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ORIGINAL PAPER

Wellbeing promotion is better than resistance training in coping with burdens in life. Results from a randomized controlled trial

Josephine Otto[1], Nils Noack[1] and Michael Linden[1]

Corresponding author
Prof. Dr. Michael Linden
Charité Universitätsmedizin Berlin Forschungsgruppe Psychosomatische Rehabilitation
Hindenburgdamm 30, CBF, Hs II, E01 12200 Berlin, Germany
Email: michael.linden@charite.de
http://fpr.charite.de

Affiliation
[1] Charité University Medicine Berlin, Research Group Psychosomatic Rehabilitation, Berlin, Germany

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Abstract

Background: *There are basically two ways of coping with stress and burdens in life. One is to withstand and accept demands and burdens by active coping, hardiness, endurance, and resistance. The other is to care for oneself, uphold wellbeing, and ensure regeneration. Both approaches correspond to problem focused and emotion focused strategies according to the transactional stress model (Lazarus & Folkman, 1984), and can be addressed in psychotherapy.*

Objectives: *To test whether resistance or regeneration oriented treatment results in better tolerance of burdens in life.*

Method: *Research participants were patients of a department of behavioral medicine. 108 participants were assigned to a regeneration group (RG) and 113 to a resistance group (RS). A convenience sample of 124 patients was interviewed at the end of the hospital stay, who had not participated in the special groups and only received treatment as usual (TAU). The perception of burdens in life was assessed with the DLB-scale and analyzed with non-parametric configural frequency analysis.*

Results: *In comparison to TAU participants, RG participants rated burdens in life lower on fifteen of the seventeen dimensions after treatment in contrast to nine of the RS participants, showing a significant difference according to frequency analysis.*

Conclusions: *The study supports the assumption that regeneration and wellbeing oriented treatment in comparison to resistance training leads to a more relaxed evaluation of problems in life, which demonstrates the beneficial effects of positive psychology interventions.*

Keywords: *Burdens in life, stress coping, wellbeing, salutotherapy, positive psychology, occupational therapy*

Abstrait

Contexte: *Il existe fondamentalement deux façons de gérer le stress et les fardeaux de la vie. L'une consiste à supporter et à accepter les demandes et les charges en faisant face à une gestion active, à la résistance, à l'endurance et à la résistance. L'autre consiste à prendre soin de soi, à préserver le bien-être et à assurer la régénération. Les deux approches correspondent à des stratégies centrées sur le problème et centrées sur l'émotion, selon le modèle de stress transactionnel (Lazarus & Folkman, 1984), et peuvent être abordées en psychothérapie.*

Objectifs: *Vérifier si un traitement axé sur la résistance ou la régénération entraîne une meilleure tolérance aux charges de la vie.*

Méthode: *Les participants à la recherche étaient des patients d'un département de médecine comportementale. 108 participants ont été affectés à un groupe de régénération (RG) et 113 à un groupe de résistance (RS). Un échantillon de convenance de 124 patients a été interrogé à la fin du séjour à l'hôpital, qui n'avait pas participé aux groupes spéciaux et n'avait reçu que le traitement habituel (TAU). La perception des charges dans la vie a été évaluée à l'aide de l'échelle DLB et analysée à l'aide d'une analyse de fréquence configurale non paramétrique.*

Résultats: *Comparés aux participants TAU, les participants RG ont évalué les charges dans la vie plus faibles pour quinze des dix-sept dimensions après traitement par rapport à neuf des participants RS, montrant une différence significative selon l'analyse de fréquence.*

Conclusions: *L'étude confirme l'hypothèse selon laquelle un traitement axé sur la régénération et le bien-être par rapport à l'entraînement contre résistance permet une évaluation plus détendue des problèmes de la vie, ce qui démontre les effets bénéfiques des interventions en psychologie positive.*

Mots clés: *Fardeau dans la vie, adaptation au stress, bien-être, salutothérapie, psychologie positive, ergothérapie*

INTRODUCTION

Burdens, problems and stressful situations are part of daily life. Their psychological impact depends on the appraisal and coping repertoire of the person (Lazarus & Folkman, 1984). Successful coping with burdens results in feelings of self-efficacy, self-confidence, and personal growth. Insufficient control and mastery has a negative impact on wellbeing and life satisfaction.

Stress coping skills are of major importance in patients with mental disorders. They can produce problems in life or lead to a distorted view on the self, the world, and the future (Beck et al., 1979; Headey, 1993; Koivumaa-Honkanen, 2001). Patients regularly feel overburdened and unable to cope with demands and conflicts on the job or in the family. This can even become a causal factor in the development and maintenance of their illness (Amiel-Lebigre et al. 1996; Despland et al. 1995; Fava et al. 2001; Fischer & Riedesser 1999; Maerker & Rosner, 2006; Paykel 2001).

There are two basic approaches in coping with stress. One is to withstand burdens by hardiness, active coping and stress management (i.e. resistance against stressors). For example, at work it is normal that one has to pursue a task until it is finished, that one has to withstand heat or unfriendly clients and overcome frustration, independent of how one feels. Another approach to react to stressors is to distance oneself and not to allow burdens to have an impact on oneself. This can be done by cognitive reframing, humor, relaxation, and self care (i.e. regeneration when stressed).

There are corresponding treatments, which focus on resistance or regeneration. Resistance oriented strategies are aimed at enhancing coping skills, training of tolerance against hardship, engagement, commitment, frustration tolerance, endurance, and hardiness, using cognitive and exposure methods (Bernstein et al., 2011; Bornovalova et al., 2012; De Beurs et al., 1995; Funk, 1992; Kobasa, 1979; Macatee & Cougle, 2015; McHugh et al., 2014;). The goal is to learn how to confront stressors and enable the person to go on, in spite of discomfort and negative wellbeing.

The alternative regeneration oriented treatment approach follows theories of positive psychology, salutogenesis and "emotion based coping" (Lazarus & Folkman, 1984). Interventions aim at fostering selfcare, wellbeing, sense of coherence, autonomy, self acceptance, positive relations with others, distraction and distancing from stressors, engaging in recreational and personal meaningful activities, mindfulness, induction of positive emotions and regeneration (Antonovsky 1987; Dalebroux et al., 2008; Fava & Tomba, 2009; Fredrickson, 2001; Lutz, 2011; Ryff, 1989; Seligman et al., 2005). The theoretical concept is, that controlling emotional reactions to stress is more important than coping with the stressor, as many burdens cannot be changed. The aim of the therapeutic intervention is to change the emotional or somatic response to stressors rather than the stressor itself.

In this study inpatients from a department of behavioral and psychosomatic medicine were randomly assigned to a group treatment which either focused on resistance training or on fostering of regeneration and wellbeing. At discharge, patients evaluated burdens across different areas of life. The research question was, whether the different treatment groups showed different results regarding the perception of burdens in life.

METHODS

Research patients

All patients of a department of behavioral and psychosomatic medicine were asked whether they would participate in a special seminar on stress management. They were free to accept or cancel their participation at any point. After giving their informed consent, they were either allocated to the regeneration or the resistance oriented group treatment. In the study period 972 patients were admitted as inpatients, 231 were interested to participate in the additional treatment offer, 10 dropped out before the first session. 108 research participants were assigned to the regeneration group (RG) and 29 dropped out during treatment. 113 were assigned to the resistance group (RS) and 33 dropped out early. Complete data were available for 70 research participants in the RG and 75 in the GS group. Additionally, a convenience sample of 123 patients was interviewed at the end of the hospital stay, who had not participated in the special groups but only had treatment as usual (TAU).

Research participants were on average 50.8 (SD 9.7) years old, 62.6% were female, 27.9% had a high school or university education, 53.5% were married. 55.2% were in a full-time job, 18.9% a part-time job, and 23.9% were unemployed. Primary clinical diagnoses were affective disorders (ICD-10 Code: F30-F39: 43.4%) anxiety and somatoform disorders (F40-F49: 33.2%), and personality disorders (F60-F69: 11.5%). There were no significant differences between groups.

Treatment groups

Resistance and hardiness training (RS) had the goal to promote endurance, hardiness, coping with stressors, readiness to expose

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oneself to stressors and motivation to work (De Beurs, 1995; Kobasa, 1979). The research participants undertook challenging tasks, with higher demands, which had to be executed under time pressure. They were informed that they could learn to cope with adversities and that hardiness and endurance are important resilience factors which can be learned in the context of the group session and transferred to everyday life. To reach this goal, participants were given tasks in occupational therapy, which were difficult to do, could easily go wrong and needed endurance (see Table. 1). For example, origami is the Japanese art of paper folding, to create intricate little sculptures. For untrained people it is difficult to do and does often not result in satisfactory results but rather in frustration and disappointment. Participants were then encouraged to try it again and again, until there is a perfect outcome. Soapstone is a rock, which can be carved by hand, using knives, chisels, or files. It needs endurance to create artistic works. Research participants are tempted to stop early but are encouraged to go on and make it better. Other techniques used are silhouette cuttings, aquarelle painting, or woodcarving. Similiar to many work related activities, in order to reach a proper goal one needs endurance, correctness, frustration tolerance etc. Regeneration oriented therapy had a focus on wellbeing, hedonia and recovery (Linden & Weig, 2009). Participants were instructed to relax, distract oneself from burdens in life and to regain strength. Treatment interventions were to engage in positive activities, hobbies, playing games, selfcare, or mindful indulgence (Fava & Tomba, 2009; Lutz, 2008). Participants were informed that the goal of the group was to improve selfcare and wellbeing, as it helps to better tolerate and compensate adversities. Techniques were to engage participants in relaxing parlour games, mindful cooking, tea ceremonies, waxbath, make up acitivites and relaxation. Research participants were informed that wellbeing was the goal, in that they should learn to enjoy the little things in life instead of pondering about stressors, and that really competent persons are relaxed.

Table 1: Core treatment goals and methods in resistance and regeneration group therapy

Resistance group	**Regeneration group**
Frustration tolerance *(origami)*	Social and recreational activities *(parlour games, handicraft)*
Endurance *(soap stone)*	Mindful indulgence *(eating, tea ceremony, mindfulness cooking)*
Accuracy *(silhouette, basketry)*	Compensatory and spare time activities *(planning of hobbies and meaningful activities)*
Discomfort tolerance *(working with hard wood)*	Self care and relaxation *(wax bath, relaxation, mindfulness walks)*
Flexibility *(encaustic, aquarell painting, soap stone with swapping with the neighbour while working on the task)*	Social and communicative wellbeing *(personal wellness, clothing, first impression with others, social resources)*

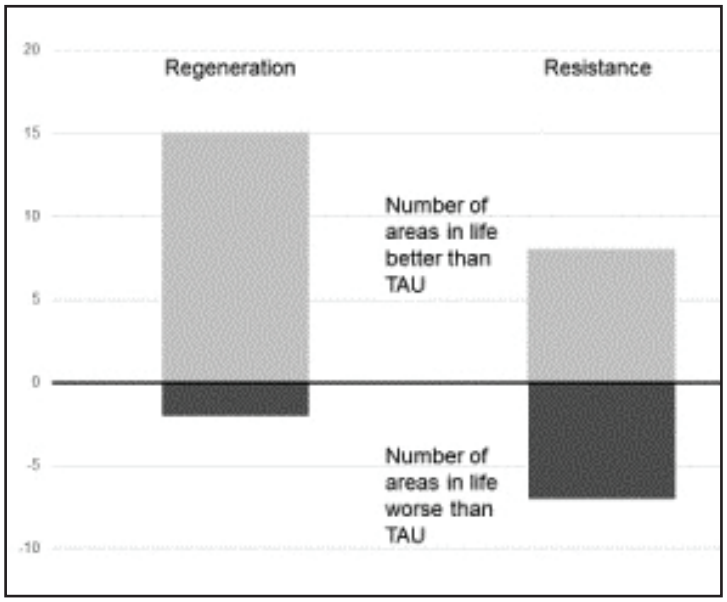
There were treatment manuals for both groups. In both groups, therapists were supportive, empathic, warm and person-centred with the participants. They had to inform participants at the beginning of each session about the "topic of the day" (i.e. which treatment block was the goal of the session). This was supported by short written information with daily topics like "If you feel bad, then take care of yourself " or "If you feel bad, just go on". Then participants were asked to work for example, on soapstone and train according to the topic of the day either to withstand adversity or to relax and distract. Table 1 summarizes the core interventions for both groups.

There were three study group sessions per week, each lasting 1.5 hours. The average inpatient stay lasted five weeks so that participation in all topic sessions was possible. All patients were additionally treated according to their individual needs with medical treatment, pharmacotherapy, individual and group psychotherapy, social therapy, sport therapy, and unspecific occupational therapy. Patients in the TAU group were having this treatment program but no specific RG or RS groups.

Instruments and Analyses

The outcome measure was the "Differential Life Burden Scale" (DLB-Scale, Linden & Ritter, 2007). Participants had to make

Figure 1: Number of areas in life which were rated as less burdened by patients of the RG or RS group in comparison to TAU patients at discharge from the hospital (Configural frequency analysis χ2(1)= 6,59, p=0,01)



a rating to which extent they feel burdened in 17 different areas of life ("1.When I think about my partnership and marriage, my feelings are..." or "16.When I think about my work, my feelings are...", "1=my feelings are very negative" to "6= my feelings are very positive"). The sum score indicates the degree of burdens in life. We have chosen this instrument as the outcome measure as it captures coping effectiveness. Participants were not asked for the improvement of their stress coping skills (effects of treatment), but for their mastery of life (effectiveness). The scale therefore has a high external validity. As only endpoint data were available for three groups, we compared the two intervention groups in reference to the TAU group. Statistical analyses were done with the non-parametric configural frequency analysis (CFA) (Krauth, 1993).

Ethical considerations

The treatment groups were additional to routine care, so that patients not only received everything that they would have received during regular treatment, but with additional treatment. The type of treatment in the special groups is part of any routine occupational therapy, so that no special risk for patients is to be expected. Participants were asked to give their written consent after they had been informed about the study by the therapists and written information. The study was approved by the internal review board of the Federal German Pension Agency.

RESULTS

Research participants of the regeneration group (RG) rated in comparison to the TAU participants burdens of life as less severe in 15 of the 17 dimensions. Research participants in the resistance group (RS) reported in comparison to the TAU participants less severe burdens in only 8 out of the 17 dimensions (see Figure 1), a highly significant difference between the two treatment groups according to the CFA was found ($\chi 2(1)= 6.59$, p=0.01).

Discussion

To our knowledge, there is no other controlled clinical trial comparing the effects of resistance training and regeneration fostering in regard to the perception of burdens in life.

The data show that participants who have been exposed to wellbeing and regeneration oriented treatment see less problems in life than participants in a resistance training. Participants have been stimulated to take care of themselves, to engage in relaxing activities, and to look after their wellbeing. As a consequence, they are obviously also more relaxed when asked about their living condition than participants without specific treatment. Participants who have been confronted with adversities and stressors in order to train their stamina, show significantly less positive attitudes towards their life.

This supports the assumption that the subjective state of wellbeing has an impact on the judgement about life, while training of problem orientated coping skills is less effective. This speaks for the assumption that the perception of burdens in life depends on the current cognitive and emotional state of an individual. Being in a hospital, participants had only limited possibilities to change their life in reality. Our data confirm theories of cognitive psychology (Beck et al., 1979) that we are primarily impressed by ours view of the world rather than by the actual status of affairs, which is a basic theory in cognitive psychotherapy.

The data furthermore supports theories developed in positive psychology, salutotherapy, and wellbeing therapy (Fava et al., 2001; Fava & Tomba, 2009; Fava, 2016; Frederickson, 2001; Linden & Weig 2009; Seligman & Csikszentmihalyi, 2000) and which suggest that the induction of positive emotions can help not only to recover from mental problems, but also to see the

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world in a different perspective and thereby improve the quality of life in general.

The general conclusion is that salutotherapeutic interventions (Linden & Weig 2009) should have their proper role in the treatment of mental disorders, additional to specialist psychotherapy, medication etc. Positive psychology can make an important contribution to cognitive behavior therapy in regard to stress coping skills and the mastery of burdens in life.

A problem in need of discussion is, whether both treatments in this study are ethical and allowed. Health and pension insurance send patients to inpatient treatment when their ability to work is endangered. They expect a treatment, which helps to reinstate the ability to work and explicity demand training of work skills ("medical occupational oriented treatment"; Streibelt & Buschmann-Steinhage, 2011). We have mimicked to our best, in a hospital setting, real life conditions at work. In all jobs employees have to withstand pressure, work under time limits, deal with conflicts, accept frustration, confront demands and failures, and this is what was trained in the resistance group. We also had to justify the regeneration approach to the health and pension insurance, who pay for the treatment, and explain that this approach is not spoiling of patients, but real treatment. The results are of interest as they are contrary to this notion and suggest that regeneration and the application of positive psychology may be a better treatment approach in learning how to deal with stress than putting patients under work pressure.

Limitations of the study are that only post treatment measures were used, so regardless of the randomized design, differences between groups could have existed already before treatment. The study was done in an inpatient setting with patients suffering from various mental disorders. Because of the limited numbers no detailed analyses regarding different disorders were possible. The data refer only to the end of treatment. No follow up data are available. ■

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Biographies

Michael Linden has studied medicine and psychology and is state licensed in psychiatry, psychosomatic medicine and psychotherapy. He is Professor of Psychiatry and Psychosomatic Medicine, director of the Research Group Psychosomatic Rehabilitation at the Charité University Medicine Berlin, and medical director of the Institute of Behavior Therapy Berlin, Germany. He is speaker of the psychotherapy section of the German Association of Psychiatry, member of the Scientific Advisory Board on Psychotherapy of the Federal Chamber of Physicians and Psychotherapists. Research interests are embitterment reactions, side effects of psychotherapy, cognitive behaviour therapy, and rehabilitation for psychological disorders. He has published more than four hundred papers in peer reviewed journals, more than twenty books, and received more than ten scientific awards.

http://orcid.org/0000-0002-0830-5453

Josephine Otto studied Psychology and Sociology. She is a state licensed cognitive behavior psychotherapist. She has worked in various psychosomatic settings. Her research focuses on salutogenesis, positive psychology, stress-coping interventions, interdisciplinary treatment and the development of questionnaires. She is currently finishing her PhD-Thesis about "Stress coping skills of psychosomatic patients" in the research group "Psychosomatic Rehabilitation" at the Charité University Medicine Berlin.

http://orcid.org/0000-0002-8874-2900

Nils Noack has studied psychology at the Free University of Berlin and is currently in a master course with a focus on clinical psychology. He is a research assistant of the Research Group Psychosomatic Rehabilitation at the Charité University Medicine Berlin. Research interests are positive psychology, psychodynamic psychotherapy, embitterment reactions, ADHD, and rehabilitation for psychological disorders.

http://orcid.org/0000-0002-8960-469X