Correlation is significant at the 0.01 level (2-tailed)

The table above shows *Pearson's Correlation* significant at r = .867> 0.01. It means that the scores obtained on MDII (Moral Development Interview Inventory) and MJT (Moral Judgment Test) are highly correlated to indicate sufficient concurrent validity and both of the tests measure the same aspect of personality, that is, moral development or competence.

Table 3

Spearman's rho Correlations for MDII and MJT

			MDII score	**MJT score**
Spearman's rho	MDII score	Correlation Coefficient	1.000	.865(**)
		Sig. (2-tailed)	.	.000
		N	135	135
	MJT score	Correlation Coefficient	.865(**)	1.000
		Sig. (2-tailed)	.000	.
		N	135	135

**Correlation is significant at the 0.01 level (2-tailed)

Table 3 indicates that the Spearmans' rho correlation coefficient is .865 > 0.01 which is also highly significant for the scores of both instruments. This correlation also supports the concurrent validity of MDII with MJT.

Table 4

Kendall's Correlations for MDII and MJT

			MDII score	MJT score
Kendall's tau_b	MDII score	Correlation Coefficient	1.000	.703(**)
		Sig. (2-tailed)	.	.000
		N	135	135
	MJT score	Correlation Coefficient	.703(**)	1.000
		Sig. (2-tailed)	.000	.
		N	135	135

**Correlation is significant at the 0.01 level (2-tailed)

The scores on both of the instruments were also analyzed by Kendall's correlation coefficient whose value is significant i.e. .703 > 0.01 showing sufficient concurrent validity in table 4.

Reliability of the instrument

Reliability of the inventory was determined by test-retest method. The MDII (Moral Development Interview Inventory was administered to 135 subjects, 60 boys and 75 girls of ninth and tenth classes randomly in District Lahore during the first week of November 2007 and then after the gap of one month, in the first week of December 2007, it was again administered to the same sample. The *Pearson's r* correlation coefficient and *Cronbach 's Alpha* was computed for the scores of first and the second test administration.

Table 5

Reliability Statistics for Cronbach 's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.951	.952	2

The Cronbach alpha value for both of the administrations has been calculated as. 951which shows sufficiently high reliability while Cronbach's Alpha Based on Standardized item is .952.

Table 6

Reliability Statistics of Variance for first and second administration of MDII

Common Variance	**81.261**
True Variance	73.683
Error Variance	7.578
Common Inter-Item Correlation	.907
Reliability of Scale	.951
Reliability of Scale (Unbiased)	.952

Table No.6 shows common variance V = 81.261, Common Inter- Item Correlation .907 and unbiased reliability of the scale as .952. Therefore, the test is acceptably reliable for the two administrations; one on the first week of November 2007 and the second administration on the same participants in the first week of December 2007.

Table 7

Correlation Coefficient between first and second administration of MDII

		MDII test A	**MJT test B**
MDII test A	Pearson Correlation	1	.909(**)
	Sig. (2-tailed)		.000
	N	135	135
MDII test B	Pearson Correlation	.909(**)	1
	Sig. (2-tailed)	.000	
	N	135	135

**Correlation is significant at the 0.01 level (2-tailed)

The table 7 above shows highly significant correlation r = .909> 0.01 between the two administrations i.e. test 1 and test 2 of MDII after the period of one month. It declares that the instrument is reliable to the acceptable extent.

Researchers obtained permission for using MJT for determining concurrent validity and the information for its scoring system (C-score) from the author George Lind by email corresponding through georg.lind@uni-konstanz.de.

Conclusion

MDII (Moral Development Interview Inventory) is a comprehensive, substantially valid and reliable inventory in Urdu language that can be used to measure moral development of children and adults above 4 years (literate or

illiterate). It is based on Kohlberg's (1969) six stages of moral development. It consists of ten hypothetical dilemmas (stories) each measuring a distinct moral value. The characters of stories are embedded in Pakistani culture but may be used for other cultures of the world. The participants are presented with these dilemmas and asked to give answer of the question at the end of the story and then to give reason for their answer. These answers can be easily scored and interpreted by matching with the scoring key. Researchers suggest that MDII may be used for further fields of social, psychological, religious and educational studies. The instrument is also available in English Version.

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