THE EFFECTS OF THE LET'S GET RATIONAL BOARD GAME ON RATIONAL THINKING, DEPRESSION, AND SELF-ACCEPTANCE IN ADOLESCENTS

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ABSTRACT: The present study investigated the effects of the Let's Get Rational board game on rational thinking, depression, and self-acceptance in high school students. A sample of 80 subjects (40 male, 40 female) was selected for participation in this study. Four experimental groups of 10 students played the board game Let's Get Rational for one 52 minute class period once a week for seven weeks. Three dependent measures were used. These included a measure of rational thinking (Child and Adolescent Scale of Irrationality), a measure of depression (Beck Depression Inventory), and a measure of self-acceptance (Adjective Generation Technique). Cell means were calculated for the following independent variables: 1) treatment vs. no treatment, 2) gender—male vs. female, and 3) grade level—9th, 10th, 11th, and 12th. Results indicated that the subjects in the experimental group agreed with fewer irrational beliefs than subjects who received no treatment. Ninth grade experimental subjects reported less irrational thinking than did 9th-grade control group subjects. Finally, 10th-grade experimental subjects were significantly less depressed than 10th-grade control subjects.

Game playing is indeed a universal human activity. It is not just the creation of a few advanced civilizations as games are a part of nearly every culture except for a handful of the most primitive societies (Sutton-Smith & Roberts, 1971). The earliest board game dates back to 4000 B.C. and was similar in some respects to many of the strategy

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games available today (Shapiro, 1992). No fewer than four board games were found in the tomb of King Tutankhamen who died in 1352 B.C. (Schaefer & Reid, 1986).

Mead (1934) was among the first to recognize the importance of games and game playing in the socialization process. Through the playing of games, the child was seen by Mead as learning to differentiate himself from others as well as gaining practice in communication skills. Loomis (1957) was the first to publish an article on the use of checkers in therapy. This marked the initial analysis of the therapeutic value of organized games.

Since the early 1970's, there has been a dramatic rise in interest in the therapeutic possibilities of game playing (Schaefer & Reid, 1986). A review of currently available therapeutic products highlights the fact that games are becoming increasingly specialized. There currently are therapeutic games that focus upon a variety of situations and deficiencies such as a) communication skills, b) children whose parents are going through a divorce, c) alcohol/drug refusal skills, d) games to teach values, e) games to teach socially appropriate manners, f) games to increase self-esteem, g) games to teach impulsive children self-control, h) games to prepare children to testify in court, i) games that focus on relaxation, and j) games that focus upon improving fine motor skills to name but a few. At this point it is quite likely that there are games available for nearly every therapeutic intervention used in the practice of psychotherapy.

The first game designed specifically to increase children's ability to think rationally was the Rational Emotive Game (Zitsman, 1984) which attempted to teach children the difference between rational and irrational thinking. Another RET game is Instant Replay (Bedford, 1974) which was designed to help children learn problem solving skills.

Though there are numerous therapeutic board games available to mental health professionals, there is a lack of research to support these games as effective therapeutic tools. The Ungame (Zakich, 1975) has sold over one million copies yet to this day there does not appear to be one controlled study to assess its efficacy.

The game being examined in this study, Let's Get Rational (LGR) was designed for players aged eleven through adulthood. It contains twenty-eight game squares, ten of which are known as Rational Reminder Squares (RRS). When a player lands on a RRS they pick a card that contains a rational statement and read the card aloud. For example, a card may read, "The world is not a good or bad place. The world

is a place where things happen and people decide if these things are good or bad." The player is then to explain what this statement means and if possible gives an example of how this saying applies to his or her life.

There are four Affirmation squares that require players to state a positive statement about the player who has landed on the square. The player who landed on the square is then asked to make a self affirming statement.

Twelve of the squares give specific commands designed to promote open communication of feelings during the playing of the game. For example, one square states, "Tell the group what is most on your mind today." Such squares provide structure to the playing of the game but also allow players to bring up whatever issues they feel are important at the time.

While portions of "Let's Get Rational" are designed to facilitate trusting relationships, improve group cohesiveness, and quicken the process of forming a functional therapeutic group, the primary emphasis is upon teaching the players the fundamental tenets of RET.

METHOD

A sample of 80 subjects (40 males and 40 females) were selected for participation in this study. Stratified random sampling was employed to include an equal number of male and female subjects from each of the 9th, 10th, 11th, and 12th-grade for both experimental and control groups. Thus 10 male and 10 female subjects were randomly selected for each of the four grade levels. Experimental groups met once a week for seven weeks for one 52 minute class period to play LGR. During this time control group subjects attended their regularly scheduled high school classes.

Dependent measures included a) The Child and Adolescent Scale of Irrationality (CASI) (Bernard & Laws, 1988) is a 44 item Likert scale designed to measure irrationality in children and adolescents. b) The Beck Depression Inventory (BDI) (Beck & Steer, 1979) consists of twenty-one groups of statements with four possible responses per group. The subject is to read the four statements and select the response that best describes how the subject had been feeling the past week, including the day they completed the questionnaire. c) The Adjective Generation Technique (AGT) (Allen & Potkay, 1973) involves having subjects produce five adjectives from their own vocabularies to

describe themselves. The resulting mean of the five adjective values then may be computed so as to provide a quantitative index representing the subject's favorability of self-description.

Cell means for the experimental and control groups were calculated for the following independent variables:

1) treatment vs. no treatment,
2) grade level—9th, 10th, 11th, and 12th,
3) sex—male vs. female.

Each of the research hypotheses were analyzed using multivariate analysis of variance (MANOVA) and univariate analysis of variance (ANOVA) to determine whether or not there was a statistically significant difference between the cell means of the control and experimental groups with regard to the above mentioned independent variables.

RESULTS

Three research hypotheses reached significance at the .05 level (see Tables 1-4). Subjects in the experimental group endorsed fewer irrational beliefs than control group subjects according to scores on the CASI ($F = 4.20$, $p < .05$). Ninth grade experimental subjects agreed with fewer irrational beliefs than 9th grade control subjects ($F = 5.65$, $p < .05$). Finally, 10th grade experimental subjects were significantly

Table 1

Multivariate F—Summary Table for CASI, BDI, and AGT

Source of Variance	df	F	p
Experimental vs. Control	62	1.79	.158
Gender	62	1.55	.209
Grade Level	192	1.37	.200
Ex. vs. Cn. by Gender	62	.11	.950
Ex. vs. Cn. by Grade Level	192	.83	.586
Gender by Grade Level	192	.68	.718
Ex. vs. Cn. by Gender by Grade Level	192	.53	.844

Ex. = Experimental
Cn. = Control

Table 2

Univariate F—Summary Table for Experimental vs. Control by Sex by Grade Level: CASI

Source of Variance	df	F	p
Experimental vs. Control	78	4.20*	.044
Ex. vs. Cn. by Sex	76	.09	.758
Ex. vs. Cn. by Grade 9	18	5.65*	.029
Ex. vs. Cn. by Grade 10	18	2.73	.116
Ex. vs. Cn. by Grade 11	18	.10	.760
Ex. vs. Cn. by Grade 12	18	.11	.742
Ex. vs. Cn. by Sex by Gr. 9	16	1.47	.244
Ex. vs. Cn. by Sex by Gr. 10	16	.36	.558
Ex. vs. Cn. by Sex by Gr. 11	16	.88	.363
Ex. vs. Cn. by Sex by Gr. 12	16	1.09	.312

* = significant at the .05 level
Ex. = Experimental
Cn. = Control
Gr. = Grade

Table 3

Univariate F—Summary Table for Experimental vs. Control by Sex by Grade Level: BDI

Source of Variance	df	F	p
Experimental vs. Control	78	2.66	.108
Ex. vs. Cn. by Sex	76	.34	.559
Ex. vs. Cn. by Grade 9	18	.22	.645
Ex. vs. Cn. by Grade 10	18	4.55*	.047
Ex. vs. Cn. by Grade 11	18	.24	.627
Ex. vs. Cn. by Grade 12	18	.18	.679
Ex. vs. Cn. by Sex by Gr. 9	16	.31	.586
Ex. vs. Cn. by Sex by Gr. 10	16	.11	.740
Ex. vs. Cn. by Sex by Gr. 11	16	.35	.563
Ex. vs. Cn. by Sex by Gr. 12	16	2.53	.131

* = significant at the .05 level
Ex. = Experimental
Cn. = Control
Gr. = Grade

Table 4

Univariate F—Summary Table for Experimental vs. Control by Sex by Grade Level: AGT

Source of Variance	df	F	p
Experimental vs. Control	78	.00	.960
Ex. vs. Cn. by Sex	76	.06	.812
Ex. vs. Cn. by Grade 9	18	.06	.809
Ex. vs. Cn. by Grade 10	18	.25	.624
Ex. vs. Cn. by Grade 11	18	.47	.502
Ex. vs. Cn. by Grade 12	18	.00	.965
Ex. vs. Cn. by Sex by Gr. 9	16	.46	.508
Ex. vs. Cn. by Sex by Gr. 10	16	.01	.926
Ex. vs. Cn. by Sex by Gr. 11	16	.04	.850
Ex. vs. Cn. by Sex by Gr. 12	16	1.99	.178

Ex. = Experimental
Cn. = Control
Gr. = Grade

less depressed than 10th grade control group subjects according to scores on the BDI ($F = 4.55, p < .05$).

DISCUSSION

Of the three research hypotheses that reached significance, two were related to measures of rational thinking. The primary intention of the inventor of LGR was to produce a therapeutic tool that would increase the ability to think rationally.

It is unclear at this time why there was a significant finding of increased rationality among 9th-graders but not among the remaining three grade levels. It is worth noting that the differences between experimental and control group subjects in 11th and 12th-grades on the CASI were almost non-existent. Eleventh grade experimental subjects obtained a mean of 108.8 as compared to control subjects who obtained a mean score of 110.6. Twelfth grade experimental subjects actually endorsed more irrational beliefs (mean = 113.3) when compared to control subjects (mean = 111.3).

Age was considered in studies by DiGiuseppe and Kassinove (1976)

and Wasserman and Vogrin (1979). In the study by DiGiuseppe and Kassinove (1976) in which 4th and 8th-grade students were compared, age was not found to be a significant factor in predicting rational thinking. Wasserman and Vogrin (1979) found that older subjects endorsed fewer irrational beliefs than younger subjects. Subjects used in this study ranged in age from 8 to 13. The current study was conducted with high school aged subjects who were between the ages of 14 and 18. Results from the subjects who played the Let's Get Rational board game suggest that younger subjects endorsed fewer irrational beliefs.

The comparison of 10th-grade experimental and control group subjects in regard to depression produced significant results. Statistical significance may have been influenced by the scores of 10th-grade control subjects who produced the highest cell means on the BDI (males - 10.00, females - 18.20). The lowest cell mean on the BDI was 10th-grade male experimental subjects (2.80). The lone subject who scored in the severely depressed range (BDI score of 30 and above) was a 10th-grade female control group subject.

One study was cited relating to the incidence of depression in adolescents as measured by the BDI. Teri (1982) reported that in a sample of 568 adolescents, 5% scored in the severely depressed range. Of the 80 adolescents who participated in the LGR study, only one subject scored in the severely depressed range (1.3%). Sixty eight percent (68%) of the 568 subjects in Teri's study scored in the normal to mild range of depression while 93.7% of the subjects in the LGR study were within the normal to mild range.

None of the analyses of variance performed to evaluate the research hypotheses associated with the AGT produced significant results. Once again, the differences between the experimental and control groups were negligible (experimental mean = 349.34, control mean = 348.43). Ellis (1962) has stated it is irrational to rate an individual's value according to the appropriateness of their actions. Since it is impossible to prove or disprove inherent worth, it is much more logical to simply accept all people as worthwhile (Wilde, 1992). Numerous LGR Rational Reminder Pick-Up Cards emphasize this contention. However, the cards' messages do not appear to have been adopted to a higher degree by experimental group subjects.

The mean attendance of subjects in the experimental groups was 4.95 out of a possible seven. Therefore, it would be more accurate to think of the duration of treatment as five weeks rather than seven weeks. The length of treatment may have been insufficient to bring

about therapeutic change in the experimental subjects. Other research supports the contention that treatment length is a significant variable in terms of outcome. Ribowitz (1979) found that subjects in rational-emotive education groups endorsed significantly fewer irrational beliefs after 14 weeks as opposed to 7 weeks of treatment.

REFERENCES

Allen, B., & Potkay, C. (1973). The adjective generation technique: An alternative to adjective checklists. *Psychological Reports, 32,* 457-458.

Beck, A., & Steer, R. (1979). *Beck depression inventory manual.* San Antonio, TX: The Psychological Corporation.

Bedford, S. (1974). *Instant replay.* New York: Institute for Rational-Emotive Therapy.

Bernard, M., & Laws, W. (1988, June). *Childhood irrationality and mental health: Development of a scale.* Paper presented at the 24th International Congress of Psychology, Sydney, Australia.

DiGiuseppe, R., & Kassinove, H. (1976). Effects of a rational-emotive school mental health program in children's emotional adjustment. *Journal of Community Psychology, 4,* 382-387.

Ellis, A. (1962). *Reason and emotion in psychotherapy.* Secaucus, NJ: Citadel Press.

Loomis, E. (1957). The use of checkers in handling certain resistances in child therapy. *Journal of American Psychoanalytic Association, 5,* 130-135.

Mead, G. (1934). *Mind, self, and society.* Chicago: University of Chicago.

Ribowitz, A. (1979). *Effects of "abc" homework sheets, initial level of adjustment, and duration of treatment on the efficacy of rational-emotive education in elementary school children.* Unpublished doctoral dissertation, Hofstra University.

Schaefer, C., & Reid, S. (1986). *Game play: Therapeutic use of childhood games.* New York: Wiley.

Shapiro, L. (1992). *Childswork/childsplay fall catalog.* King of Prussia, PA: Center for Applied Psychology.

Sutton-Smith, B., & Roberts, J. (1971). The cross cultural and psychological study of games. *International Review of Sports Sociology, 6,* 79-87.

Teri, L. (1982). The use of the Beck depression inventory with adolescents. *Journal of Abnormal Child Psychology, 10,* 277-284.

Wasserman, T. & Vogrin, D. (1979). Relationship of endorsement of rational beliefs, age, months of treatment and intelligence of overt behavior of emotionally disturbed children. *Psychological Reports, 44,* 911-917.

Wilde, J. (1992). *Rational counseling with school aged populations: A practical guide.* Muncie, IN: Accelerated Development.

Zakich, R. (1975). *The ungame.* Anaheim, CA: The Ungame Company.

Zitman, S. (1984). *The rational emotive game.* Unpublished manuscript. Wright State University, Dayton.