DOCUMENT RESUME

ED 382 619 SP 035 991

AUTHOR Stoll, Sharon Kay; And Others
TITLE The Importance of Teaching Methodology in Moral Education of Sport Populations.
PUB DATE Mar 94
NOTE 23p.; Paper presented at the Annual Meeting of the American Alliance of Health, Physical Education, Recreation, and Dance (Denver, CO, March 1994).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Athletes; College Students; Discussion (Teaching Technique); *Ethical Instruction; Ethics; Higher Education; *Instructional Effectiveness; Lecture Method; Methods Research; *Moral Development; Moral Values; *Outcomes of Education; *Teaching Methods; *Teaching Models; Values Education
IDENTIFIERS Student Athletes

ABSTRACT

Three approaches to teaching moral reasoning were implemented by expert teachers in classes at three small colleges and outcomes were compared. Teaching models included the following: Model A, a "good reasoned" approach in which students discussed scenarios and determined the best course of action; Model B, a teacher-centered lecture, question and answer approach focusing on first order questions; and Model C, a maieutic teaching style based in moral reasoning and dialogue and focused on societal and sports issues. Participants in Models A and B (N=22 and 34 respectively) were general college age students, while participation in the Model C class was limited to 18 intercollegiate grant-in-aid athletes. Pre- and post-tests using the Hahm-Beller Values Choice Inventory found significant improvements in scores for students in Models A and C, but no significant change in scores for Model B students. Results indicate that interaction teaching based on theory, dialogue, and argumentation is preferred to increasing cognitive moral learning. (Contains 32 references.) (PB)

The Importance of Teaching Methodology in Moral Education of Sport Populations

Sharon Kay Stoll, Ph.D., 1993-94, Visiting Professor USMA, West Point, NY 10996, (914) 938-3401, FAX (914) 928 - 2138; Professor and Director of the Center for ETHICS*, University of Idaho, Moscow, ID 83843 (208) 885-6582, FAX (208) 885-5929

Jennifer M. Beller, Ph.D., Assistant Professor Eastern Michigan University, Ypsilanti, Michigan

Michael Reall, Ph.D. Consultant, Center for ETHICS*, University of Idaho

Chung Hae Hahm, Ph.D., Assistant Professor, Ewha Women's University, Seoul, Korea

Running Head: The Importance of Methodology

Abstract

The Importance of Teaching Methodology in Moral Education of Sport Populations

Presently an educational movement is afloat to re-instill moral education in the school classroom. The concept is titillating and those who purport the merits of morality are oftentimes misguided in their attempts to return to the values of yesteryear. Moral education is a slippery and highly complicated issue both in theory and practice. We do know that moral education is based on the triparti premise of moral knowing, moral valuing, and moral doing. We also know that moral knowing, ie., moral reasoning, can be positively affected through teaching methodologies, but wondered as to what methodology was better. We instituted a study at three different small colleges to discover whether selected, teaching methodologies would accomplish the same goal: A cognitive increase in moral reasoning. The sample group at each school randomly enrolled in a sport ethics class taught by expert teachers, who were student evaluated and found to be fair, impartial, positive, supportive and caring instructors. All three groups were pre and post tested with the Hahm-Beller Values Choice Inventory (HBVCI). The HBVCI is a reliable (Cronback Alpha 0.74 - 0.86) instrument to measure moral reasoning in the sport context. Each class was then treated with a specific teaching methodology directed toward increasing moral reasoning. The three methodologies were based on different models: Model A was the good reasoned approach in which students discuss scenarios and determine the course of action via the best personal reason; Model B was a lecture, question and answer approach that was teacher-centered and focused on first order questions; and Model C which was a maieutic teaching style based in moral reasoning and dialogue and focused on societal and sport issues. Model A and C are somewhat

alike in that all focus and direction is toward the student with student interaction, discussion, and dialogue. Model A and B were general college age students, Model C was intercollegiate grant-in-aid athletes. An ANOVA was used to test difference degrees of change from Pretest to Posttest as well as differences by model.

Model A, N = 22, pretest Mean 72.09, SEM ± 1.85

post test Mean 82.09, SEM ± 1.86.

(At the $p < .05$ level, a significant difference was found from pre to post test.)

Model B, N = 34, pretest Mean = 70.65, SEM ± 1.96,

posttest Mean = 70.73, SEM ± 1.69

(No significant different was found from pre to post test.)

Model C, N = 21, pretest Mean = 54.61, SEM ± 2.61

posttest Mean = 69.56, SEM ± 2.59

At the $p < .05$, a significant difference was found from pre to post test. Note this sample was limited to intercollegiate, scholarship athletes.

Results of the three models suggest that an interactive teaching model based on argumentation, theory, dialogue is preferred to increasing cognitive moral learning. Not every or any type of teaching methodology has the potential to increase cognitive moral knowing.

KEY TERMS: Teaching Moral Education, Moral Education, Moral Development, Moral Reasoning

Introduction

Presently an educational movement is afloat to re-instill moral education in the school classroom. Educators across the country have been highly concerned as to what is perceived to be an increasing "moral wasteland" in schools. In the elementary schools, vulgarity and disrespect is a common problem.(Niebuhr, 1992; Coles, 1988). Junior and senior high schools are afflicted by escalating numbers of teenage pregnancies, violent crimes, high school dropout rates, and uncontrollable dishonesty (Lickona, 1991). Universities and colleges have seen increased problems of faculty and scholarly plagiarism, research "fudging", incivility to peers, racial unrest, as well as the ever present cheating in intercollegiate athletics. (Chronicle of Higher Education, any issue) Unfortunately for all interested parties, the forecast is that the above trend will continue unless some active plan can change moral destiny.

Some writers, theoreticians, scholars and educators state that a change in destiny can occur through proactive methods (Reall, 1993; Stoll, 1993; Beller, 1991; Beller & Stoll, 1992, 1993; Bok, 1987; Bailey & Littleton, 1991; Lickona, 1991; Bredemeier, 1984). To combat the moral problems at hand, these educators and others have focused their energy on moral education through intervention programs. They theorize that if moral development can be increased through education, then moral behavior will therefore improve which when multiplied by the masses will positively affect our present social and educational behavioral problems.

This concept of moral education through intervention is not necessarily new. The literature, from Rousseau (Many editions) to Piaget (1932a, 1932b) and Dewey (1909) to Kohlberg (1971, 1976, & 1981) and Lickona, (1991), is replete with historical accounts of successful and failed attempts to foster morality

through the educational system. In our present decade, Lickona in his seminal work, "Educating for Character" (1991) outlines in detail the many current programs developed throughout the country, from kindergarten through college, that purport to improve moral development of our youth. The present educational movement is not, however, limited to school age children. Because they saw a national need, Harvard Business College recently instituted a complete moral education program for its MBA students. The faculty published a brief history, Can Ethics Be Taught? (Piper, Gentile, Parks, 1993) of how they developed, incorporated, and finally implemented their comprehensive moral education curriculum. At the same time, formal education is not alone in the quest for moral education, businesses across America have begun implementing educational programs directed toward ethical behavior (Pamental, 1991; Myers, 1992; Jones, 1989; Labich, 1992).

The concept of moral education with its hoped for benefits on individual behavior and the collective society is titillating, however, teachers must be careful not to jump on the "moral bandwagon" too soon. Good intentions may not bring about the hoped for results. If past research is to be believed, only a specific type of methodology, an interactive question-answer approach that relies on cognitive dissonance, will improve moral reasoning, ie., moral development. (Kohlberg, 1971, 1976, 1981; Reimer, Paolitto, Hersh, 1990).

However, the concept of "cognitive dissonance" married to the dialectic question-answer approach is confusing or completely misunderstood by many moral educators. Critics of the "only cognitive dissonance method" have argued that methodological approaches in teaching have always been a chameleon.

They ask, "Could not the same be said for moral education?" They argue that morality is learned in the home and they suggest that the following syllogism expresses the truth of what occurs:

(Premise One) Because most teachers use a question-answer approach,

(Premise Two) And, most teachers are in some way involved in helping students understand morality,

(Premise Three) Most teachers, therefore, already do "moral education" and no specific training is necessary.

We decided to investigate these two divergent points of view. Is moral education a chameleon, a sham? Or is there truth to the notion that moral development can be improved through specific methodological approaches. Our investigation was an initial attempt to explore the effect of three different teaching methodologies from three different teachers on cognitive moral reasoning of college-aged adults.

Method

Subjects

Subjects were 74 college-aged students who randomly enrolled in a moral reasoning in sport class at three different small colleges or universities, (enrollment varied from the largest at 10,000 to the smallest at 3,000) each geographically separated from 300 to 3000 miles. Twenty-two students enrolled in Model A (10 females, 12 males) at institution 1; Thirty-four students enrolled in Model B (18 females, 16 males) at institution 2; Eighteen students enrolled in Model C (9 females, 9 males) at institution 3. Sixty-seven students were caucasian, two African-American, one Hispanic, and four Oriental.

Instruction-Intervention

The classes were taught by expert teachers, who students evaluated as being competent, enthusiastic, fair, positive, and caring. Each instructor had at least ten years of teaching experience and had taught a course in moral reasoning, sport ethics, or its equivalent numerous times. The purpose of all three classes was to improve moral reasoning, ie., moral development, through an active teacher - student dialogue. Each class had a heavy cognitive focus, with theoretical as well as contemporary daily readings. All classes was expected to write philosophic papers on current ethical problems and to write a final term examination.

All three classes were a minimum of 16 weeks in length and met for a total of two hours instruction per week.

Each instructor however had a different teaching model, that was personally developed to accomplish the task of improved cognitive, moral reasoning.

Model A was based on the good-reasoned approach where students discussed scenarios and determined the course of action via the best personal reason. The teacher helped the students discuss the importance of values and develop personal guidelines to follow. The teacher caused cognitive disequilibrium (dissonance) by working through moral dilemmas and then addressing the reasons why one action is better than another. Dialogue centered on pre-formed first order questions such as, "Let us list all the reasons why this course of action is questionable, and then resolve our dilemma by our own reasoning process." Second order questioning then became spontaneous playing on student reasoning responses. Teacher-talk, student talk was approximately at a 3:2 ratio.

Model B was a teacher centered lecture, with a question and answer approach focusing on first order questions. The teacher directed action toward all

students by asking pertinent predetermined questions concerning the assigned readings, "Why did the author suggest this course of action?", or "Do you agree that this was the best course of action, and why?" Teacher-talk, student talk was approximately at a 3:1 ratio.

Model C was a Socratic teaching style that was student-based in oral reasoning, dialogue, and cognitive disequilibrium about societal sport issues. The focus was student-directed whereby all action was toward students interacting with students, self and teacher. Teacher talk to student talk was approximately a 1:1 ratio. The spontaneous teacher questioning that occurred was directed toward specific students, incorporated second order questions, and forced cognitive disequilibrium, "Regina, you just said that you thought it was acceptable to cheat under certain circumstances. However, two weeks ago, you said your honesty would never be compromised. Please explain what appears to be an inconsistency on your part?"

Each instructor had a working knowledge of moral development. They were aware of the literature and understood the concept of cognitive disequilibrium. Each instructor in a preliminary questionnaire about their teaching style in relation to moral development stated that they thought their pedagogical method would improve cognitive moral reasoning and foster cogntive dissonance. Each thought they were good teachers and that their approach was as good as any other approach in accomplishing the goal at hand.

Models A and C were somewhat alike in that focus and direction was toward the student with student interaction, discussion, and dialogue. Models A and B were general college-aged students, Model C was intercollegiate grant-in-aid athletes.

Moral Reasoning Evaluation

All three groups were pretested and posttested with the Hahm-Beller Values Choice Inventory (HBVCI). The HBVCI is a reliable (Cronback Alpha 0.74 - 0.86) instrument to measure moral reasoning in the sport context. (Beller, Stoll, & Hahm, Submitted for Publication). The HBVCI is comprised of 21 questions that ask participants to answer using a Likert Scale of Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree (Hahm, 1989; Hahm, Beller & Stoll, 1989). The scenarios ask participants to reason critically about various common moral dilemmas in sport, ie., the implications of the intentional foul, performance-enhancing drug use, drug testing, retaliation, responsibility for personal action, and fairness to teammates and competitors. Higher scores reflect a consistent use of moral principles and reasoning which can be universally applied.

Design and Analysis

This observational study used a randomized groups design. A Model (3) X Time of Testing (2) X Gender (2) ANOVA was used to test for different degrees of change from prettest to posttest by those in the three models. The critical test was the Model X Time interaction. Tests to determine which models differed from pretest to posttest were conducted by comparing the magnitude of difference scores computed as posttest - pretest. Tukey-B multiple comparison procedures were performed to determine which means were significantly different. Experimentwise error rates were controlled at a level to the F test alpha level, $p < .05$.

Results

Relative to the interaction of Time*Model on the HBVCI, significant differences were found pretest to posttest (see Table 1).

Insert Table 1 about here

_Students enrolled in Model A scored significantly higher from pretest (M = 72.1 SEM ± 1.9) to posttest (M = 82.1 SEM ± 1.9) ($F[1,71] = 11.8$ $p < .01$). Model C students increased significantly from pretest (M = 54.6 SEM ± 2.6) to posttest (M = 69.56 SEM ± 2.6) ($F[1,71] = 21.88$ $p < .01$). Because the significant interaction appears attributable to the differences between Model A and Model C to Model B, change scores were run by Model (see Table 1).

Insert Table 1 about here

A significant difference was found in change scores by Model ($F[2,71] = 16.1$ $p < .05$). Tukey-B multiple comparison procedures were run, finding Model A (M = 10.0 SEM ± 1.69) and Model C (14.94 SEM ± 2.9) mean change scores essentially the same, but significantly different than Model B (M = .08 SEM ± 1.55). As such, the prettest and posttest interaction is identical to the main effect of change mean scores.

A significant difference was found by gender, with females (M = 77.0 SEM ± 1.3) scoring significantly higher than males (M = 68.0 SEM ± 1.5), ($F[1,68] = 11.62$ $p \leq .001$). (See Table 2).

Insert Table 2 about here

No significant differences were found with the interactions of Model*Gender ($F[1.2] = 1.78$ $p < .18$), Gender*Time ($F[1,2] = .08$ $p < .78$), or Model*Gender*Time ($F[1,2] = .43$ $p < .66$).

Discussion

The purpose of this study was to analyze the effect of three different teaching models, ie., methodologies, on student cogntive moral reasoning in three different and unique sport ethics classes. The results of this study suggest the following thoughts to ponder in developing moral curriculum and moral education programs.

1. To increase cognitive moral reasoning, results of the three models suggest that an interactive teaching model (Model A and C) based on argumentation, theory, and dialogue that challenges cognitive dissonance is preferred. Some teaching models, (Model B), apparently do not have the potential to increase cognitive moral reasoning. Good teacher intentions will not necessarily develop successful moral education programs. For moral education to be effective, the content and curriculum must be undergirded by specific theoretical knowledge, supplied through an interactive methodological approach, and supported by a rigorous systematic evaluation. The results of the present study support the conclusions of Bredemeier, Weiss, Shields, & Shewchuck, (1986), Wanzilak, Carrol, & Ansorge (1988), Beller & Stoll (1992) and others who detail the importance of methodologically sound cognitive dissonance to increase moral development.

2. Of interest in this study is that, regardless of teaching model, women scored significantly higher than males. Though not a specific intent of this study, the results do support earlier findings that females in sport and athletics appear not to arrest in development or their scores are not masked as quickly as men

(USAFAORD, 1993; Beller, 1991; Bredemeier and Shields, 1984, 1986; Hahm, 1989; and Penny & Priest, 1990). The results are interesting in that, on the whole, few methodologically or theoretically sound psychological studies have found significant differences by gender. And, most of the cognitive developmental studies based on Kohlbergian research (Kohlberg, 1971, 1976, 1981) and the Defining Issues Test (DIT) have found women to be less morally developed than men (Rest, 1990). Beller & Stoll (1992) have hypothesized that this mixture-of-results phenomenon is directly related to the so-called male win-at-all costs competitive model that is currently in vogue in competitive situations. Because men have been inculcated with the model for a longer period of time, their reasoning is adversely affected at a younger age and continuously assaulted over longer periods of their educational development. Women per se have not as yet completely adopted this model, probably because women have been in the competitive sports arena for a shorter duration. Or, because coaching styles for women are still somewhat idealized which appears to positively and directly affect their moral reasoning.

3. Where students cognitively began in a specific model seems to have a direct effect on how much they can increase in moral reasoning, over a specified period of time. Model A and B were composed of general students, while Model C was university-aged athletes. The beginning mean scores of Model A and B were similar, while Model C beginning scores were significantly lower. (See Figure 1).

Insert Figure 1 about here

This condition is three pronged. First, the difference in reasoning scores is consistent with earlier data that suggests intercollegiate athletes score significantly lower than their peer group (Beller & Stoll, 1992; Beller, 1991;

Hahm, 1989; Bredemeier, Weiss & Shields, 1986; Bredemeier, & Shields, 1986; and Bredemeier, 1984. Beller & Stoll (1992) as well as Bredemeier & Shields (1984) have suggested that this difference is directly linked to the competitive model of interscholastic and intercollegiate sport. That is, if the competitive model is based on a win-at-all costs mentality, the resultant effect on cognitive moral reasoning will be significantly negatively affected. It seems that the competitive model has a direct effect on either arresting or masking moral development of student athletes.

Second, because the magnitude of change in Model A and Model C are statiscally the same, that is both groups improved to the same degree, it appears that there is limit to how much improvement can occur in moral reasoning over a specific time period. This finding underscores the work of Kohlberg (1976, 1979, 1981) who spoke decisively in support of Piaget (1932) about the length of time necessarily to bring about moral development. However, the present study does not agree with Kohlberg or Piaget in how much time is actually necessary. Like Stoll & Beller (1992), the present study found that period of time necesaary to improve moral reasoning to be shorter in adult, athlete populations. Perhaps this can be ascribed to what they describe as the phenomenon of masking. For some reason, whether it is stress or environment, adult athlete populations either stop reasoning about moral dilemmas in sport or mask the dilemma as something trivial which needs no reasoning. This phenonmenon is important to sport moral educators in understanding the differences in moral development between athletes and non-athlete peers groups. It may not be correct to say that athletes are less morally developed, rather it may be correct to say that athletes are adversely affected in their reasoning s... through long term sport involvement.

Third, after intervention, Model C improved scores were at a level consistent with the beginning scores of Model A and B. This data was also consistent with Beller & Stoll (1992), who found that athletes in an interactive

setting moved progressively upward in moral reasoning to a place consistent with their non-athletic peer groups. If we assume that an interactive program can improve moral reasoning for either general students or student athletes, and we implement such a program for both groups, and if we assume that athletes are significantly less to begin, then we might also say that athletes may need longer and more concerted efforts in moral reasoning than their peer groups.

Summary

Moral education has many provocative possibilities. In this day of steadily declining social and moral values, it is an easy respite to jump on the moral education bandwagon. However, this study as well as many before in different arenas and disciples caution against hasty decisions based on unprepared methodologies (see Weiss & Bredemeier, 1990). Good moral education can only occur if it is secured in a valid and reliable cognitive dissonance methodology.

References

Bailey, W., & Littleton, J. (1991). Athletics & academe. New York: American Council on Education, MacMillan.

Beller, J. M., & Stoll, S. K., (1992). A moral reasoning intervention program for student athletes. The Academic Athletic Journal. 47-57.

Beller, J. M., & Stoll, S. K. (August, 1993). Sportsmanship: An antiquated concept. JOPERD, pp. 74-79.

Beller, J. M. (1991). A comparative analysis of intercollegiate and interscholastic student athletes' and general student's moral reasoning. Manuscript submitted for publication.

Bredemeier, B. J. (1984). Sport, gender, and moral growth. In J. M. Silva & R. S. Weinberg (Eds). Psychological Foundations of Sport. Champaign: Human Kinetics.

Bredemeier, B. J., & Shields, D. L. (1984). The utility of moral stage analysis in the investigation of athletic aggression. Sociology of Sport Journal. 1(2), 138-149.

Bredemeier, B. J., & Shields, D. L. (1986). Moral growth among athletes and nonathletes: A Comparative analysis. Journal of Genetic Psychology, 147(i), 7-18.

Bredemeier, B. J., Weiss, M.R., Shields, D. L., & Shewchuck, R. M. (1986). Promoting moral growth in a summer sport camp: The implementation of theoretically grounded instructional strategies. Journal of Moral Education, 15(3), 212-220.

Bok, D. (1987). The President's Report, 1986-1987. Harvard University. Boston, MA.

Coles, R., (1988). Learning to believe — or disbelieve—in the American dream. Education: 89/90. pp. 10-13, Guilford, Connecticut: Dushkin.

Dewey, J. (1909). Moral principles in education. Cambridge, MA: Riverside Press.

Hahm, C.H. (1989). Moral reasoning and development among general students, physical education majors, and student athletes, Unpublished doctoral dissertation, University of Idaho, Moscow, ID.

Hahm, C.H., Beller, J.M., & Stoll, S. K., (1989). The Hahm-Beller Values Choice Inventory in the Sport Milieu. Moscow: University of Idaho, Center for ETHICS*.

Jones, T. M. (1989). Can business ethics be taught? Empirical evidence. Business & Professional Ethics Journal, 8(2).

Kohlberg, L. (1971). From is to ought: How to commit the naturalistic fallacy and get away with it in the study of moral development. In T. Mischel

(Ed.,), Cognitive Development and Epistemology. New York: Academic Press.

Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. In T. Lickona (Ed)., Moral Development and Behavior. New York: Holt, Rinehart, & Winston, Inc.

Kohlberg, L. (1981). The philosophy of moral development: Moral stages and the idea of justice. New York: Harper & Row.

Labich, K. (1992, April). The new crisis in business ethics. Fortune, pp. 167-176.

Lickona, T. (1991). Educating for character. Bantam Books.

Myers, R. N. (1992, September 25). At Martin Marietta, this board game is lesson in ethics. The Wall Street Journal, A5.

Niebuhr, R. G. (1992, July 8). Schools resound with four-letter words. The Wall Street Journal, 1-2.

Pamental, G. L. (1991). Is business ethics dying? Moral Education Forum, 16(3), 9-14.

Penny, W. J. & Priest, R. F. (1990). Deontological sport values choices of United States Military Academy cadets and selected other college-aged populations. Manuscript submitted for publication.

Piaget, J. (1932a). The moral development of the child. Glencoe: The Free Press.

Piaget, J. (1932b). The moral development of the child. Marjorie Gabain (Tr.). New York: Collier.

Piper, T. R., Gentile, M. C., & Parks, S. D. (1993). Can ethics be taught? Cambridge, MA: Harvard Business School.

Potter, G., & Wandzilak, T. (1981). Youth sports: A program evaluation. Journal of Physical Education and Recreation, 52(3), 67-68.

Reall, M. J. (1993). The relationship of cognitive moral development, moral reasoning, and moral conduct of business students in a competitive environment. Unpublished doctoral dissertation, University of Idaho, Moscow, ID.

Reimer, J., Paolitto, D. P., & Hersh, R. H. (1990). Promoting Moral Growth from Piaget to Kohlberg. Prospect Heights, ILL: Waveland Press.

Rest, J. (1990). Manual for the Defining Issues Test: An objective test of moral development. Minneapolis: University of Minnesota, Center for the Study of Ethics, p. 14.

Rousseau, J. (Many editions). The Social Contract.

Stoll, S. K. (1993). Who says this is cheating? Dubuque, IA: Kendall Hunt.

USAFAORD (United States Air Force Academy Office of Research and Development). (October 5, 1993). personal communication,

Wandzilak, T., Carroll, T., & Ansorge, C. J. (1988). Values development through physical activity: Promoting sportsmanlike behaviors, perceptions, and moral reasoning. Journal of Teaching in Physical Education, 8(1), 13-22.

Weiss, M. R., & Bredemeier, B. J. (1990). Moral development in sport. In K. B. Pandolf & J. O. Holloszy (Eds.) Exercise and sport Science Reviews, 18, Baltimore: Wilkins & Wilkins.

Table 1

Least Square Means for Change by Model in Total Reasoning Scores on the Hahm-Beller Values Choice Inventory (HBVCI).

Model	N	Pretest	Posttest	Degree Change
A	22	72.09	82.09	10.00b
		(1.85)	(1.86)	(1.69)
B	34	70.65	70.73	.08a
		(1.96)	(1.69)	(1.55)
C	18	54.61	69.56	14.94b
		(2.61)	(2.59)	(2.87)

Note. Total moral reasoning score = 105 Means with different subscripts difer significantly at p<.00001. SEM = ( ).

Table 2

Least Square Means for Gender Reasoning Scores on the Hahm-Beller Values Choice Inventory (HBVCI).

Gender	N	LSM	SEM
Male	70	67.77a	(1.48)
Female	78	76.97b	(1.30)

Note. Total moral reasoning score = 105. Means with different subscripts differ significantly at $p<.001$. SEM = ().

Figure Caption

Figure 1. Least Square Means of Pretest to Posttest by Model in Total Reasoning Scores on the Hahm-Beller Values Choice Inventory (HBVCI).