

TABLE 5
EFFECT SIZES OF SCALE 1 (KNOWLEDGE), SCALE 2 (ATTITUDES) AND SCALE 3 (BEHAVIOUR)

Experimental group (e)		Comparison group (c)		σ	d-Value (effect size)
n	μ_1	N	μ_2		
Effect size of Scale 1: Knowledge of stress management					
327	-0.14	57	-0.14	0.360	0.4*
Effect size of Scale 2: Attitudes regarding stress					
298	0.054	51	0.054	0.538	0.1
Effect size of Scale 3: Stress-related behaviour					
327	0.21	57	0.21	0.421	0.5*

* Medium effect: $d = \pm 0.5$.

The questions of "Scale 1: Knowledge of stress management" focused on the respondents' knowledge of the nature of stress and how to manage it (Dainow, 1988:3). The d-value of this scale indicates that the programme had a medium effect on this level of knowledge (see Table 5). If Spatz's (2001:74-75) views are taken into consideration, this type of result could be viewed as significant. However, some further study is required to confirm this finding beyond all doubt.

In the case of "Scale 2: Attitude regarding stress", the questions focused on the respondents' willingness to allow new experiences to modify their attitude towards stress management (Barker, 1995:290; Dianow, 1988:3). The scores obtained showed no significant differences between the pre-test and post-test. This result contradicts those that were achieved by means of the other measurement instruments used in triangulation. From this and the data on which the calculations were based, it was concluded that the questions that were used in the scale were seriously flawed.

One of the main aims of the "Managing Stress Effectively" programme was to change respondents' stress-related behaviour. The questions that were used in Scale 3 focused on three issues. They were the way in which the respondents deal with stress, how they manage pent-up emotions and their first reactions when confronted with a difficult situation. This scale produced a d-value of 0.5 (see Table 5). As in the case of Scale 1, this result can be viewed as important and significant, but as such, not necessarily conclusive enough.

The possible reasons for the lower than expected and contradictory effect measurement were further investigated. An analysis of the data on which the measurements were based showed some flaws in the questions that were used, as well as the presence of a Hawthorne effect (Babbie, 2001:220). A number of comparison group members evidently wanted to change their stress-management behaviour (or to indicate this desire) and were able to guess the most appropriate answers.

In spite of some flaws, it was possible to draw an important conclusion from the application of the three KAB scales. This was that, in the case of the respondents' knowledge and intended behaviour, there was ample proof that the programme brought about a significant change.

THE VALUE OF THE PROGRAMME

The post-test questionnaire that was administered to the experimental group contained five additional Likert-type questions (see Table 6). These were specifically aimed at determining the value that the programme had for the respondents.

The programme as a whole received an exceptionally high value rating (see Table 6). This is reflected in the far above average d-value of 1.4 and a d-value of 1.7 for question 22. Such effect sizes are viewed by Cohen (1969:22-25) and others as indicative of a large effect that is of practical significance. This finding is further substantiated by the fact that 93.47% of the respondents were of the opinion that it had either an "above average" or "a lot of value". All these findings can be viewed as proof that the programme as a whole, as well as its constituent parts, were of great value to the respondents. Because the parts covered knowledge, behaviour and attitudes-related issues, it can be assumed that it must have had an effect on all three these dimensions.

TABLE 6
EFFECT SIZE OF SCALE 4 (VALUE OF THE PROGRAMME)

Questions	n	Choices and Responses				μ_{diff}	σ_{diff}	d-Value (effect size)
		<i>It had no or little value</i>	<i>It had below average value</i>	<i>It had above average value</i>	<i>It had a lot of value</i>			
22. What was the overall value of the programme/ course?	306	6 (1.96%)	14 (4.58%)	66 (21.57%)	220 (71.90%)	3.633	0.665	1.7**
23. What value did the following component have for you: "What is stress/ what causes stress and the physiology of stress?"	304	6 (1.97%)	20 (6.58%)	84 (27.63%)	194 (63.82%)	3.532	0.707	1.5**
24. What value did the following component have for you: "The compilation of your personal stress profile"?	303	7 (2.31%)	35 (11.55%)	111 (36.63%)	150 (49.50%)	3.333	0.770	1.0**
25. What value did the following component have for you: "The different strategies in dealing with stress"?	303	5 (1.65%)	16 (5.28%)	109 (35.97%)	173 (57.10%)	3.485	0.675	1.5**
26. What value did the following component have for you: "The compilation of your own personal stress management plan"?	306	9 (2.94%)	19 (6.21%)	81 (26.47%)	197 (64.38%)	3.522	0.742	1.4**
<i>Average</i>		7	21	90	187	3.501	0.711	1.4**

**Practical significant effect: $d = 0.8+$

THE RELEVANCE OF THE PROGRAMME

The experimental group's view of the relevance of the programme was the fifth dimension of programme effect that was measured. The reason for also focusing on this facet was that any given programme could have a large effect on its participants, but compared to other available capacity-building and general training programmes, would not be deemed as a main priority. It was, therefore, necessary to ascertain to what extent the programme was relevant to the personnel's professional and personal lives.

The relevance scale (Scale 5) consisted of six questions. These questions dealt with issues such as the degree to which the programme stimulated the respondents' creative thinking and the extent to which they could use the newly gained knowledge and insight in their jobs. The results are contained in Table 7.

TABLE 7
EFFECT SIZE OF SCALE 5 (RELEVANCE OF THE PROGRAMME)

Scales/ questions	n	μ	σ	d-Value (effect size)	α
<i>Scale 5</i>	289	3.512	0.400	2.53**	0.85 [■]
22. The course/programme stimulated my creative thinking.	284	3.415	0.528	1.73**	
23. I will be able to apply the new knowledge and insights that I have gained in my job.	287	3.473	0.546	1.78**	
24. I feel that the course/programme will help me do my job better.	283	3.487	0.521	1.89**	
25. I will be able to apply the new knowledge and insights that I have gained in my daily life.	289	3.453	0.532	1.79**	
26. I feel that the course/programme will help me to live my life in a better way.	287	3.505	0.534	1.88**	
27. All SAPS personnel should receive this course/programme.	288	3.763	0.464	2.72**	

■ Reliable scale: $\alpha = 0.5+$. **Practical significant effect: $d = 0.8+$

With an overall effect size of 2.53 (see Table 7), it is clear that the stress-management programme had an extremely high relevancy value. The probable reason for this effect is that the programme successfully addressed an issue that represented a felt need within the organisation. This conclusion is substantiated by the fact that the effect size in the case of Question 27: "All SAPS personnel should receive this course/programme" was extremely high ($d=2.72$).

There are a number of additional conclusions that could be drawn from the effect size generated by the other questions. These include the following:

- All the scores tended to be high. This indicates that the relevance of the programme could not be attributed to only one factor, but to the combined effect of all its components.

- If the two questions that relate to the effect of the programme on a person's job performance (questions 23 & 24) are compared to those that focus on their personal lives (questions 25 & 26), no overall trend emerges. This implies that the programme should not be seen as either a job-enrichment instrument or a personal-empowerment tool, but rather as a combination of the two.
- Questions 23 to 26 *inter alia* also dealt with knowledge, attitudes and behavioural change. In terms of triangulation, their high effect size further vindicates the conclusions reached regarding flaws in some of the scales that were used. It is, therefore, clear that the programme must have had a practical significant effect on respondents' knowledge, attitudes and behaviour.

THE INFLUENCE OF THE PROGRAMME PRESENTATION

Because poor presenters and presentations will have a detrimental influence on any programme's effect, it was necessary to measure the overall quality of the stress-management programme's presentations. For this purpose Scale 6 was developed and included in the presentation evaluation questionnaire. This scale consisted of 21 questions that were grouped into four subscales. Only the results for these four subscales are included in Table 8.

TABLE 8
EFFECT SIZES OF SCALE 6 (QUALITY OF PROGRAMME PRESENTATION)

Subscale	n	μ	σ	d-Value (effect size)	α
Subscale 6.1: Evaluation of the presenter	290	3.434	0.468	1.99**	0.83 [■]
Subscale 6.2: Evaluation of the presenter's presentation skills	290	3.699	0.507	2.36**	0.84 [■]
Subscale 6.3: Evaluation of the learning process	290	3.471	0.445	2.18**	0.88 [■]
Subscale 6.4: Evaluation of the presentation context	289	4.304	0.569	2.29**	0.78 [■]
<i>Average</i>	289.8			2.21**	0.83 [■]

■ Reliable scale: $\alpha = 0.5+$. **Practical significant effect: $d = 0.8+$

The average rating for the four scales that covered the quality of the programme presentation came to an astonishing 2.21 (see Table 8). This would, firstly, indicate that the presenters generally succeeded extremely well in their task of presenting the programme in an effective and professional way. A second implication is that any weaknesses in the effects of the programme could not be attributed to the presenters, but rather to the contents of the programme.

THE PRESENTER'S EVALUATION OF THE PROGRAMME

The presenters of the programme also had to complete the presenter's evaluation questionnaire. This questionnaire, which was similar to the presentation evaluation questionnaire, enabled them to evaluate their own expertise and presentation skills, as well as the learning process, the learning context and the relevance of the programme. The data showed strong similarities between the presenters' and respondents' evaluations. The only marked difference was that the presenters tended to evaluate their presentation skills at a lower level than those attributed to them by the respondents.

Provision was also made in the questionnaire for recommendations regarding the improvement of the programme. Some of these are included in the guidelines.

FINDINGS AND IMPLICATIONS

The three main research findings and their implications can be summarised as follows:

The availability sampling produced experimental and comparison groups that correlated extremely well with the profile of the SAPS population. The programme should, therefore, have the same type of effects on all other SAPS personnel, irrespective of their rank/post, race, gender or province of origin.

- Through the triangulation of measurements it became clear that the programme ought to have had a *practical significant effect* on SAPS personnel's stress-related knowledge, attitude and behaviour. In addition, it empowered them to function more effectively on both a professional and a personal level. The programme, therefore, succeeded fully in the purpose for which it was originally designed.
- The third general finding was that the *presentations of the programme* were of a high standard and contributed positively to its effect.

GUIDELINES FOR IMPROVING THE PROGRAMME

In spite of the programme's proven effect, value and relevance, it is not without some shortcomings. The research results were, therefore, also used as a basis to formulate the following guidelines for its further improvement:

- The elements of the programme that the presenters found least helpful and most cumbersome should be reformulated.
- It should become standard practice to revise and update the programme every 12 to 18 months. In this process and in order to comply with the principles of experiential learning, all the activities, exercises, checklists and examples should be re-evaluated and improved in order to make them even more relevant and effective.
- The nature of the programme makes it an imperative that only suitably qualified social workers from the Police Social Work Services should present the programme. In order to ensure an even higher presentation standard, all the presenters should receive an advanced facilitation and presentations skills course.
- The KAB scales should be improved and used on a continual basis in the evaluation of the programme's effect. This will help to ensure that all new participants will receive the same high standard of service delivery.

CONCLUDING REMARKS

The "Managing Stress Effectively" programme represents an important attempt by the Police Social Work Services to enhance SAPS personnel's ability to face the rigours of their highly stressful occupations. It is, therefore, quite significant that the research has proven that it is a highly effective intervention mechanism that succeeds fully in the purpose for which it was originally designed. Through its proactive stress-management abilities, the personnel are enabled to lead more productive professional lives and to serve all of South Africa's communities more effectively.

The study's results have, however, implications that stretch beyond the narrower ambit of police or even occupational social work services. They indicate that social workers do have the ability to develop, implement and evaluate stress-management programmes. Such programmes could and should become an integral part of generic practice.

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