

Günter Krampen, and Dietmar Ohm

Effects of relaxation training during rehabilitation of myocardial infarction patients

Brief research report – *Int. J. Rehab. Research*, 1984, 7 (1), 68–69.

1. Introduction

In rehabilitation programs for psychosomatic patients, relaxation training (RT) is widely used as a rehabilitative and preventive method. Rehabilitation programs for patients with myocardial infarctions start relatively soon after the infarction and RT is applied (besides other interventions) to make the patients more sensitive for interactions of physical and psychological variables as well as to optimize relaxation skills. Often however, the application of RT in inpatient rehabilitation settings is restricted by temporal and other organizational limitations. Therefore, it is important to evaluate the effects of such short-term introductory courses in RT. In the present study, a quasi-experimental test of the effects of RT-participation during a 4- to 6-week rehabilitation treatment for myocardial infarction patients on selected variables, namely subjective and objective indicators of the short-term rehabilitation effectiveness, was conducted.

2. Methods

Subjects were 105 male patients who underwent a 4- to 6-week rehabilitation program in a clinic after they had suffered a myocardial infarction. The treatment group ($N = 46$) participated besides the usual rehabilitation program in a RT-course (six sessions), in which autogenic training was combined with some elements of the progressive relaxation method (Jacobson 1938). The control group ($N = 59$) participated only in the usual rehabilitation program. At the beginning of the rehabilitation treatment, the two groups did not differ significantly in the following variables: (1) age ($\bar{x} = 56.9$, $s = 7.74$ years); (2) time between the infarction and the onset of the rehabilitation treatment ($\bar{x} = 19.9$, $s = 9.44$ weeks); (3) occupational status (mainly white collar workers, business personnel, and employees); (4) heart action measured with an inflection catheter.

At the end of the rehabilitation program, medical as well as psychological variables were measured as indicators of the short-term rehabilitation effectiveness. Medical indicators of the effectiveness were: (1) physicians' ratings of the general and the cardiovascular state of health; (2) physicians' ratings of changes in general and cardiovascular health during rehabilitation; (3) changes in ergometric performance during rehabilitation (index composed of watt, time, arrhythmia and ischemia); (4) changes in arrhythmia during the rehabilitation. In addition, the following psychological variables were measured by questionnaires at the end of the rehabilitation program: (1) hopelessness (German adaptation of the H-scale from Beck et al., 1974; see Krampen, 1979); (2) subjective state of health at the end of the treatment (seven-point rating scale); (3) subjective perception of the treatment environment using a strongly modified version of the Ward Atmosphere Scale (WAS; Moos, 1974), consisting of eight subscales: (a) satisfaction with the equipment of the clinic, (b) possibilities for engagement, (c) experienced support, (d) autonomy, (e) rehabilitative orientation, (f) person orientation, (g) order and organisation and (h) information in non-psychiatric as well as psychiatric inpatients (Klinik-Umwelt-Skalen, KUS; Krampen & von Delius 1981). Split-half reliabilities of the scales exceeded $r_{tt} = .79$.

3. Results

To test the general hypothesis of differences in the rehabilitation effectiveness between the RT-group and the non-RT-group a multivariate analysis of variance (MANOVA) was conducted. Dependent variables were the six medical and ten psychological indicators of health and well-being at the end of the rehabilitation treatment, which a priori have no close relationship to the goals and the technique of RT. The overall MANOVA-F for the equality of the means was statistically significant ($F = 2.89$, $df_1 = 16$, $df_2 = 86$, $p < .01$). This indicates relevant differences in these variables between treatment and control group. Univariate comparisons of the means of the two groups show the following significant differences ($p < .05$): (1) The general state of health at the end of the treatment and the changes in general health during treatment were rated more positively in the RT-group by the physicians; (2) The ergometric performance and the arrhythmia improved much more in the RT-group than in the control group; (3) The RT-participants experienced more support, more person orientation, more information, and a higher rehabilitative orientation in the clinic than the patients who did not participate in RT; (4) At the end of the treatment, the participants of the RT-group were much less hopeless than the members of the control group, i. e. they were more optimistic with reference to their personal future; (5) The RT-participants rated their general state of health and well-being at the end of the rehabilitation program more positively than the members of the control group. No significant differences between the two groups were found in the other variables, which concern the equipment and the organisation of the clinic, the possibilities for engagement and autonomous behavior, as well as the physicians' ratings of the cardiovascular state of health and of changes in cardiovascular health during rehabilitation.

4. Discussion

In a quasi-experimental design, the effectiveness of short-term introductory courses in RT during the rehabilitation of myocardial infarction patients has been demonstrated. While there were no significant differences between treatment group and control group in some relevant sociodemographical and medical variables at the beginning of the rehabilitation program, there were such differences in objective and subjective indicators of health and well-being at the end of rehabilitation. Participation in RT-courses obviously leads to a more positive perception of treatment environment (especially with respect to dimensions of interpersonal interaction, such as experienced support, person orientation and information), to a more optimistic perspective of the patients (less hopelessness, higher well-being) and to more positive evaluations in the medical diagnosis. These results are supposed to be indirect effects of participation in RT-courses, which are mediated mainly by the involvement and integration of those patients in a structured group psychotherapy. Therefore, the aims and the functions of RT-groups in rehabilitation go beyond the optimization of relaxation skills; rather, they concern the general effectiveness of a rehabilitation treatment.

5. References

- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. The measurement of pessimism: The hopelessness scale. *Journal of Consulting & Clinical Psychology*, 1974, 42, 861-865.
- Jacobson, E. *Progressive relaxation*. Chicago: University of Chicago Press, 1938.
- Krampen, G. Hoffnungslosigkeit bei stationären Patienten. *Medizinische Psychologie*, 1979, 5, 39-49.
- Krampen, G., & von Delius, A. Wahrnehmung therapeutischer Umwelten und subjektive Befindlichkeit von stationären Patienten. *Medizinische Psychologie*, 1981, 7, 110-126.
- Moos, R. *Evaluating treatment environments*. New York: Wiley, 1974.

Authors' addresses

Dr. G. Krampen, Dipl.-Psych., University of Trier, Dept. of Psychology, Schneidershof, D-5500 Trier, Fed. Rep. of Germany

Dipl.-Psych. D. Ohm, Curschmann-Klinik, D-2408 Timmendorfer Strand, Fed. Rep. of Germany

Esther Shurka, and Victor Florian

The evaluation of a physically disabled person in different stages of rehabilitation by a group of rehabilitation clients

Brief research report – *Int. J. Rehab. Research*, 1984, 7 (1), 69-72.

1. Problem and aims

In the last decade a voluminous quantity of theoretical and empirical studies of societal attitudes toward disability appears in the psychological and rehabilitation literature. In a recent extensive review of the literature Livneh (1982) describes and analyzes the possible explanations of negative societal attitudes toward people with disabilities. Although he enumerates different sources of these negative attitudes such as psychodynamic processes, psychosocial norms and cultural patterns, he also mentions that a certain degree of overlapping of categories exists. According to the well known statement by Goffman (1963) physical disability carries a stigma that implies the person is different from others. He is reduced from a whole and "normal" person to a taunted, discounted one. Society ascribes a number of attributes to persons with physical disabilities on account of their handicap. Richardson et al. (1961) and Neff and Weiss (1965) claim that the disabled are conscious of society's view toward persons with physical disabilities and as a result, introject these views into their own self-image.

In summarizing the views of Gellman and Wright, Livneh (1982) emphasizes that specific behaviors by disabled individuals (being dependent, seeking secondary gains, acting fearful, insecure, or inferior) create and strengthen certain prejudicial beliefs in the observer. Wright (1960) similarly traced these behaviors to the physically disabled person's expectations of being treated in depreciating ways, and as a result set themselves up in situations in which they will be devalued.

In recent years numerous studies have investigated the influence of negative societal attitudes toward disabled persons and how these attitudes affect the self-image of the person with physical disabilities (Weinberg-Asher, 1976; Comer and Piliavin, 1975; Cumming, 1978; Higgins, 1978; Grey, 1977; Bruhm, 1977).

In reviewing the literature, very few studies actually investigate the attitudes of disabled persons toward other disabled people. Connors (1977) found that disabled persons are as prejudiced toward persons