e-Bangi Faculty of Social Sciences and Humanities Universiti Kebangsaan Malaysia
Journal of Social Sciences and Humanities
Vol. 16. No.7 (1-14) ISSN: 1823-884x

COGNITIVE AND MORAL DEVELOPMENT IN ASSAULTIVE AND NON-ASSAULTIVE CRIMINAL: THE CASE OF PAKISTAN GENERALIZED AND CORRECTION POPULATION

Tarique Muhammad Nizamani & Novel Anak Lyndon

ABSTRACT

This article was undertaken in an attempt to integrate data from the realm of personality psychology with data of a more sociological nature. The main objective of the research was to explore differences between assaultive and non-assaultive criminals in the general areas of moral and cognitive development. In the study 38 males convicted of various offenses, both assaultive and non-assaultive, were administered a detailed demographics interview, and the processes they employ in the evaluation of self and others were assessed. T-tests were computed on the cognitive and moral development variables, and multiple regression was carried out with the cognitive and moral development variables. The results indicated that there is more involved in moral decision making than can be assessed by a simple pencil and paper technique, and demonstrated that logical reasoning skills are not a major area of difference between assaultive and non-assaultive criminals.

Keywords: Cognitive, Moral development, Criminals, Assaultive, Non-assaultive

INTRODUCTION

The occurrence of interpersonal violence certainly would seem to be highly dependent upon the individual's level, moral development and the effectiveness and sophistication of their moral reasoning skills. In psychology, various criteria of morality have been employed in the research: (1) behavior that helps another human being; (2) behavior in conformity with societal norms; (3) the internalization of social norms; (4) the arousal of empathy and/or guilt; (5) reasoning about justice, and; (6) putting others' interests ahead of one's own. Each of these criteria captures something of the essence of morality (Rest, 1981), but none of them, alone or in conjunction, allows for complete understanding of morality, its development, or its functional implementation (McAdams 2006).

However, the notion of internalization by itself is an incomplete account, as it does not necessarily acknowledge the active social constructive aspects of morality (Rest 1981). The internalization conceptualization also fails to adequately capture the more spontaneous motivational effects of affective processes like empathy, guilt, anger, fear, and frustration.

This state of affairs led Rest (1981) to conclude that what is needed is a more integrated picture of morality, envisioning how these part-processes are organized and how they interact (Manzi Vignoles & Regalia 2010). In an attempt to accomplish this goal and transcend the common theoretical subdivisions of morality (thoughts, behaviors, and emotions), Rest (1981) offered a four-part framework. The first component, interpreting the situation, includes inferring the intentions, values, and needs of the people involved the probable direction of their behaviors, and the effects of their activities on the welfare of all involved (Maruna 2001).

Vol. 16. No.7 (1-14) ISSN: 1823-884x

A situation raises a moral problem for the actor only if he/she realizes that their behavior will affect the welfare of another. Formulating a moral course of action, component two, entails not only having moral standards and ideals in general, but also figuring out their applications to particular situations (Wilson Bouffard & MacKensie 2005). Component three, evaluating the various courses of action and deciding upon one, presupposes an awareness (on the part of the actor) of the possible alternatives.

Fourth, executing and implementing the chosen plan of action involves figuring out the sequence of concrete actions, working around obstacles and unexpected difficulties, overcoming and/or dealing with affective factors, resisting distractions, and keeping the goal in sight. Given this last statement, the implications and possibilities for the occurrence of "less-than-moral" behaviors become tremendous. Two basic conclusions can be derived concerning Rest's (1981) model of moral behavior: (1) The processes involved in the production of moral behavior are exceedingly complex and are highly interactive, among them-selves, with other internal processes, and with aspects of the physical and social environment. (2) Cognitive developmentalists must not be the only psychologists interested in cognition.

The first conclusion should be self-evident and explanatory, but the second warrants elaboration (Maruna Wilson & Curran 2006). The language employed (see the underlined terms above) and the content intended are equally applicable to discussions of the cognitive processes active in human reasoning and decision making.

The studies were exploratory in the sense that, even though much research has been conducted and even more theorizing has occurred, there still remain tremendous gaps in our knowledge. The inherent "empirical" problems represent important considerations, but they do not pose insurmountable obstacles to obtaining the information desired. One other fact that must be remembered is that, once an assessment technique is chosen, the definition of the concept becomes somewhat restricted to the definition around which the instrument was developed.

The methods employed were somewhat different from any previous attempts that the author is aware of, and therefore, have hopefully yielded information of a new and unique flavor. It is hoped that the findings from these studies can be utilized as a format for integrating some of the relevant concepts from various theoretical orientations.

The level of integration being striven for is much more than a simple translation of concepts from the language of one theory to another. It can be better characterized as an attempt at establishing some degree of convergent validity for concepts and constructs which have surfaced as being important. This research article was begun out of scientific and social curiosity and was not motivated by any particular theoretical orientation. The perspective adopted could best be described as exploratory, integrative, and explanatory. The explanatory goal will be addressed by using the integrated data to gain a better understanding of the etiology of violent criminal behavior.

These data, it is hoped, will aid in constructing a more complete profile of "the assaultive or the violent offender. This profile can then, at some point, possibly be used to develop a workable system for categorizing offenders and subsequently predicting the likelihood of future behaviors. The prediction of future behavior is itself an area steeped in controversy, but a discussion of the issues is beyond the scope of this section. It was the purpose of these studies to help gain some of the necessary knowledge to lay the groundwork for such a system.

Vol. 16. No.7 (1-14) ISSN: 1823-884x

METHODOLOGY AND RESEARCH DESIGN

The probability of a subject solving and justifying a significant number of items without formal reasoning skills was considered to be small. A further advantage to employing previously used items was that it assured that the Test of Logical Thinking (TOLT) would contain questions that had been previously reported as valid measures of formal reasoning ability. The test also includes demonstrations to provide context for some of the items. The original versions were video cassette recordings, but transportability proved to be a problem so the TOLT was altered to contain drawn pictorial representations of context (Robinson & Porporino 2001).

TOLT has been administered to more than 2,000 subjects (Walters, 2012) representing a fairly wide variety of populations. Based on these various data, it has been concluded that TOLT provides a valid, reliable, and convenient method for assessing formal reasoning abilities, particularly with groups of subjects (Tobin & Capie 1980a 1980b; Capie & Tobin 1980 Walters 2012).

The TOLT is a ten item test designed to assess reasoning or problem solving abilities. Each item presents a multiple choice problem requiring logical reasoning to solve it. The respondent is required to choose an answer from the alternatives provided and is also required to select a reason, from those provided, for choosing the answer. An item is scored as correct only if both answer and reason are right.

Scoring yields a one number score (ranging from 0-10) corresponding to the total of correctly answered items. The test is based on two trends which have emerged from research on Piagetian (1970) concepts: (l) Many adolescents and adults are limited in their ability to use formal modes of reasoning. (2) Formal reasoning ability is an important mediator of cognitive achievement. Formal reasoning (formal operational thinking) is indicative of Piaget's fourth (final) stage of cognitive development. Most significantly it can be characterized as abstract.

The test was developed as a means for further exploring these trends while avoiding the inherent problems in the clinical interview procedure. A characteristic of clinical interview procedures that has not typically been incorporated into pencil and paper devices is the necessity for subjects to justify their solution.

Participants

Subjects were 28 males imprisoned of several offenses, both assaultive and non-assaultive in nature (as defined by the CDI Crime Index). All subjects were incarcerated in the Sindh (Pakistan) province Department of Corrections Diagnostic and Evaluation Center. For comparative analysis with standardize populations Junior High students, Senior High students, and adults were recruited randomly by contacting the staff members from a high school in Gulshan-e- Iqbal Karachi.

Names were selected at random from the prisoner population list, and the criminal was contacted as to whether he would be willing to participate. Consequently, all subjects were randomly selected at prisoner count on Sunday morning from the common facility population (which consists of all imprisoned and sentenced adult male criminals from the entire state, customarily for a period of one to three months), but their contribution was dependent upon their willingness to do so.

Persons considered to be mainly sex offenders were excluded from the sample since it is believed that they establish a somewhat inimitable subdivision of violent or assaultive offenders. The respondent is required to choose an answer from the alternatives provided and

Vol. 16. No.7 (1-14) ISSN: 1823-884x

is also required to select a reason, from those provided, for choosing the answer. An item is scored as correct only if both answer and reason are right.

Scoring yields a one number score (ranging from 0-10) corresponding to the total of correctly answered items. The test is based on two trends which have emerged from research on Piagetian concepts: (l) Many adolescents and adults are limited in their ability to use formal modes of reasoning. (2) Formal reasoning ability is an important mediator of cognitive achievement. Formal reasoning (formal operational thinking) is indicative of Piaget's fourth (final) stage of cognitive development.

All subjects were administered the demographic interview and the Hand Test, the Test of Logical Thinking (TOLT), Form A (Robinson & Porporino 2001), and the Defining Issues Test (DIT) (Rest 1979a) designed to provide a standardized, objectively scorable alternative to Kohlberg's original approach to assessing moral development.

Measures

OLT has been shown to be significantly related to achievement in several specific areas of study, SAT scores, and several clinical interview techniques. This evidence suggests that TOLT does measure formal thought. The reliability data indicate high internal consistency, and the coefficients were of sufficient magnitude to enable the test to be used diagnostically or in a research context.

The validity data are diverse and supportive of TOLT as an effective group test of formal thought. The test has been deemed suitable for administration on a group basis for ages 12 and up. The TOLT was scored by hand against a standard answer sheet. The one number score obtained is indicative of the general level of formal reasoning capabilities, with a higher score corresponding to more formal reasoning skills the TOLT was designed to allow for analysis of five modes of formal reasoning, but these analyses were not conducted for this study.

There currently is no procedure for converting TOLT scores into Piagetian stages of cognitive development (Walters 2008). Rest (1980 1979b) Defining Issues Test (DIT) is a derivation, and a modification of the work of Lawrence Kohlberg (1980). It is designed to provide a standardized, objectively scorable alternative to Kohlberg's original approach to assessing moral development.

DIT consists of six brief stories in which a person or group of persons are involved in some type of moral dilemma. The respondent is required to choose one of three alternatives concerning the solution to the dilemma.

Three different types of analyses were carried out. T-tests were computed for all three groups including assaultive, non-assaultive, and undefined on five variables, the TOLT score, and the "principled" score off of the DIT, which is a measure of the relative importance given to principled moral considerations; an "inconsistency" score indicative of the total number of inconsistent responses given on the DIT stories; a score corresponding to the number of DIT stories to which inconsistent responses were made; and the quartile rank attained on the DIT.

The "principled" score was utilized as it is advocated by Rest (1979b) as being the principle score of the DIT. It can be interpreted as "the relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas" (Rest 1979a). The inconsistency scores constitute two of the three reliability checks built into the DIT (Rest 1979b). Thirty six percent (10/28) of the respondents violated one or both of these reliability criteria (no one violated the third criterion, a faking good score). This seemed like an

Vol. 16. No.7 (1-14) ISSN: 1823-884x

inordinately high percentage, so these variables were included in the analysis in an attempt to ferret out the possible reason(s).

The quartile rank was obtained by comparing the respondent's P scores with the standardized P score/Quartile table in the scoring manual (Rest 1979b). Also computed on the "principled" score between all three criminal groups and the standardized principled score for Junior High (N=l, 322), Senior High (N-581), and Adults (N=l, 149) groups were T-tests (Rest 1979b) for more detail on these standardized samples). The second analysis performed was a set of Pearson's correlations.

Data Analysis Techniques

All possible pairwise correlations were computed for all five variables. A series of multiple regression equations were computed utilizing various combinations of the above five variables as predictors. The dependent variable was always the respondent's group classification. Both forward inclusion (stepwise) and hierarchical inclusion procedures were employed. All analyses conducted utilized standard SPSS package.

The t-tests yielded no statistically significant differences between any of the groups (assaultive, non-assaultive, and undefined) on any of the variables. The t's were computed on groups including and excluding those whose responses on the DIT violated the reliability criteria (Walters 2007) but in neither case were there any significant differences. Only one comparison approached statistical significance and the quartile rank comparison for assaultive (x=l.40) and undefined (x=2.33),' but this was in the analysis which included those who had violated the reliability criteria. When these cases were excluded, the significance level dropped considerably, from .061 to .045.

The comparisons between the criminal populations and the standardize populations yielded several highly significant differences. The assaultive, who had the lowest mean (21.50) score of all the groups: were significantly lower on the "principled" score than both Senior High students and adults. They were also lower (not significantly) than Junior High students. These findings indicate that the assaultive individuals in this study are comparable in moral reasoning skills as measured by DIT to young adolescents (ages 11-14, approximately), and are drastically inferior in these abilities to older adolescents and adults.

The non-assaultive scored higher than the assaultive (non-assaultive= 24.09, assaultive=21.50) (although not significantly so) and minimal higher than the Junior High group. Like the assaultive, they were considerably lower than older adolescents and adults. Members of the very small undefined group occupied the superior position among the criminal groups (x=27.77) (not at a significant level) and were also significantly higher on the principled score than were Jr. High age individuals. They were slightly less inferior to Senior High students than were the other two criminal groups, but showed the same statistical level of inferiority to adults.

Table 1: Means Principled Reasoning Score
Criminal Groups vs. Standardized groups

Group	Quartile= 1.50 Junior High M= (21.90)	Quartile=2.80 Senior High M= (31.80)	Quartile= 3.45 Adult M= (40.00)
Assaultive Principle Score 21.50 Quartile 1.40	.878	.001	.000

Vol. 16. No.7 (1-14) ISSN: 1823-884x

Non-Assaultive Principle Score 24.09 Quartile 1.80	.405	.006	.000
Undefined Principled Score 27.77 Quartile 2.33	.001	.012	.000

All probabilities are 2 Two-tailed tests

Note: (These data represent slightly conservative significance levels as the reliability criteria violators were not excluded from the criminal groups.)

The assaultive, who had the lowest mean (21.50) score of all the groups: were significantly lower on the "principled" score than both Senior High students and adults. They were also lower (not significantly) than Junior High students. These findings indicate that the assaultive individuals in this study are comparable in moral reasoning skills (as measured by DIT) to young adolescents (ages 11-14, approximately), and are drastically inferior in these abilities to older adolescents and adults. The non-assaultive scored higher than the assaultive (non-assaultive= 24.09, assaultive=21.50) (although not significantly so) and minimal by higher than the Junior High group.

Like the assaultive, they were considerably lower than older adolescents and adults. Members of the very small undefined group occupied the superior position among the criminal groups (x=27.77) (not at a significant level) and were also significantly higher on the principled score than were Junior High age individuals. They were slightly less inferior to Senior High students than were the other two criminal groups, but showed the same statistical level of inferiority to adults.

One factor that might exert some influence over these data and which is important in interpreting them is the fact that the age ranges for the criminal groups probably are much greater than those for either the Jr. or Senior High groups (see Table 3, for criminal groups age data). All three criminal groups contained individuals of ages which are representative of both Senior High and Adult groups; no one in the criminal sample would fall within the (typical) age range of the Junior High group.

The criminal groups all exhibited mean ages that would fall within the adult rang. Subsequently, one would expect, if there were no serious deficits in moral reasoning skills, that the mean P score for the criminal groups would at least be comparable to the Senior High Level P score. As this was not the case, we can conclude that the criminal sample in general is suffering from some deficiencies in moral reasoning.

Table 2: Pearson's Correlations: Test of Logical Thinking with DIT Variables

	TOLT	P	INCON	STINCON	QUART
Principled Reasoning	0.413 p=0.045*				
Inconsistent Responses	0.1650	-0.0260			

Vol. 16. No.7 (1-14) ISSN: 1823-884x

	p=0.256	p=.0459		
Inconsistent Score is	0.1481 p=0.279	-.0452 p=0.429	0.9750 p=0.000	
Quartile Rank	0.6100 p=0.004*	0.9108 p=0.000	0.0812 p=0.374	0.0868 p=0.366

Correlations reported here are based on the data excluding the individuals who violated the reliability criteria (N=l8).

The Test of Logical Thinking and principled reasoning scores yielded positive correlations, .28 (p<.10) with all subjects included and .41 (p<.05) with the reliability violators excluded. This result is indicative of a relatively moderate positive relationship between formal reasoning skills and upper level moral judgments.

In other words, as formal reasoning abilities increase so do moral reasoning abilities. As a double check on the relationship of formal reasoning skills with moral reasoning, the TOLT also correlated with the quartile rank. A correlation of .47 (p <.01) with all subjects and .61 (p< .01) with reliability violators excluded was found. This correlation can be seen as representing support for the relationship between these two variables; knowing a person's level of formal reasoning allows one to make a reasonably accurate prediction of their position on the moral development continuum.

Neither of the inconsistency scores correlated significantly with TOLT (-.23 [p=.12]; -.19 [p=.17]. A stronger relationship might have been expected as the inconsistency scores could be manifestations of some deficits in formal reasoning skills. Higher inconsistency scores could be due to failure in understanding the tasks involved. The correlations were, however, in the expected negative direction, as TOLT increases inconsistency of responses decreases.

Table 3: Multiple regression summary for TOLT AND DIT variables

Variable	Multiple R	R Square	RSQ Change	F Ratio
Test of Logical Thinking	0.29268	0.08566	0.08566	1.49901
Principled Reasoning	0.30544	0.09329	0.00763	0.77169
Inconsistent Responses	0.30697	0.09423	0.00094	0.48550
Inconsistent Stories	0.30875	0.09533	0.00110	0.34246

Analysis based on the data excluding reliability criteria violators (N=l8).

All of the multiple regression analyses which predicted criminal group whether by stepwise or by hierarchical inclusion, produced the same basic results. TOLT accounted for approximately 4% of the variance when all subjects were included and 8.6% when the DIT reliability violators were omitted.

The various combinations of the three DIT variables (quartile rank was not included as it is a measure of the same function as the principled score) accounted for less than 1% of the

Vol. 16. No.7 (1-14) ISSN: 1823-884x

variance; regardless of the regression program employed and whether the reliability violators were included or not. None of the variables attained a significant F ratio. Put very simply, the data demonstrate that these moral reasoning scores, alone or in combination, do not offer much as predictors of assaultiveness or other criminal behavior.

RESEARCH FINDINGS

i) *TOLT*

The TOLT also possesses some inadequacies. As was the case with the DIT, many of these problems may be more salient in relation to the purposes of this research than to the test itself. The instrument does seem to offer a reliable means for assessing logical thinking in group settings, and the validity has been affirmed in a number of studies (Walters 2015).

Yet, with the convenience of group administration comes the cost of inflexibility in generating responses. The value of the data depends on the congruence of the set of alternative responses provided with those that subjects might generate in a more open format (Walters 2012). What the TOLT actually is, is a measure of the existence of various levels of formal reasoning skills.

It is assumed that the respondent's ability to pick out the most correct reasons for their correct solutions is indicative of formal operational thought, because to recognize formal operational concepts one must be at that level of cognitive development. What the TOLT does not assess is anything relating to the application or use of these processes in more real world settings, especially those of a social nature.

It also does not give any insight into the complex interactions between cognitive reasoning and other factors such as affect. In essence, the TOLT is a measure of the logical empirical, rational, and objective aspects of cognitive development but not of factors more deeply involved in social cognition.

As a result, TOLT provides a relatively accurate general measure of formal reasoning skills, but it does not allow one to make fine grained discriminations or predictions concerning the applications of such skills. This is not meant to imply that the TOLT data gathered are of no value, because as we shall see in the following sections, they are quite consistent with data and conclusions discussed in the literature and in study.

The findings in the current study indicate that all three groups are deficient in abstract reasoning skills, especially the assaultive and non-assaultive. In fact the non-assaultive scored slightly lower than the assaultive (non-assaultive=2.33/l0; assaultive=2.70/10). This finding supports the conclusion drawn above. The TOLT does not provide for specific assessment of all the processes relevant to the purposes of this study.

It obviously is not yielding sufficient information relating to social cognition or the application of formal reasoning skills to the evaluation of people and situations as opposed to mathematical/ logic problems). TOLT informs us that these two criminal subgroups are both low on formal reasoning skills, but it does not yield any information about the differential utilization of these skills that would account for their different tendencies for responding to people.

Vol. 16. No.7 (1-14) ISSN: 1823-884x

ii) ***DIT***

The average "principled" score from the DIT for the entire sample is very close to that reported in another study utilizing the same basic type of population. Wills and Dishion (2004) reported an average P of 23.5 in a male prison inmate population, with consistency check violators excluded. The grand mean for the current study was 23.83.

There were no reports in the literature on subdivided criminal populations, but the breakdown in this study shows that assaultive were actually much closer in their P score, 19.06, to juvenile populations. Walters (2015) found a P of 18.9 in institutionalized delinquent boys ages 14-17 and a P of 17.2 in pre-delinquent males with an average age of 14.l years. Although there are obviously problems with making comparisons between these various data sets, the data are suggestive of a severe lag in development that is occurring in the assaultive. Remember, the average P score for Junior High age individuals was 21.9 and for Senior High ages it was 31.8.

According to the data, a great deal of change seems to occur during this developmental period. It appears, however, that in the case of the assaultive group, moral development virtually stops somewhere short of the Junior High level. Exactly why development becomes arrested, and what impact this developmental retardation has on moral conduct is far from clear.

A person who has an overinflated and somewhat fragile self-concept and also belongs to a subculture of "have-nots" (lower socio economic status) may have a different perception of what is "just" than you or I. If one does it "have" and yet feels that they are a "good" person, then one may feel justified in taking from one of the haves".

Kohlberg (1976) said that the degree of alienation one feels from the others involved is an important factor in moral decision making. Of course there will be other factors operating as well in any particular decision making/conduct process. One type of factor which has been alluded to frequently, that must be involved, is affect (empathy).

Affective arousal is not based upon an unambiguous interpretation of events. In fact, misperception of situations can trigger strong emotional arousal. Even in social situations which are not fully understood, individuals experience alarm, fear, anger, empathy, frustration, etc.

iii) ***Cognitive Development (Formal Reasoning)***

As was stated at the outset of this section, the discussion of moral and cognitive development cannot be mutually exclusive. This segment will focus on tying up the loose ends that are left and reiterating the general role of cognitive development in moral conduct.

The TOLT was designed to assess the capacity for formal reasoning. This type of thinking is representative of Piaget's final stage of cognitive development, formal operations. Formal reasoning is abstract thought (Kochanska 2002).

They are free to (mentally) entertain and vary several factors and alternative courses of action and their possible outcomes simultaneously. Some of the problems with the TOLT were discussed earlier, but in review, it offers a more objective and logical measure of formal reasoning.

It is not designed to assess formal reasoning skills as they apply to social situations or to measure social cognitions and decision making processes. The results, although somewhat disappointing, did demonstrate that the subject population generally exhibited fairly low levels of formal reasoning, with assaultive and non-assaultive being quite low.

Vol. 16. No.7 (1-14) ISSN: 1823-884x

As no standardized norms for comparison are available and no system for converting the scores into Piaget's (1969) cognitive development stages exists, there is not much more that can be concluded. There has been some speculation (Kochanska 2002 & McAdams 2001) that a score of "4" may represent the transition point between concrete and formal operational thought, but no more specific information concerning this possibility is available.

Some conclusions have been offered in the literature that are relevant to this study. The compiled data from many studies suggest that reasoning patterns do generalize across contexts (i.e. reasoning patterns tended to be independent of the problem setting). Two common incorrect problem solving approaches that tended to occur were failing to consider the effects of multiple elements and failing to consider the presence of other sets of objects (Clininbeard & Murray 2012). These conclusions were drawn based on the responses to TOLT problems, which we stated are not representative of social situations.

The findings from study support the conclusion that reasoning patterns generalize, as in all three groups, the individuals demonstrated the same basic response pattern whether evaluating self or twenty significant others. The type of strategy adopted by each group was also relatively consistent with their TOLT score, although the non-assaultive' results are somewhat confusing as they had the lowest mean TOLT score but did not exhibit the most concrete rating strategy.

It must also be kept in mind that the evidence suggests that many individuals, even adults, are unable to utilize formal operations. Therefore, cognitive reasoning deficits alone are not sufficient to explain inappropriate moral reasoning and actions.

DISCUSSION

The data from this study do not allow any definitive conclusions to be drawn concerning group differences. Neither instrument was able to discriminate between any of the three criminal groups. From the DIT comparisons between the criminal groups and Rest's (1979b) standardized groups, it can be concluded that criminals in general, and especially assaultive criminals exhibit lower levels of moral reasoning skills and on the continuum of moral development, than the general population, with the differences between the criminal groups and their comparable age groups being quite large (Robinson & Porporino 2001).

The exact role that moral reasoning skills play in the etiology of criminal behavior cannot be determined from the data, but the data do suggest that there is nothing unique about the moral reasoning capabilities as measured by the DIT of the assaultive that contributes heavily to their proneness for violence.

It is unfortunate that no non-criminal control or standardized norms were available for the TOLT. If these data were available as they were for the DITs it would have given considerable more insight into the role of formal reasoning skills in criminal behaviors and into the relationship between cognitive and moral development.

It is equally unfortunate that no system for converting TOLT scores to Piagetian stages of cognitive development exists. Such a system would have enabled one to access information similar to that contained in the quartile ranking system for the DIT. A very rough categorization system for the TOLT has been proposed by Pratt et al. (2010) and Walters (2005).

These researchers suggested that when TOLT Form A scores are partitioned at "4" for two sets of regression analyses, high scores contribute significantly to regression prediction but low scores do not. These results are believed to be pertinent to the issue of the transition from

Vol. 16. No.7 (1-14) ISSN: 1823-884x

concrete to formal operational thought (stages 3 and 4 from Piaget's cognitive development theory); perhaps it is a TOLT score of 4 which is representative of this transition (Walters 2006). This speculative system has some relevance for the data here as the undefined group had the highest mean score on TOLT, 4, and they also exhibited the highest level or moral reasoning.

The TOLT and DIT variables accounted for only about 9% of the variance, with none of the variables reaching statistical significance. In isolation or combined with each other, these variables possess very little predictive utility. It would be interesting to incorporate the TOLT information with the information from the Self Rep in a regression analysis.

The potential problems aired above become quite feasible when one considers the context and nature of the test taking situation, as compared to that of real world situations requiring moral decision making. One key factor which is absent in the testing situation is reading the stories and deciding for those involved calls for cool logic, which is carried out totally removed from the actual circumstances in question. (Walters 2015).

The separation of affect and cognition on this instrument is somewhat surprising as Rest (1981) cautions several times against such a division, and yet, he really makes no attempt to include assessment of affective components on the DIT. A general criticism of the DIT which has surfaced in the literature concerns the effect of language on the results. Walters (2008) proposed that preference for moral statements on the DIT is an artifact of language sophistication, not a preference for different stages of moral reasoning.

In fact, the individual's own affective state is part of what must be interpreted in any situation. Because affect must be interpreted along with the other factors, the deciphering of affect may influence the processes of decision making (cognitive/moral), which in turn influence behavior (Rest 1981).

These accounts view affect as a "primary given" in any situation. Empathy is activated by the perception of distress in another. As cognitive development progresses, the child becomes better at discriminating the experiences and needs of self from those of others (Pratt et al. 2010). This interpretation places cognition in the role of mediator of emotion.

Of course, there are situational factors which can override these tendencies. The bottom line on morality/moral conduct is that, like all other aspects of human functioning, it is determined by the complex interaction of a wide variety of factors.

CONCLUSIONS

The first and most obvious conclusion is that, regardless of the model of moral decision making employed, a full understanding of morality and moral conduct is very hard to attain. Given the tremendous latitude and complexity built into all the decision making models, it is not difficult to see how the processes of moral decision making could break down or become subverted, resulting in undesirable (immoral) actions.

Even when applying a more "behavioral" model of intention to moral decision making, one finds that considerable room for interpretation exists. Therefore, if we want to understand the outcomes of moral decision making processes, we must delve further into the psychological meaning that each set of events and each specific situation has for the decision maker. One specific conclusion that can be drawn concerns the central role of the development of self-concept in moral decision making and action.

Both Piaget (1952) and Kohlberg (1980) view the giving up of ego centrism (i.e. development of self-concept) as the major cognitive pre requisite for advanced moral

Vol. 16. No.7 (1-14) ISSN: 1823-884x

development. The data from both studies support this contention. The combined punishment/child rearing data support the findings reported in the literature.

These findings and conclusions in turn, support the postulated major role of deficient empathy and role taking skills in the etiology of violent behavior. The literature also links the self-concept findings from study with the empathy and role taking conclusions.

The main conclusion which can be derived from the data is that cognitive functioning, in terms of perceptual schema, understanding, memory, reasoning, etc. occupies a central role, not only in morality, but in the general etiology of violent and other criminal behavioral patterns.

These findings serve to point up once again that internal and external variables are constantly interacting in complex manners, and the quality of our psychological (cognitive) existence is essential in determining how we react to and enact behaviors within our environment; social situations and morally charged behaviors notwithstanding. And of course, the findings also demonstrate that there are still many unanswered questions.

Finally, we are led to the same basic conclusion as Solon of Athens in around the 6th century B.C.; "without gods, morality is based on a consciousness of the consequences of one's actions for others, and it is this which must tell us what to do and what is right" (Salgado & Hermans 2005).

ACKNOWLEDGEMENTS

I express my deepest gratitude to my mentor, Prof. Novel Anak Lyndon, for his many helpful suggestions, his Socratic teaching style, sharing knowledge and much time, and his encouragement and sound advice throughout reading the major articles and writing this piece of research.

REFERENCES

Clininbeard, S. S., & Murray, C. I. (2012). Perceived support, belonging, and possible selves strategies among incarcerated juvenile offenders. Journal of Applied Social Psychology, 42, 1218-1240. doi:10.1111/j.1559-1816.2011.00884.x

Kochanska, G. (2002). Committed compliance, moral self, and internalization: A meditational model. Developmental Psychology, 38, 339-351.

Kohlberg, L. (1976). Moral stages and moralization the cognitive develop mental approach. In T. Lickona (Ed.), Moral development and behavior theory, research, and social issues (pp. 31-53). New York: Holt, Rinehart, and Winston.

Kohlberg, L. (1980). Stages of moral development as a basis for moral education. In B. Munsey (Ed.), Moral development, moral education, and Kohlberg. Birmingham, Ala.: Religious Education Press.

Manzi, C., Vignoles, V. L., & Regalia, C. (2010). Accommodating a new identity: Possible selves, identity change and well-being across two life-transitions. European Journal of Social Psychology, 40, 970-984. doi:10.1002/ejsp.669

Maruna, S. (2001). Making good: How ex-convicts reform and rebuild their lives. Washington, DC: American Psychological Association.

Maruna, S., Wilson, L., & Curran, K. (2006). Why God is often found behind bars: Prison conversions and the crisis of self-narrative. Research in Human Development, 3(2-3), 161-184. doi:10.1207/s15427617rhd0302&3_6

McAdams, D. P. (2001). The psychology of life stories. Review of General Psychology, 5(2), 100-122. doi:10.1037/1089-2680.5.2.10

McAdams, D. P. (2006). The redemptive self: Stories Americans live by — Revised and expanded edition. New York, NY: Oxford University Press.

Piaget, J. (1952). The origins of intelligence in children (M. Cook, Trans.). New York: International Universities Press.

Piaget, J. (1970). Piaget's theory. In P. H. Mussen {Ed.), Carmichael's manual of child psychology, (Vol. 1, 3rd ed.). New York: Wiley Piaget, J. (1932). The moral judgment of the child. New York: The Free Press.

Piaget, J. and Inhelder, B. (1969). The psychology of the child (H. Weaver, Trans.). New York: Basic Books.

Pratt, T., Cullen, F., Sellers, C., Winfree, L., Madensen, T., Daigle, L., Gau, J. (2010). The empirical status of social learning theory: A meta-analysis. Justice Quarterly, 27(6), 765-802. doi:10.1080/07418820903379610

Rest, J. R. (1972) Defining issues test. Minneapolis: Minnesota Moral Research Projects.

Rest, J. R. (1979a). Development in judging moral issues. Minneapolis: University of Minnesota Press.

Rest, J. R. (1979b). Revised manual for the defining issues test an objective test of moral judgment development. Minneapolis: Minnesota Moral Research Projects.

Rest, J. R. (1980). Development in moral judgment research. Developmental Psychology, 251-256.

Rest, J. R. (1981). Morality. In J. Flavell and E.Markman (Eds.), Carmichael's manual of child's psychology, volume on cognitive development 4th ed New York: Wiley.

Robinson, D., & Porporino, F. (2001). Programming in cognitive skills: The reasoning and rehabilitation programme. In C. R. Hollin (Ed.), Handbook of offender assessment and treatment (pp. 179-193). Chichester: John Wiley & Sons Ltd.

Salgado, J., & Hermans, H. J. M. (2005). The return of subjectivity: From a multiplicity of selves to the dialogical self. E-Journal of Applied Psychology: Clinical Section, 1(1), 3-13

Walters, G. (2005). Recidivism in released lifestyle change program participants. Criminal Justice and Behavior, 32(1), 50-68. doi:10.1177/0093854804270628

Walters, G. (2006). The psychological inventory of criminal thinking styles (PICT) professional manual. Allentown, PA: Center for Lifestyles Studies.

Walters, G. 2007. Predicting institutional adjustment with the Lifestyle Criminality Screening Form and the Antisocial Features and Aggression Scales of the PAI. Journal of Personality Assessment, 88(10), 99-105. doi:10.1080/00223890709336840

Walters, G. (2008). Self-report measures of psychopathy, antisocial personality, and criminal lifestyle: Testing and validating a two-dimensional model. Criminal Justice and Behavior, 35(12), 1459-1483. doi:10.1177/0093854808320922

Walters, G. (2012). Crime in a psychological context: From career criminals to criminal careers. Los Angeles: CA: Sage.

Walters, G. (2015). Short-term goals and physically hedonistic values as mediators of the past-crime-future crime relationship. Legal and Criminological, 20, 81-95. doi:10.1111/lcrp.12014

Vol. 16. No.7 (1-14) ISSN: 1823-884x

Wills, T., & Dishion, T. (2004). Temperament and adolescent substance abuse: A transactional analysis of emerging self-control. Journal of Clinical Child and Adolescent Psychology, 33, 69-81. doi:10.1207/S15374424JCCP3301_7

Wilson, D., Bouffard, L., & MacKensie, D. (2005). A quantitative review of structured, group oriented, cognitive-behavioral programs for offenders. Criminal Justice and Behavior, 32(2), 172-204. doi:10.1177/0093854804272889

ABOUT THE AUTHORS

TARIQUE MUHAMMAD NIZAMANI
University Kebangsaan Malaysia
zopyross@gmail.com

ASSOCIATE PROF. DR. NOVEL ANAK LYNDON
University Kebangsaan Malaysia
novel@ukm.edu.my