

## The Effectiveness of Psychodramatic Techniques: A Meta-Analysis

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Questions concerning the scientific basis of the clinical application of psychodramatic techniques have been raised primarily because of the infrequency of research publications that validate the clinical observations. A meta-analysis conducted on the basis of 25 experimentally designed studies showed an overall effect size that points to a large size improvement effect similar to or better than that commonly reported for group psychotherapy in general. The techniques of role reversal and doubling emerged as the most effective interventions. Of the 4 techniques investigated, 3 were significantly different from each other. There was no difference between the techniques' effectiveness when used with clinical versus student populations or between their use in single versus multiple sessions. The meaning of the findings is discussed.

As a therapeutic modality invented more than seven decades ago, psychodrama made a significant impact on the development of group psychotherapy. Its influence was particularly great in the early years of the 20th century. Then, together with the psychoanalytic–dynamic orientation, it dominated the field of group psychotherapy (Fuhrman & Burlingame, 1994). In the ensuing years, its influence in the field of group psychotherapy in the United States diminished. Yet along with the observed decline in North America, its popularity soared elsewhere, such as in Europe, South America, and the Far East. The attraction of psychodrama has been attributed in part to its powerful impact as seen in clinical practice. As to the observed decline in the popularity of psychodrama in North America, some have speculated that it is due to uncertainty concerning the research base of psychodramatic interventions and their scientific validity.

Critics have repeatedly raised the issue of the paucity of empirical research that supports claims for the effectiveness of psychodrama. For example, D'Amato and Dean (1988) wrote the following:

Since its introduction, there has been a clear dichotomy between believers and nonbelievers in PD's [psychodrama's] methods. . . . The conflict revolves around the basic assumptions of PD and the fact that the methods are not empirically based. Psychodrama as a therapeutic technique continues to be practiced internationally, and authors continue to publish case studies and theoretical discussions. But few empirical evaluations of the method have appeared since its introduction. (p. 305)

Indeed, practically all of the books on psychodrama published in the past 30 years have contained ample descriptions of anecdotal experiences, clinical experiences, and case illustrations. Summaries of empirical research, however, have been conspicuously missing (e.g., Blatner, 1996, 2000; Clayton, 1993; Farmer, 1995; Fox, 1987; Goldman & Morrison, 1984; Holmes, 1992; Holmes & Karp, 1991; Holmes, Karp, & Watson, 1994; Kellermann, 1992; Kellermann & Hudgins, 2000; Kipper, 1986; Leviton, 1977; Roine, 1997; Starr, 1977; Sternberg & Garcia, 1989; Williams, 1989; Yablonsky, 1976).

It is true that in general, empirical data on the effectiveness of psychodrama have been generated infrequently and have often been based on methodologically weak experimental designs. The explanation given for this trend has been that psychodramatists are clinical practitioners and hence are disinclined to be engaged in scientific research. J. L. Moreno, the founder of psychodrama, himself was not an avid advocate of the traditional scientific research. It has also been suggested that the absence of courses on psychodrama from academic curricula has been

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a factor contributing to the slow rate of empirical studies. This said, however, it would be inaccurate to conclude that there is absolutely no research concerning the effectiveness of psychodrama and its primary techniques (most notably, role reversal and doubling). Scant as they are, the available studies provide an initial picture about the potential usefulness of this intervention modality.

In the past 23 years, four reviews of psychodrama research have appeared in English (D'Amato & Dean, 1988; Kellermann, 1982; Kipper, 1978; Rawlinson, 2000). Using various qualitative criteria, these articles reviewed a number of selected studies that fitted their inclusion requirements. Two of these four reviews (Kellermann, 1987; Kipper, 1978) focused on experimentally controlled studies. The other two adopted a broader scope and included controlled studies; outcome studies using single-group designs (i.e., pre-post treatment improvement as well as case illustrations).

In general, all four reviews came to a similar conclusion, namely, that although the initial empirical research on the effectiveness of psychodrama revealed some encouraging results, the data were insufficient and often lacked methodological rigor. There were, however, different nuances to this conclusion, and the reviewers' comments reflected some disparity of views. For instance, D'Amato and Dean (1988) voiced the most critical opinion. Their basic view was that "studies have been built on untested assumptions, and many of the findings are questionable" (D'Amato & Dean, 1988, p. 311). Kellermann (1982), on the other hand, offered the most positive view. He thought that in principle, the evidence was supportive of psychodrama. He stated,

Although the above studies are so limited in scope that any generalization of their findings must be very tenuous, they do indicate that psychodrama is a valid alternative to other therapeutic approaches, primarily in promoting behavior change with adjustment, antisocial and related disorders. (Kellermann, 1982, p. 467)

Rawlinson's (2000) overall assessment was

that there is some research evidence to support the use of psychodrama. This includes its use as a tool for helping people to develop self-esteem, to change elements of their behavior and to develop empathy and social relationships. However, in the present climate, this may not amount to the level of evidence which would be required to present a strong case as a cost

effective treatment for the range of mental health problems currently dealt with in other ways. (p. 93)

Kipper (1978) concluded that although psychodrama research pointed to the existence of a sound basis for empirical validation of psychodrama, more and better research was needed.

Arguably, the above four reviews have two limitations. One concerns the method chosen for assessing the validity of psychodrama. All four resorted to a qualitative method of analysis that Glass (1976) called a secondary level of analysis. This type of analysis refers to reviews of data collected by someone else who may have had aims and theoretical positions that differ from those of the person conducting the analysis. A less subjective evaluation would be the third level of analysis, namely, *meta-analysis* (Glass, 1976). This is a procedure based on statistical integration of the outcomes of several independent studies. It quantifies the effectiveness of treatments by creating a formula that produces a common measuring standard known as *effect size* (Mullen, Driskell, & Salas, 1998; Mullen & Rosenthal, 1985). The effect size provides an index of the average change that can be expected from the average recipient of a particular treatment. To the best of our knowledge, psychodrama research has never been examined by means of meta-analysis. In the present study, therefore, we pursue the question of the scientific validity of psychodrama using this type of analysis.

The other limitation is that previous reviews have not differentiated between studies of the effectiveness of the entire psychodrama procedure (session) and studies concerned with the effectiveness of individual psychodramatic techniques. One may view the psychodramatic procedure as one unit that involves a complex psychotherapeutic intervention based on a particular sequence of a three-stage procedure, portraying several scenes, and the application of a number of techniques used multiple times with several group members as helpers or auxiliaries (Kellermann, 1987). Alternatively, one may view psychodrama as a compendium of techniques. The latter definition is more experimental-research friendly and is based on the notion that the application of such special techniques accounts for much of the curative aspect of psychodrama (Kipper, 1988b). In the present meta-analysis, we differentiate between studies

that followed these two views and investigate them both.

## Method

### *Definition*

Studies that were selected to be part of the present meta-analysis conformed to the definition of psychodrama as a method that uses dramatizations of personal experiences through role-playing and enactment under a variety of simulated conditions, which include at least one scene and one psychodramatic technique (Kipper, 1978).

On the basis of this definition, we identified four groups of studies that used psychodrama techniques. Three of these pertained to investigations of single psychodramatic techniques—namely, role reversal, role-playing, and doubling (as described below). One group referred to studies that used multiple techniques.

### *Literature Retrieval*

The studies selected for the present meta-analysis were located by computer (e.g., through PsycLIT and Social Sciences Index) as well as by examining published and unpublished psychodrama bibliographies (e.g., Sacks, Bilaniuk, & Gendron, 1995). The search focused on studies published during the period 1965–1999. Over 50 articles were included in the original retrieval, but half were discarded either because they pertained to sociometry research, a topic that was beyond the scope of the present study, or because they did not comply with the inclusion criteria. Finally, 25 studies were admitted to the meta-analysis.

### *Selection Procedure*

To be included, studies had to comply with the following requirements. They needed to be written in English and published in a professional, refereed journal. They had to be designed as controlled studies—that is, composed of at least one experimental and one control group—and they had to contain sufficient statistical information to allow the calculation of effect sizes.

Two independent raters selected the 25 studies out of the initially retrieved pool (a high

interrater agreement of 92%). The disagreement regarding the discarded studies was attributed to confusion as to whether articles featuring a combination of sociometry and action interventions should be included. In the end, the raters decided to exclude studies that essentially investigated hypotheses related to sociometry. Similarly, there was a high degree of agreement between the two raters (88%) regarding the sorting of the selected studies into the four techniques (as discussed below). The disagreement was attributed to confusion with regard to the difference in the definitions of role reversal and role-playing (enactment). Once the definitions were clarified, full agreement between the raters was reached.

### *Techniques*

Table 1 describes the selected 25 studies as sorted into the following four techniques.

*Role reversal.* This technique refers to enactment that involves changing the initially given role with that of another person who may be present from the session or absent but represented by an auxiliary (a helper). Typically, the protagonist begins the enactment by portraying himself or herself with an auxiliary who portrays the role of someone else. At some point the two reverse roles. The reversals need to last quite a few minutes (3–10) and may be repeated during the enactment. This group included 10 studies (D. W. Johnson, 1967, 1970, 1971; D. W. Johnson & Dustin, 1970; Kipper & Har-Even, 1984; Kipper, Har-Even, Rotenberg, & Dagan, 1982; Kipper & Ushpiz, 1987; Munev & Deutsch, 1968; Remer & Betts, 1998; Staven, 1985).

*Role-playing (enactment).* This technique refers to the enactment of roles, whether spontaneously or scripted, without the accompaniment of role reversing, doubling, or any other psychodramatic technique. The actors remain in their own identity during the entire enactment without changing their identities. The duration of role-playing techniques may range from 5 to 15 min. This group included four studies (Barrett, 1986; Grandvold & Ollerenshaw, 1977; Kipper, 1988a; Schutte, Malouf, & O'Dare, 1990).

*Doubling.* The doubling technique refers to role enactment in which one person (the protagonist) portrays himself or herself and an auxiliary assumes the protagonist's persona, acting

Table 1  
*Characteristics of Studies Included in the Meta-Analysis*

Source	Subjects				Sessions		Measure of dependent variable
	Type	Gen.	Exp. group	Cont. group	Total	Per week	
Role reversal							
Johnson, 1967	S	M	20(×4)		1	1	Conflicts Solutions, a game/case self-report
Johnson, 1970	S	M/F	10(×3)	10	1	1	Attitude Questionnaire, a game/case
Johnson, 1971	S	M/F	17	17	1	1	Attitude Change Inventory
Johnson & Dustin, 1970	S	M/F	16(×8)		1	1	Attitude Questionnaire, a game/case
Kipper & Har-Even, 1984	S	M/F	12	13	1	1	Aggression Box, questionnaires
Kipper et al., 1982	S	F	18	18	1	1	Involvement Questionnaire (original)
Kipper & Ushpiz, 1987	S	M/F	9	9, 9	1	1	Two questionnaires (originals)
Muney & Deutsch, 1968	S	M/F	50	50	1	1	Conflicts Solutions, a game/case self-report
Remer & Betts, 1998	S	M/F	98 <sup>a</sup>	97 <sup>a</sup>	4	1	Two questionnaires on decision making and realism
Staven, 1985	HP	M/F	10	10, 10	1	1	Body-image test
Multiple							
Carbonell & Partelano-Barehmi, 1999	SP	F	6, 6	14	20	1	Youth Self-Report Form, qualitative analysis
Kipper & Giladi, 1978	S	M/F	14, 10	12	14	1	Suinn Test Anxiety
Martin & Stepath, 1993	HP	M/F	53 <sup>a</sup>		8	1	Group Behavior Assessment Scale, narrative qualitative analysis
Schramski et al., 1984	PR	M	66 <sup>a</sup>	16	8	1	Correctional Institutional Environment Scale, Hopkins Symptom Checklist Group Environment Scale
Slawson, 1965	HP	M/F	27	27	— <sup>b</sup>	2	Minnesota Multiphasic Personality Inventory
Stallone, 1993	PR	M	22 <sup>a</sup>	22	5	1	Institutional disciplinary report
Role-playing							
Barrett, 1986	SP	— <sup>c</sup>	19	16	12	1	Social-Emotional Assessment Inventory
Granvold & Ollerenshaw, 1977	S	M/F	10	8	1	1	Social Avoidance and Distress Scale, Fear of Negative Evaluation, State/Trait Anxiety Inventory
Kipper, 1988a	S	M/F	15	15	1	1	Behavior Evaluation Form
Schutte et al., 1990	S	M/F	45	57	1	1	Social Consequence of Smoking Scale, Smoking Intention/Behavior Scale
Doubling							
J. A. Goldstein, 1971	HP	M/F	6, 5	6	40	2	Taped text qualitative analysis
S. G. Goldstein, 1967	HP		6	6	15	2	Qualitative analysis of taped narratives and utterances
Hudgins & Kiesler, 1987	S	F	8	8	2	1	Barrett-Lennard Relationship Inventory, Impact Message Inventory

Table 1 (continued)

Source	Subjects			Sessions		Measure of dependent variable	
	Type	Gen.	Exp. group	Cont. group	Total		Per week
Doubling (continued)							
Kipper & Ben-Ely, 1979	S	M/F	16	16, 16	6	1	Accurate Empathy Scale Responding to videotape messages, Semantic Differential of Emotional Responses
Taylor, 1983	S	M/F	19	19	1	1	

Note. Gen. = gender; exp. = experimental; cont. = control; S = students; M = male; F = female; HP = hospitalized patients; PR = prisoners/correctional inmates; SP = special population.

<sup>a</sup> Divided into small groups. <sup>b</sup> Multiple unspecified. <sup>c</sup> Gender was not specified.

alongside as a double. Doubling is a role portrayed by a group member, an auxiliary, rather than by the protagonist. The duration of double techniques typically ranges from 3 to 15 min. There were five studies in this group (J. A. Goldstein, 1971; S. G. Goldstein, 1967; Hudgins & Kiesler, 1987; Kipper & Ben-Ely, 1979; Taylor, 1983).

*Multiple techniques.* This category refers to studies that compared the effect of at least one psychodrama session that involved the use of a number of psychodramatic techniques, including but not necessarily limited to the techniques mentioned above. Customarily, a classical psychodrama session (Moreno, 1964) lasts for 60–90 min and is divided into three parts, which include the application of several psychodrama techniques. There were six studies in this group (Carbonell & Parteleno-Barehmi, 1999; Kipper & Giladi, 1978; Martin & Stepath, 1993; Schramski, Feldman, Harvey, & Holiman, 1984; Slawson, 1965; Stallone, 1993).

Role reversal and doubling are the two basic techniques of psychodrama. It is not surprising, therefore, that they constitute 60% of the 25 studies that qualified for the meta-analysis. The reasons Table 1 shows twice as many studies of role reversal than any other category are likely that (a) role reversal is easy to study experimentally and (b) two investigators (i.e., Johnson and Kipper) were particularly interested in this technique and produced multiple studies.

Additional characteristics of the studies selected for the meta-analysis are shown in Table 1. The participants in the studies varied and were drawn from both clinical and nonclinical populations. Some studies used either males or

females, and some were composed of mixed-gender groups. All studies used experimental designs with controls. About half of the studies (44%) featured interventions conducted over multiple sessions. Of these, most involved one weekly session. Table 1 also describes the measures of the dependent variables used in the selected studies (see the far right column). These descriptions are included to provide a general sense of the kind of studies chosen, but they were not part of the quantitative analysis.

### Calculating the Effect Size

The effect size was the basic unit of the present calculations and concerned the relative effectiveness of four primary psychodramatic interventions (techniques). Calculating the effect size for each reported result of the independent variable was based on D-Stat Version 1.1.1 for DOS (B. T. Johnson, 1995), which produced both Hedges's  $g$  and Cohen's adjusted  $d$  coefficients. To obtain descriptive and inferential statistics about effect size (Cohen's adjusted  $d$ ), we entered data from the D-Stat into SPSS 10.1 for Windows 2001. Hedges's  $g$  coefficients tend to yield slightly higher effect sizes than the more conservative Cohen's  $d$  (Cohen, 1992). In the present meta-analysis, we report only the  $d$  results.

The standard formula used for the present meta-analysis for unequal group size was  $d = M_e - M_c / S$ , where  $M_e$  and  $M_c$  are the averages of the experimental and the control groups, respectively, and  $S$  is the pooled standard deviations (Mullen & Rosenthal, 1985). For studies with equal size experimental and

control groups, the equation used was  $d = 2 / \sqrt{N}$  (Hunter, Schmidt, & Jackson, 1982). Results reported in the form product-moment  $r$  were also considered. Although  $r$  is a valid effect size statistic, it must be transformed into  $d$  in order to maintain uniformity of effect size across the studies. The formula used to this end was  $d = \sqrt{4 r^2 / 1 - r^2}$  (Mullen & Rosenthal, 1985, p. 135). Another common statistic used in psychodrama research is  $t$ , which is also a valid effect size statistic; however, it must be converted into  $r$  and then into  $d$ . The effect size variance was computed to determine the degree of variations across studies. It ought to be pointed out that mean differences are stated in terms of standard deviations, so that an effect size of 0.50 indicates a difference of one half of a standard deviation. If all 25 studies had reported approximately the same effect size, then the variance would be estimated to equal zero. Therefore, any effect size that exceeds the 0–0.50 range is considered a very positive outcome.

In the present study we sought to obtain answers to several questions. First, considering all the studies together, do the results show a good improvement effect for psychodrama techniques? In other words, will the magnitude of the average effect size for all psychodramatic interventions ( $N_{ES} = 281$ ) exceed the 0.50 moderate level (Cohen, 1992) cutoff point, thereby showing moderate to large effect size? Second, are there significant differences among the four techniques? We were also interested in whether there was a statistically significant difference between (a) studies using student versus clinical populations, (b) studies using single- versus mixed-gender groups, and (c) studies using techniques administered in one session versus multiple sessions.

## Results

The 25 studies included in the meta-analysis generated 281 unique effects about their dependent measures, with a combined sample of the participants of  $n = 1,325$  ( $M = 53.00$ ,  $SD = 40.95$ ). The sample size averages reported here came from total reported samples.

### Overall Effectiveness

The main question concerned the overall effectiveness of psychodramatic techniques. Ta-

ble 2 lists the 25 studies reviewed, divided into the four technique groups along with the number of  $d$ s, their mean effect sizes, and their standard deviations.

Table 2 shows the average adjusted Cohen's  $d$  for each of the 25 studies. The total average adjusted  $d$  coefficient for all of the studies under investigation, 0.95 ( $SD = 0.69$ ), was significantly different from zero,  $t(280) = 23.20$ ,  $p < .01$ , at the 99% confidence interval (lower = 0.847, upper = 1.061). This suggests the presence of an overall moderate to large improvement effect size (i.e., greater than the commonly

Table 2  
*Outcomes by Source, Technique, Mean Effect Size, and Standard Deviation*

Source	$n_d$	Effect size	
		$M$	$SD$
Role reversal			
Johnson, 1967	10	0.82	0.31
Johnson, 1970	17	1.72	0.94
Johnson, 1971	9	0.83	0.32
Johnson & Dustin, 1970	11	0.73	0.14
Kipper & Har-Even, 1984	6	0.59	0.25
Kipper et al., 1982	16	0.90	0.39
Kipper & Ushpiz, 1987	7	1.30	0.92
Muney & Deutsch, 1968	13	0.68	0.99
Remer & Betts, 1998	8	0.32	0.30
Staven, 1985	3	0.49	0.23
Multiple			
Staven, 1985	8	0.66	0.33
Kipper & Giladi, 1978	6	0.62	0.46
Martin & Stepath, 1993	2	0.66	0.16
Schramski et al., 1984	23	0.02	0.00
Slawson, 1965	4	0.10	0.17
Stallone, 1993	3	0.67	0.10
Role-playing			
Barrett, 1986	2	0.02	0.28
Granvold & Ollerenshaw, 1977	9	-0.28	0.36
Kipper, 1988a	1	1.75	0.00
Schutte, Malouf, & O'Dare, 1990	5	0.71	0.33
Doubling			
J. A. Goldstein, 1971	63	1.35	0.48
S. G. Goldstein, 1967	33	1.26	0.45
Hudgins & Kiesler, 1987	9	1.49	0.79
Kipper & Ben-Ely, 1979	10	0.80	0.41
Taylor, 1983	3	1.32	0.45
Total	281		
Adjusted $d$		0.95	0.69

regarded moderate effect size level of 0.50) for all of the psychodramatic techniques under investigation.

*Effectiveness of the Specific Techniques*

The second question concerned the effectiveness of each of the four techniques. Table 3 shows the adjusted effect sizes for the four techniques, which represents the average of all of the effect sizes, to retaining the *n* of 281. The results show that the average adjusted effect sizes for each of the four techniques ranged from 1.29 for doubling to 0.16 for role-playing. The inflated mean (i.e., over  $ES_d$  of 1.00) for doubling suggests the influence of outliers (i.e., occasional very high standard deviations that tend to skew the outcomes). In such an event, the median is often a better descriptive statistic than the mean. Calculating the median (see Table 3) did not solve the problem for doubling, however, because the median effect size turned out to be more inflated ( $ES = 1.35$ ). Again, when we used the 0.50 level as a guide for assessing the importance of the mean effect sizes, role reversal and doubling showed means suggesting large improvement effect size. The results for the multiple techniques were somewhat below the cutoff point for moderate improvement, with a mean  $ES_d$  of 0.42 (*Mdn*  $ES_d = 0.35$ ). At best it suggests an improvement effect that falls within the small–moderate range. The results for the technique of role-playing showed hardly any improvement effect (0.16).

*Effectiveness of Techniques Relative to Each Other*

The second question concerned the differences among the four specific techniques. A

Table 3  
*Descriptive Statistics for Techniques Using All Average Reported Effect Sizes*

Techniques	<i>n<sub>d</sub></i>	Effect size		
		<i>M</i>	<i>Mdn</i>	<i>SD</i>
Role reversal	100	0.93	0.79	0.74
Multiple techniques	46	0.42	0.33	0.30
Role-playing	17	0.17	0.09	0.68
Doubling	118	1.29	1.36	0.51
Total	281	0.95	0.85	0.69

one-way analysis of variance of the estimated effect sizes revealed that the four categories differed significantly from each other, yielding a significant main effect,  $F(3, 277) = 35.47, p < .01$ . The relative effectiveness of each of these categories against the others was determined by the Bonferroni post hoc comparison analysis (see Table 4).

The results shown in Table 4 reveal significant mean differences between all of the techniques except for the  $ES_d$ s of multiple techniques and role-playing ( $M_{diff} = 0.25, p > .70$ ). Role reversal revealed significantly higher  $ES_d$ s than both multiple techniques and role-playing and a significantly lower  $ES_d$  than doubling. In addition, doubling differed significantly from multiple techniques and role-playing. The negative signs for some of the results shown in the mean difference column of Table 4 indicate that the average  $ES_d$  for Technique B was higher than that of Technique A. The meaning of these outcomes may suggest that each technique contributes to a psychological effect or effects that are different from those of other techniques, thus possessing a unique impact. The only exception to this conclusion is that the effects of role-playing and multiple techniques seemed undifferentiated.

*Gender*

The next question concerned the possible effects of gender composition of the participants in the studies (see Table 1). The average effect size for studies using single-gender groups was 0.72 ( $n = 69, SD = 0.53$ ). This was compared with the mean effect size for studies that used males and females together ( $M = 0.99, n = 177, SD = 0.75$ ). The result of a *t* test revealed a statistically significant difference between studies using only one gender at a time and those using mixed-gender groups;  $t(244) = -2.71, p = .01$ . Studies reporting effects from data on groups of mixed gender tended to report higher effect sizes.

*Clinical Versus Nonclinical Participants*

Of the 25 studies, 9 (36%) involved hospitalized patients, prisoners, and special populations with developmental and physical disability (see Table 1). The rest of the studies (64%) were conducted with college and university students.

Table 4  
*Bonferroni's Post Hoc Comparison of Adjusted d Means*

Technique A	Technique B	Mean difference (A minus B)	SE
Multiple techniques	Doubling**	-0.87	0.10
	Role-playing**	0.26	0.16
	Role reversal*	-0.51	0.10
Doubling	Role-playing**	1.13	0.15
	Role reversal*	0.35	0.08
Role-play	Role reversal**	-0.77	0.15

\*  $p = .0001$ . \*\*  $p < .00005$ .

To determine whether psychodramatic techniques were more effective with either of these two groups, we compared the results by means of a  $t$  test. There was no statistically significant difference,  $t(279) = -1.32$ ,  $p = .18$ , between the studies using students ( $n = 134$ ,  $M = 0.89$ ,  $SD = 0.77$ ) and those using clinical populations ( $n = 147$ ,  $M = 1.01$ ,  $SD = 0.60$ ).

#### *Number of Sessions*

Table 1 shows that some of the studies involved one session intervention (54%), and some ranged between 2 and 40 sessions. To determine whether there was a difference between one-session and multiple-session intervention, we conducted a  $t$ -test analysis. The results revealed that there was no statistically significant difference in the effectiveness of psychodramatic techniques applied in a single session ( $n = 110$ ,  $M = 0.88$ ,  $SD = 0.78$ ) compared with several sessions ( $n = 167$ ,  $M = 1.02$ ,  $SD = 0.61$ )  $t(275) = -1.58$ ,  $p = .12$ .

#### *Independence of the Predictors*

The present meta-analysis included three dichotomous independent variables: population (students vs. other populations), gender (single vs. mixed), and number of sessions (one vs. more than one). The results of  $2 \times 2$  chi-square (two-tailed Pearson's) analyses showed that there were no statistically significant associations between population and gender,  $\chi^2(1, N = 246) = 0.54$ ,  $p = .46$ , or between gender and number of sessions,  $\chi^2(1, N = 242) = 2.35$ ,  $p = .13$ . However, there was a statistically significant association between population and number of sessions,  $\chi^2(1, N = 277) = 174.68$ ,  $p <$

.00. Participants who were members of groups conducted in hospitals, prisons, and other special populations were more often exposed to multiple sessions, whereas students, mostly in university-based research, tended to be limited to a single session.

The results of three  $2 \times 4$  chi-square analyses conducted to investigate the association between the four treatment techniques (role-play, role reversal, doubling, and multiple techniques) and each of the above three predictors revealed the following: There were statistically significant relations between the type of techniques by (a) population group,  $\chi^2(3, N = 281) = 190.51$ ,  $p \leq .01$ ; (b) number of sessions,  $\chi^2(3, N = 277) = 226.68$ ,  $p \leq .01$ ; and (c) gender,  $\chi^2(3, N = 246) = 66.84$ ,  $p \leq .01$ . Some of the interesting outcomes of these results are, for instance, that studies with role reversal were conducted significantly more with students than with other populations and involved a single-session exposure. The doubling technique was conducted significantly more with nonstudent populations and in multiple sessions. Multiple techniques were used significantly more with single- than with mixed-gender groups

Finally, a question might be raised concerning the likelihood that our selection of studies might have been biased. Using the calculations proposed by Rosenthal (1995, pp. 189–190; 1991, p. 104), we found that it would take some 1,057 statistically insignificant findings to challenge the present outcomes. Becker (1994) pointed out that a large fail-safe number lends credence to the finding of significance, and in many cases this number will be large. Given the paucity of psychodrama research, we can safely assert that the studies used in the present meta-analysis do not represent a selection bias.

## Discussion

The implications that emerged from the present study concern changing the perception of the empirical validity of psychodrama and its primary techniques, integrating such techniques in a wider group psychotherapy practice, and outlining directions for future psychodrama research. Some of these issues are clearly supported by the findings; others, though somewhat speculative, are nonetheless worthwhile considering.

The first implication addresses the prevailing view toward psychodrama and its techniques. As described earlier, observers of psychodrama have been torn between the favorable clinical impression of the method, on the one hand, and the absence of empirical validation for its multifarious interventions, on the other. The present meta-analysis shows that the overall treatment effect size found for the 25 studies was 0.95, above the cutoff level of 0.80 that customarily indicates a large effect (Cohen, 1992). This effect size is slightly higher than the comparable results commonly reported in the group psychotherapy literature for the effectiveness of group therapy in general (0.50–0.70; Fuhrman & Burlingame, 1994). Arguably, the elevated effect size might be partly due to the halo effect often associated with psychodramatic interventions. Nonetheless, the overall effect size is certainly congruent with the tendency reported for group psychotherapy in general, a fact that lends credence to the conclusion that the available research demonstrated the empirical validity of the basic psychodramatic techniques (i.e., role reversal and doubling).

This conclusion notwithstanding, the paucity of sound research remains a troubling issue. The 25 studies selected for the present meta-analysis spanned over a period of three decades—by any measure, a poor showing. True, these studies may not have constituted the entire body of published empirical psychodrama literature. First, they included only studies published in English. Second, there were other experimental studies published in English not included in the meta-analysis because of incomplete data or weak designs. Our selection aimed at representing the best studies available. Obviously, the paucity of studies is an unwelcome trend. The second implication of the present study is, therefore, that if one reason for past diminished research activities has been

a view that psychodrama is not amenable to traditional, quantitative research, the results of the present meta-analysis ought to dispel that notion.

Our focus on single psychodramatic techniques has some relevance for clinical practice. We have repeatedly noted that this meta-analysis concentrated on psychodramatic techniques rather than on the psychodramatic process (the entire session) that characterizes the classical approach (e.g., Blatner, 1996; Kellerman, 1992; Moreno, 1953, 1964). Addressing the individual psychodramatic techniques as a way of demonstrating the merit of the entire therapeutic procedure is a novel approach. It means that each component (technique) of the process plays an important role by itself. The implication for clinical practice is that separate psychodramatic techniques can be adopted and incorporated into various forms of group psychotherapy, even those based on theoretical approaches that differ from that of J. L. Moreno. Role reversal, doubling, and role-playing enactment, singularly or together, could add to the psychotherapeutic endeavor of many forms of group treatment.

The final implication of the present analysis concerns a most promising direction for future research. The classical psychodramatic literature (e.g., Blatner, 2000; Moreno, 1964; Starr, 1977; Yablonsky, 1976) did not offer a systematic rationale for predicting a specific, or unique, therapeutic effect of each psychodramatic technique. In fact, half of the studies in the present meta-analysis were conducted before the first rationale for a systematic categorization of psychodramatic techniques was proposed (Kipper, 1986). In the absence of a clear theoretical model for the therapeutic effect of the various psychodramatic techniques, there was no coherent direction in psychodrama research. Kipper (1981, 1986, 2001) proposed a new model based on the proposition that the particular design of psychodramatic enactments (techniques) represents one of four unique simulation conditions. Each such condition tends to activate different psychological (psychotherapeutic) processes and therefore produces different therapeutic outcomes. The finding that each of the role reversal, doubling, and multiple techniques significantly differs from the others is consistent with the above proposition, which expects the three to be distinctly (psychologically) different interventions.

So far, there have been too few studies based on this new model—that is, studies designed to test Kipper’s specific predictions about the differential psychological processes activated by each simulation condition. Yet initial outcomes tend to support the model. For example, it has been shown (Kipper, 2001) that role reversal activates disinhibition processes by creating psychological distancing. Cognitively, role reversal was also shown to have facilitated attitude change. On the emotional level it generated warmth and trust. Doubling, however, was shown to have produced empathy (Hudgins & Kiesler, 1987). It is hoped that future research will result in a good number of studies based on the differential psychological effect hypothesis, thus enabling us to incorporate the “specific psychotherapeutic outcome” as a predictor in subsequent meta-analyses.

It is not clear, though, why the present results for the technique of role-playing showed a negligible improvement effect size. It is important to note that in the psychodramatic context, the term *role-playing* does not connote “enactment in general.” Rather, it refers to a specific form of enactment, a portrayal of oneself in one’s own identity. Given the widespread use of role-playing enactments in research, therapy, and training, better outcomes for this particular technique were expected. This might have been due to the fact that it had fewer studies in our list than the other three groups. Moreover, the role-playing studies generated a minuscule number of ESs, at most one fifth of the number generated by the studies on role reversal and doubling. One can only speculate that with more studies on the clinical effectiveness of role-playing technique and subsequently a number of effect sizes similar to those obtained for role reversal and doubling, the results for this technique would be much better.

The group we called multiple techniques represented the traditional approach to the study of the effectiveness of psychodrama—that is, studies that considered the entire psychodramatic procedure as the basic unit of the investigation. The results revealed a small to moderate improvement effect size. Logically, one would assume that if each of the role-reversal and doubling techniques separately generates a large effect size, they would produce a better synergetic effect when combined with other techniques. The combined format would boost

the improvement effect size of the multiple techniques package. This did not happen. The reason for this may lie in the data. A glance at Table 2 reveals that the mean effect sizes for two of the studies in the multiple techniques group were close to zero. One study, in fact the only study in the entire list of 25, actually reported no significant differences between the group treated with psychodrama and a control group (Slawson, 1965). Given the weakness of the available data, one must hold any conclusion on the effectiveness of multiple techniques in abeyance pending further investigations. The closeness of the presently found effect size to the moderate cutoff point would encourage such a research undertaking.

Other specific outcomes of the present study deserve comment. One would be hard pressed to explain the lack of a difference in the effectiveness between the same therapy rendered in one session and in multiple sessions. With our focus on psychodramatic techniques, these results are actually considered positive. It might be recalled that the rationale underlying the therapeutic effect of psychodramatic technique makes no differentiation concerning who the actor is. Rather, it hypothesized that being placed under a particular simulation condition (a technique) ipso facto activates the specific psychological process. All that it requires is that the actors be able to understand and follow the instructions on how to role-reverse or become a double and be able to become involved in the enactment. The psychological effect(s) of a given technique would be the same regardless of whether the actor is a patient or a student. The same underlying rationale also expects that having identified the specific therapeutic effect of a given technique, a person will experience it every time the technique is used, whether once during a single session or 20 times during 20 sessions. The results, therefore, are interpreted as an encouragement for the continued research into the therapeutic effectiveness of single psychodramatic techniques.

It appears that studies using both male and female participants showed greater improvement effect sizes than those using only males or females. The meaning of this finding is puzzling and certainly poses a challenge for future research.

Finally, the strength of the findings depends on the number and the scientific rigor of the

studies that constituted the basis for the meta-analysis. We are aware that the present selection is restricted. It did not include studies published in foreign languages, although to the best of our knowledge, most of the well-designed quantitative studies in the field have been published in English-language journals. Also, we did not have access to unpublished studies, if such "manuscripts in drawers" exist. Because we were conducting the first meta-analytic study of psychodrama research, we decided to adopt an inclusion criterion that considered only experimentally designed studies. Although this decision may have lent more credence to the findings, at the same time it has curtailed the scope of the data. One must bear in mind this limitation in assessing the meaning of the present outcomes. All in all, the findings appear to shed a positive light on the issue of the validity of psychodramatic interventions and to encourage research regarding the specific psychotherapeutic effects of its basic techniques.

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