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EMOTIONAL RELIEF FOR PARENTS: IS RATIONAL-EMOTIVE PARENT EDUCATION EFFECTIVE?

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ABSTRACT: The effects of a rational-emotive parent education program were studied on forty-eight parents from a nonclinical population using a pre-test, post-test control group design. The RET parenting program included four components: a) reducing emotional stress through disputing irrational beliefs, b) implementing rational discipline methods, c) rational problem solving skills and d) fostering rational thinking traits in their child. Four dependent variables were studied: parent irrationality, parent emotionality, parent perceptions of child problems and the perception of participants' parenting by their spouses. Results showed that for experimental group subjects there was a statistically significant reduction in parent irrationality, parent guilt and parent anger. An exploratory ten month follow-up suggested maintenance of effects, a reduction in perceived child behavior problems, and changes in parental irrational beliefs regarding self worth.

An evaluation of a parent education program based on rational-emotive therapy (RET) (Barrish & Barrish, 1985; Ellis, 1962, 1978, 1994; Ellis & Bernard, 1983; Ellis, Moseley, & Wolfe, 1966; Hauck, 1967) and designed for a non-clinical parent population constituted the focus of this study. While many parent education programs (e.g., Dinkmeyer & McKay, 1982, 1983; Gordon, 1978; Forehand & McMahon, 1981) have as their primary goal teaching parents skills in order for them to solve child-oriented problems, RET's approach to parenting recognizes the importance of helping parents reduce their emotional stress associated with parenting as well as teaching parents how to manage child problems and foster the personality development of children.

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There is no commercially-available or other published material which is recognized as constituting a comprehensive RET parent education curriculum. Different RET authors cover different aspects of parenting. The RET parent education program developed for this study was based on this author's analysis of existing RET literature on parenting which falls into four areas. The nine session RET parent education program developed for this study covered: a) identifying and disputing parental irrational beliefs which lead to *emotional stress* (e.g., excessive anger, guilt, anxiety, and self-downing) (e.g., Barrish & Barrish, 1985; Bernard & Joyce, 1984); b) reinforcement of rational beliefs (e.g., non-blaming) concerning *discipline* methods (kindness and firmness) leading to emotional self-management as well as non-punishing, methods for dealing with child misbehavior (e.g., Hauck, 1967); c) *rational problem-solving* methods for helping parents deal rationally with child problems and for helping children think more rationally about their problems using the ABC model (e.g., Joyce, 1990); d) teaching children *rational personality traits* which Ellis hypothesizes to lead to emotional health and happiness including high frustration tolerance, self-acceptance, other-acceptance, non-exaggeration and non-demandingness (e.g., Bernard, 1994).

Studies applying RET as an educational intervention are known as rational emotive education (REE) and have been reviewed in detail by Hajzler and Bernard (1991). The rational parenting program evaluated in this study draws on the psychoeducational REE methods which have been developed to teach the basics of RET in an educational rather than therapeutic context (e.g., Bernard & Joyce, 1984). As well, some of the teaching methods used in the few studies which have employed RET and REE with parents were incorporated in this study (e.g., Hultgren, 1977; Bruner, 1979; El Din, 1982; Berger, 1983).

Of particular relevance to the present study is Berger's 1983 work which focused on functional relationships between irrational cognitions and the parental emotions of anger and guilt. As a consequence of a RET-based parent education program, Berger found predicted changes in the specific cognitions targeted but no concommitant change in emotional outcome measures. In addition to the short duration of treatment (three weeks), it may be that Berger's program which focused exclusively on the disputing of "self-directed shoulds" and "other-directed shoulds" was too narrow in focus failing to address other important irrational cognitions.

The current study also draws on related research which provides for the role of irrational beliefs in emotional distress. For example, Ber-

nard's 1988 study with teachers found that teacher irrationality was a better predictor of teacher stress than level of coping skills. Other important empirical studies underlying the present one examined the role of RET in treating distress such as Jorm's 1988 meta-analysis which compared the outcome studies of various treatments including RET, Conoley, Conoley, McConnell and Kimsey (1983) and Nomellini and Katz (1983) who employed cognitive interventions to change anger, and Woods (1987) who demonstrated that changes in irrational beliefs were related to changes in emotional distress in the staff of a large corporation.

This study attempts to answer five key questions. Does a rational parent education based on RET reduce levels of parent irrationality? Does rational parent education reduce levels of parent negative emotions? Are changes in parent irrationality correlated with changes in emotionality? What are some emotional correlates of parent irrationality? What is the factor structure of parent irrationality?

Additional questions explored by this study were as follows. Does rational parent education reduce levels of child problems and increase levels of spouse satisfaction? Will a rational parenting program be more effective with parents who enter the program with high levels of emotionality and irrationality? Is the effectiveness of a rational parenting program influenced by leader characteristics? Are changes brought about by rational parent education maintained at a ten-month follow-up?

METHOD

Sample

The sample comprised 48 volunteer parents with elementary school-aged children (or child) in a Melbourne, Australia, private school. This non-clinical sample was made up of 73% mothers, 27% fathers, 25% being both parents from one family. The sample included one widow and no single or divorced parents. It was heterogeneous with respect to educational level—17% of parents had school to Year 10, 10% had Year 10 plus job training, 17% had school to Year 11 or 12, 27% had post-secondary training or diploma, and 29% had a university degree. They volunteered in response to a letter from the school principal inviting them to participate in a parent education program to be conducted by the school's two counsellors. It was described as being "de-

signed to help parents learn new ways to deal with stress in everyday parenting and to help solve childhood problems."

Design

The design was a pre-test post-test control group design (Campbell & Stanley, 1963) in which one third of the subjects were randomly assigned to a waiting list control group. The control group completed two testings parallel in time to the experimental groups' pre- and post-testing, thus providing comparison data to evaluate intervention effects.

Parents were randomly assigned to four experimental and two control groups. First, in order to cater for parents who had enrolled in the expectation of attending together, couples were randomly assigned, then individual parents. The two group leaders were then randomly assigned to the experimental groups. Of the two leaders, one was male and the other was female. Both leaders were experienced practitioners of RET with school-aged children and their parents, Leader One having nine years experience in the field and Leader Two having six years. Both are authors of RET literature and teach RET to other professionals. All participants completed pre-test questionnaires, with control group members being asked to wait twelve weeks to do the program. Experimental parents then attended once a week for a one and a half hour session over nine consecutive weeks, and completed the questionnaires again at post-test, along with the control parents, who thus provided waiting list control group data. Ten months later, experimental parents completed the measures again by mail to provide some limited information on maintenance of effects. An informal evaluation was also carried out by means of a "consumer evaluation" questionnaire at the end of the last parent education session.

Dependent Measures

1. Parent Irrational Beliefs. The irrational beliefs of parents were measured using a 24-item revisision of Berger's 1993 Belief Scale (see Results section for new factor analysis and reliability of this scale).

2. Parent Emotionality. A number of different scales were employed to try to maximize the coverage of this domain of parental functioning.

a. Parent *anger* and *guilt* were measured using Berger's (1983) Feeling Scale. Alpha coefficients reported by Berger were .88 for anger and .91 for guilt. Test-re-test correlations were .69 for anger and .96 for guilt.

b. Spielberger's State-Trait Anxiety Scale (STAI, Form Y, Spielberger, 1983) provided measures of *state anxiety* (non-reversed items), *trait anxiety* and *well-being* (reversed state items, see Naylor, 1978). Test re-test reliability for trait anxiety is reported by Spielberger as ranging from .73 to .86.

c. Parent *self-downing* was measured using the Parent Performance subscale (coefficient alpha of .83) of the Cleminshaw-Guidubaldi Parent Satisfaction Scale (Guidubaldi & Cleminshaw, 1985) with three items from the Parenting Stress Index (Abidin, 1983).

d. Parent subjective *discomfort* with child problems was assessed using the Problem Score sub-test of the Eyberg Child Behavior Inventory (ECBI) (Eyberg & Ross, 1987) (for information on this inventory, see below).

3. Child Behavior and Emotional Problems. The extent of *child behavior problems* as perceived by the parent was assessed by the 36-item ECBI. Test-retest data shows high levels of stability for the ECBI (.86) and high internal consistency (.98). Parent perception of *child anxiety* was measured by the critical items of the anxiety subscale of the Personality Inventory for Children (PIC) (Wirt, Lachar, Klinedinst & Seat, 1981) (alpha coeffient of .74; test-retest coefficient of .85).

4. Spouse Satisfaction. The Family Discipline and Control subscale of the Cleminshaw-Guidubaldi Parent Satisfaction Scale was included to provide a measure of the extent of *spouse satisfaction* with their partner's performance as a parent and served as a dependent measure that was separate from parental self-reports.

Procedure

All subjects completed pre-test questionnaires with the experimental groups participating in the parent education program after completion. The control parents waited twelve weeks. At the end of the intervention, all subjects again completed the questionnaires. As dictated by ethical standards, the parenting program was then made available to control group parents.

Independent Treatment

The Rational Parenting Program was developed by the author. It consisted of nine sessions that had four general goals: a) to help

parents learn new ways of thinking and rational beliefs for dealing with the emotional stresses of everyday parenting; b) to provide parents with rational management beliefs and strategies for disciplining children; c) to teach rational-emotive methods for emotionally managing child problems and rational methods for solving child problems, and d) to expose parents to a range of rational beliefs to teach children and methods of instruction.

A large component of the program involved bringing about changes in parent irrational beliefs via the following steps: a) increasing self-awareness of irrational self-statements, b) examination and evaluation of irrational beliefs underlying self-statements, c) disputing of irrational beliefs, d) substitution of more rational beliefs, e) practice in using rational self-statements, and f) reinforcement (by leader, group, self) for rational thinking.

Materials for all sessions include leaders' notes, which provided behavioral objectives and rational-emotive goals, and a session plan for each session, "main ideas" sheets which were given to parents, session by session. The nine topics of the sessions were as follows:

Session 1. Parents Have Feelings Too.
Session 2. Emotional Stress in Bringing Up Children
Session 3. Rational Discipline
Session 4. Rational Self-Acceptance for You and Your Child
Session 5. Rational Coping in a Crisis
Session 6. Rational Parenting: Understanding Children's Emotions
Session 7. Children's Problems: Rational Problem Solving (I)
Session 8. Children's Problems: Rational Problem Solving (II)
Session 9. Teaching Rational Attitudes to Children

The content of the nine-session rational parenting program was submitted to a recognized expert in RET, REE and its applications to parents. The material was subjectively rated as being highly reflective of RET theory and practice and very suitable for use as a RET-based parenting curriculum.

RESULTS

Validation of the Belief Scale

As only limited information on the validity of the Belief Scale (Berger, 1983) was available, this scale was assessed further in the course of this research by means of a factor analysis on a relevant sample of

parents. The scale was administered to a sample of 388 parents, separate from the sample which participated in the main study but drawn from the same population. The resulting data were subjected to principal axis factoring and oblimin rotation. The factor analysis yielded three factors: a Low Frustration Tolerance factor, a Demandingness factor and a Self Worth factor. Selection of items which loaded .30 or above on each of these factors resulted in a revised scale of 24 items in place of the original 60 item scale. The three factors provided new subscales in place of the six subscales of the original scale. Coefficient Alpha for the revised scale was 0.75 for the total scale. Analyses of irrationality reported below are based on this revised scale.

Correlates of Parent Irrationality

Using pre-intervention measures, Pearson correlation coefficients were computed for the Belief Scale (total scores and subscale scores) with each dependent measure. Table 1 shows the correlation coefficients and their probability estimates. (*Note*: the direction of scoring on the Belief Scale, with low scores representing *more* irrational thinking and high scores representing *less* irrational thinking, leads to negative coefficients. The same is true of the Wellbeing scale, which is the reversed items of the State Anxiety scale (see Naylor, 1978).

The correlations of total parent irrationality scores with the emotional measures show strong relationships across the emotional domain. As predicted by RET, the more irrational beliefs the parents endorse in relation to parenting, the more they report stressful negative emotions and also report lower levels of wellbeing. Of the subscales, low frustration tolerance (LFT) shows the strongest relationship with emotional measures, with significant correlations across the emotional domain. Parents believing that their situations are impossible and unbearable, rather than difficult but tolerable, report more feelings of anger, guilt, anxiety, discomfort and self-downing and less wellbeing. Results on the Demandingness subscale show that endorsement of beliefs expressing demandingness towards the child concerning his/her behavior is associated with higher anxiety (Trait and State) in the parent and a lower level of wellbeing. Findings on the Self Worth subscale show that less positive acceptance of oneself as a parent is associated with more reported negative emotions and lower wellbeing.

Pearson correlation coefficients were calculated for the Belief scale with the child measures. While overall irrationality is not significantly related, LFT in parents is correlated with perceived child anxiety ($-.34$, $p<.01$) and approaches significance for behavior problems

Table 1

Pearson Correlation Coefficients for the Belief Scale with Parental Emotional Measures

	Parent Emotion						
Irrationality	*Trait Anxiety*	*State Anxiety*	*Well Being*	*Anger*	*Guilt*	*Self-Downing*	*Discomfort*
Total	−.60	−.33	−.51	−.41	−.39	−.51	−.35
Scale	p<.001	p<.01	p<.01	p<.01	p<.01	p<.001	p<.01
L.F.T.	−.57	−.36	−.39	−.45	−.48	−.49	−.40
	p<.001	p<.01	p<.01	p<.001	p=.001	p<.001	p<.01
Demand	−.33	−.29	−.36	−.07	−.04	−.13	+.00
-ingness	p<.05	p<.05	p<.01	N.S.	N.S.	N.S.	N.S.
Self	−.34	−.02	−.28	−.35	−.41	−.46	−.36
Worth	p<.01	N.S.	p<.05	p<.01	p<.01	p<.001	p<.01

(−.24, p<.056). The measure of spouse dissatisfaction also shows a significant relationship with irrationality and with LFT and Self Worth. It appears from these findings that a parent's degree of irrationality has implications beyond the immediate intra-personal experience of distress, extending into both child and spouse relationships.

Leader Effects

No significant effects were found for the leader variable. An analysis of covariance on post-intervention irrationality yielded a F value of 0.14. No effect of the leader variable on post-intervention scores was found in multivariate analyses of covariance for subscales of irrationality (F = 1.03), for the seven emotional measures (F = 1.29) and for the two child measures (F = 0.24). Nor was an analysis of covariance on post-intervention spouse dissatisfaction significant for the leader variable.

As no effects were found for "leader" in any analysis, the data from all experimental groups were combined for comparison with control group data in the tests for intervention effects which follow.

Intervention Effects—Irrationality

Overall changes in irrationality in the experimental and control groups were evaluated by a one-way analysis of covariance on post-

intervention Belief Scale scores, using pre-intervention scores as covariates. The F value of 21.02 for the main effect of group is statistically significant ($p < .001$), indicating a strong intervention effect for irrationality, with experimental parents endorsing significantly fewer irrational beliefs about parenting than the control parents. A multivariate analysis of covariance to test for intervention effects on the subscales yielded a multivariate F value of 5.94 (Pillais Test, $p < .01$) with each of the univariate tests significant, indicating that the overall changes reflect across the board changes in all dimensions of irrationality. The strongest effect was for LFT (F value of 15.86, $p < .01$), followed by Demandingness (F value of 13.63, $p < .01$) and Self Worth (F value of 8.07, $p < .01$).

Intervention Effects—Emotional Variables

A multivariate analysis of covariance was carried out on post-intervention scores of experimental and control groups on emotional variables, using pre-intervention scores as covariates. An overall F value of 2.91 on the Pillais test was significant ($p < .02$), indicating greater change in emotionality in experimental parents than control parents following the intervention, but examination of the univariate F values shows that guilt was the only single emotional variable to show significant effects in group comparisons ($F = 6.96$, $p < .01$). The results of multiple regression analyses below throw further light on intervention effects by examining interaction effects.

Intervention Effects—Child and Spouse Variables

No significant differences were found between experimental and control groups on post-intervention child domain measures. The program did not bring about changes in parents' reports of the level of child anxiety or problem behavior in their children.

No significant effects were found for the intervention on the spouse variable. Dissatisfaction of participating parents' spouses did not decrease following the intervention.

Interaction Effects

In a series of multiple regressions using entering level of irrationality, the intervention (with dummy coding for this categorical variable), and the interaction term as independent variables, and each

emotional measure as a separate dependent measure, no significant interactions were revealed. That is, emotional changes did not vary with entering level of irrationality.

A second parallel series of multiple regressions were carried out to test for interaction effects between the intervention and entering levels of each emotion. As the results (see Table 2) showed two significant interaction effects—for anger and state anxiety, further analysis was done to establish the direction and range of the interaction. For state anxiety, an adjusted R squared value of 0.45 was obtained for the full equation which is as follows:

$$Y = -3.89 + 1.36X + 10.79 - 0.90X$$

Thus 45% of the variance in post-intervention state anxiety can be accounted for by a linear combination of pre-state anxiety, the intervention and the interaction term. Applying the method detailed by Kerlinger and Pedhazur (1973, p.251ff.), separate regression equations were calculated for experimental and control groups. The regression equation for the experimental group is:

$$Y = 6.89 + 0.45X$$

and for the control group it is:

$$Y = -3.89 + 1.36X$$

The values for the point of intersection are $X = 11.81$, $Y = 12.21$. Following Kerlinger and Pedhazur (1973, p.257ff.), the Johnson-Neyman technique was applied to establish the region of significance. The upper region of significance was found to be all values of X above 14.97. (The interaction is disordinal and the lower region of significance is out of range of research interest). From this analysis it can be concluded that for experimental parents whose pre-intervention level of state anxiety was 14.97 or higher, the intervention was effective in reducing state anxiety, whereas for lower levels of pre-intervention state anxiety, the treatment had no significant effect on state anxiety.

Post-intervention anger showed similar results (see Table 2). The multiple regression indicated an adjusted R squared of .54 for the full model. Fifty-four percent of the variance of post-intervention anger is accounted for by pre-intervention anger, the intervention, and their interaction. The full regression equation for post-intervention anger is:

Table 2

Multiple Regression Statistics: Testing for Interactions Between Treatment and Pre-Intervention Emotionality on Post-Intervention Emotional Scale Scores

	Multiple R.	*Adjusted R. Squared*	*F*	*Significance of F. Change*
POST-I DISCOMFORT:				
Step				
1. Pre-I Discomfort	.63	.38	28.97	.001
2. Treatment	.64	.38	.96	.33
3. Interaction	.66	.40	2.04	.16
POST-I GUILT:				
Step				
1. Pre-I Guilt	.54	.28	17.71	.001
2. Treatment	.63	.37	7.13	.01*
3. Interaction	.64	.37	.76	.38
POST-I ANGER:				
Step				
1. Pre-I Anger	.68	.45	35.68	.001
2. Treatment	.72	.50	5.69	.02*
3. Interaction	.76	.54	4.39	.04**
POST-I SELF-DOWNING:				
Step				
1. Pre-I Self-Downing	.68	.46	38.82	.001
2. Treatment	.70	.46	1.52	.22
3. Interaction	.70	.46	.77	.38
POST-I WELLBEING:				
1. Pre-I Wellbeing:	.54	.28	18.16	.001
2. Treatment	.57	.29	1.94	.17
3. Interaction	.59	.30	1.29	.26
POST-I TRAIT ANXIETY:				
1. Pre-I Trait Anxiety	.64	.39	30.24	.001
2. Treatment	.64	.38	.21	.65
3. Interaction	.64	.37	.19	.67
POST-I STATE ANXIETY:				
1. Pre-I State Anxiety	.60	.34	24.15	.001
2. Treatment	.62	.36	2.35	.13
3. Interaction	.70	.45	8.49	.006**

**Significant Interactions
*Significant Treatment Effect

$$Y = -9.15 + 1.27X + 22.97X - 0.78X$$

As for state anxiety, separate equations were derived for experimental and control groups. For the experimental group,

$$Y = 13.82 + 0.49X$$

For the control group,

$$Y = -9.15 + 1.27X$$

The values for the point of intersection are $X = 29.28$, and $Y = 28.17$, resulting in regression lines which intersect in a disordinal interaction. Applying the Johnson-Neyman technique, it is found that the upper region of significance is all values of pre-intervention anger of 33.67 and higher. The lower region of significance is out of range of research interest. These findings mean that higher entering levels of anger are associated with greater decrease in post-intervention anger following the intervention than for those with levels below 33.67. That this is not a "regression to the mean" artifact of repeated measurement is shown by the contrast between experimental and control group results.

It is also worth noting that a significant treatment effect for anger is evident in this analysis ($p = .02$). The previous multivariate analysis, testing the overall intervention effect, used *all* pre-test emotional scores as covariates. In this part of the analysis, testing for interaction effects, pre-test anger has been used as a covariate and a treatment effect demonstrated.

Further Testing of Differential Effectiveness—Gender, Education Level, Spouse Participation

Three multivariate analyses of variance were carried out to evaluate the differential effectiveness of gender, educational level and whether or not one's spouse participated in the program on dependent emotional measures. Interaction effects were examined for each and none was found to be significant.

Correlates of Changes in Irrationality

To examine the degree of concomitant change in irrationality and emotionality, Pearson correlation coefficients were calculated for pre-

post difference scores in Belief scale scores with pre-post difference scores in emotional scores, for *experimental* subjects. Differences between pre-intervention irrationality and post-intervention irrationality were significantly correlated with corresponding pre-post changes in guilt ($-.44$, $p<.01$), self-downing ($-.39$, $p<0.1$), and trait anxiety ($-.30$, $p<.05$). Of the Belief Scale subscales, changes in LFT were correlated with changes in self-downing ($-.32$), $p<.05$); changes in Self Worth were correlated with changes in guilt ($-.53$, $p<.01$), self-downing ($-.39$, $p<.01$) and trait anxiety ($-.35$, $p<.05$), and also discomfort ($-.29$, $p<.05$). The Demandingness subscale does not correlate significantly with any changes, which raised questions about the usefulness and validity of this subscale.

Follow-Up Analysis

Limited follow-up data was collected as ethical reasons (i.e. the requirement of providing the program for the waiting list control group parents) prevented a control group being available at this stage. A high correlation ($+.81$, $p < .001$) was found between pre-post irrationality difference scores and pre-follow-up irrationality difference scores for experimental group parents. This is an indication that the decreases in irrationality demonstrated in experimental parents (but not controls) in the evaluation of main intervention effects, were largely maintained at the follow-up testing. Means for pre-, post- and follow-up (presented in Table 3) reveal consistency across subscales as well as for the overall scores. In the domain of child measures, one follow-up correlation is of interest: experimental parents whose Self Worth score changed from pre- to follow-up also showed changes in child behavior problems ($-.39$, $p<.01$). That is, over the ten month follow-up period, parents with improved sense of self worth also reported reduction in child behavior problems as measured by the ECBI.

DISCUSSION

The revision of Berger's Belief Scale left three pertinent subscales which enabled more accurate monitoring of parent irrationality. The three factors that emerged from the factor analysis were consonant with Ellis' (1994) general theory of irrationality.

Results in the study have demonstrated strong, widespread relationships between beliefs parents endorse about their parenting and their children, and how parents customarily feel in parenting situations (an-

Table 3

Means and Standard Deviations for Experimental Group Subjects' Scores on Overall Irrationality and Subscale Scores at Pre-Intervention, Post-Intervention and Follow-Up (N = 37)

	PRE-I		*POST-I*		*FOLLOW-UP*	
	Mean	*S.D.*	*Mean*	*S.D.*	*Mean*	*S.D.*
Overall Irrationality	48.08	5.77	58.03	7.65	58.03	7.33
Low Frustration Level	16.17	2.68	19.11	2.18	18.88	1.98
Demandingness	18.89	3.25	22.43	4.41	22.75	3.92
Self Worth	13.03	2.75	16.49	2.95	16.41	3.36

ger, guilt, discomfort and self-downing measures) and in general (anxiety measures). These results support the findings of Roehling and Robin (1986) who demonstrated a relationship between emotional distress and "unrealistic" parent beliefs.

Central to this study, however, is the confirmation provided for the basic RET assumption of a cognitive-emotional connection. These findings add to the empirical basis of the rationale for devising and implementing an intervention such as the one under study.

While both the total Belief Scale scores and all subscale scores correlated strongly with all emotional measures, the LFT subscale produced the highest correlation with negative emotions. When parents evaluate difficult parenting situations with cognitions such as "I can't stand it" and "it's awful and terrible," it appears they are more likely to experience higher levels of anxiety, anger, guilt, self-downing and discomfort than parents who have a higher level of frustration tolerance. This supports the RET view of high frustration tolerance as of central importance in a parent's adaptive psychological functioning. The correlations between parent irrationality and the child measures further showed the significance of frustration tolerance in the parent. No other irrationality subscale correlated with the child measures.

Two implications emerge from this research: it underlines the importance of teaching parents to increase their levels of frustration toler-

ance for their own emotional welfare, and it also importantly helps to focus on one of the most significant rational thinking traits for parents to foster in their children. These findings support the emphasis placed on teaching frustration tolerance in the Rational Parenting Program.

Results for the spouse measure indicate that a spouse is more likely to express dissatisfaction with the parenting of the other, when high levels of irrationality are evident in the one being rated. This suggests further that parent irrationality may be a significant factor in the inter-personal domain, above and beyond its significance for the individual parent.

The findings of the study in relation to leader effects have implications both for this study and for wider research. In the present study, intervention effects cannot be explained by the effect of a particular leader. Of wider relevance, these findings demonstrate that with the precautions exercised here (ensuring appropriate knowledge and experience of each leader, joint piloting of the program and using a detailed manual), a RET parent education program can be led by different people without the effects of the RET treatment depending on the particular leader. The robustness of the finding of "no leader differences" is evident from its generality, across all dependent measures, and its persistence in the presence of intervention effects. No conclusions can be drawn regarding the effectiveness of the Rational Parenting Program with an inexperienced leader.

The Rational Parenting Program was found to bring about significant changes in irrationality in the experimental group, while no significant changes occurred in the control group. The size of decrease shown by experimental group parents represented one and a half standard deviations, a sizeable change, arguably significant not just in the statistical sense but enough to make a difference in the cognitive functioning of the parents. The results showed that the experimental groups as a whole decreased significantly, showing that even parents with moderate levels of irrationality can benefit from such a program. This finding of cognitive change as a result of rational parent education supports the findings of Bruner (1979) and Berger (1983), but is not consistent with the findings of Hultgren (1977) who found no post-intervention change in irrationality.

One important aspect of these findings is that they provide a check on the independent variable. Sutton-Simon (1981) has strongly criticised studies that rely on cognitive interventions to bring about change in other areas but do not measure the presumed cognitive mediator to demonstrate change in cognition.

The question might be raised as to whether changes in Belief Scale scores represent true change in cognition or simply a new learned verbal response. Sutton-Simon (1981) has raised this issue: "No researcher has as yet tackled the difficult issue of the separability of the assessment of a rational system from a cognitive and philosophical change in the direction of rationality" (p.77). Is it possible that parents simply learned what to say on the items? It can be argued that this was not the case on four grounds: 1) Some of the emotional effects hypothesised by RET to be dependent on true cognitive change were found; 2) The language of the items and the language of the sessions were not the same, having different authors; 3) Parents reported subjective discomfort about completing the Belief Scale, a reflection of the unusual nature of the task of having to retrieve the logical working assumptions about their parent-child world that normally may not be readily available to introspection. The cognitive purity of the scale, which was uncontaminated by affective content, accentuated this for the parents but made it a task that required direct and uncomfortable reflection and, therefore, unlikely that some "automatic" learned verbal response would be given; 4) Finally, parents who have learned to be less irrational could be expected to engage in less "approval-seeking" behavior and not feel pressured to respond the "right" way. Further corroborative evidence of "true change" could be obtained in later research by monitoring and analysing parents' worksheets, such as ABCD sheets, as this would provide evidence that they had internalized the RET ideas, formulating disputes in their own words and making them part of their own belief systems.

The major findings of the study concern changes in emotionality as a result of rational parent education, which were found for guilt, anger and state anxiety. Significant reduction in parent guilt (when pre-test scores on *all* emotional variables were used as covariates) was found for the experimental group and not the control group.

The psychological significance of reducing guilt can be seen in the emphasis RET theorists have placed on the destructiveness of guilt on personal adjustment and on parent-child interaction. Hauck (1983) has described blaming oneself as "feeling guilty because you are guilty over some misdeed" and as "one of the most unhealthy acts you can perform" (p.18). Knaus (1986) refers to guilt as "a vindictive perfectionism" (p.61). Feelings of guilt which involve an attack against oneself, can lead to emotional disturbance and can prevent parents from acting as sensibly and productively as they could without the guilt.

Hauck (1983) argues that depressed feelings in parents—self blame and guilt being fuels for depression—can lead to depressive symptoms in their children, and further sees the remediation of the parent problem as leading to alleviation of the child's symptoms. Further, in relation to child discipline, parent guilt is an "emotional consequence parents want to avoid at all costs" (Hauck, 1983, p.359) because it, along with pity for others, can be a major obstacle in implementing a program of effective discipline which will lead over time to the development of self discipline in the child.

Consistent with the findings of McKnight et al. (1984) the study found treatment by interaction effects: parents' entering levels of anger and state anxiety were found to interact with the intervention. Those in the experimental group with high entering levels of these emotions showed decreases in post-intervention levels of anger and state anxiety respectively. Those experimental parents who, at pre-test scored 33.67 or higher showed more significant changes in post intervention anger than those at lower levels. No such changes occurred in the control group. It is noted that this was not a small proportion of subjects as a score of 33.67 falls below the pre-test mean for the experimental group (34.89). Nineteen experimental group subjects scored above this cut-off level and of those, seventeen showed changes in anger ranging from 3 to 21 points. Ten of the seventeen showed changes greater than three quarters of a standard deviation, suggesting a meaningful change in anger. The changes found in anger levels support the findings of Nomellini and Katz (1983) and Conoley et al. (1983) using cognitive interventions, but contrast with Berger's (1983) study in which no changes in anger were found. Berger's parents were a clinical sample, small in size, and interaction effects were not examined. His research studied functional relations between specific irrational cognitions and levels of anger. It appears that a more comprehensive RET intervention is necessary to reduce levels of parent anger.

Ellis, Moseley, and Wolfe (1966), Hauck (1967) and Barrish and Barrish (1985) have all emphasised the maladaptiveness of anger in parent-child interactions, for both the parent and the child. As with other emotional states stemming from irrational ideas, anger is seen from the rational standpoint as both harmful to the angry parent and also as providing a poor model for the child. Hauck argues that anger "does not reduce the neurotic behavior around us. Instead it creates more of it." Even when short term gains follow angry outbursts, Hauck reasons that "the price of waging the war and bearing the burden of anger

is too high" (1967, p.101). Rational-emotive education teaches parents to be more rational and more "in charge" of themselves, i.e. more emotionally responsible. The reduction of anger as demonstrated in this research is one of the consequences of this process.

Additional exploratory analysis of concomitant changes in beliefs and emotions in the experimental subjects revealed that changes in guilt, self-downing and trait anxiety were correlated with overall changes in irrationality. Changes in beliefs about self worth were the strongest component in these effects and were also correlated with changes in discomfort. Changes in LFT were also associated with changes in self-downing.

Follow-Up

The follow-up analysis, while limited by lack of a control group and by the use of change scores, provided some interesting results which offer leads for further research. Changes in irrationality were maintained in experimental group subjects over the ten month follow-up period, with frustration tolerance and demandingness the strongest, but self worth also highly significant. Changes in emotionality were also significantly maintained across all measures, including those emotions which showed group intervention or interaction effects.

Of particular interest in the follow-up results was the finding that reduction of perceived child behavior problems in the long term is associated with long term changes in parents' beliefs about their own self worth. It appears that parents who, over a ten month period, lessen their global self rating, experience fewer child behavior problems. Further research to assess whether this result can be replicated and to explore this relationship in more detail is desirable.

CONCLUSION

The findings of this study are supportive of a rational-emotive education approach to reducing the everyday stresses of parents. Counsellors engaged with parent populations may consider a cognitive intervention such as the Rational Parenting Program to be effective in changing parent irrationality and associated emotionality. While the primary interest of the study has been the mental health of parents, there are indications that parent irrationality has significance also for the spouse and the children.

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