

Предотвращение отпуска по болезни для страдающих высокой стрессовой нагрузкой и Синдром выгорания: объединение пилотного исследования Психотерапия и Флотаткапсула

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Аннотация

Цель настоящего экспериментального исследования состояла в том, чтобы получить информацию о том, может ли 10-недельная комбинированная программа лечения с релаксацией в флотационной капсуле и последующих психотерапевтических сеансах, быть полезна для людей, страдающих высокой стрессовой нагрузкой и синдромом выгорания. В исследовании приняли участие четыре женщины и двое мужчин в возрасте от 33 до 57 лет. Все они были диагностированы как на грани отказа от лечения и страдают от «синдрома выгорания» с симптомами усталости и проблемами, связанными с повседневной жизнью. Все клиенты принимали участие в 10-недельной программе лечения, состоящей из методов флотации-REST (Метод ограниченной сенсорной стимуляции) и разговорной терапии с психологом. Во время программы лечения они продолжали свою обычную работу, но могли уезжать на 4 часа в неделю для участия в лечении. Результаты выявили значительное снижение степени депрессии и беспокойства и увеличение позитивных взглядов на жизнь. Наблюдалось также значительное уменьшение масштабов болезненных районов и значительное снижение их тяжелой болевой нагрузки. После периода лечения все продолжали работать, и не было необходимости в больничном листе. Вывод заключается в том, что эта комбинированная программа лечения является многообещающей и должна быть дополнительно оценена в рандомизированном контрольном исследовании.

Key words: Flotation-REST, burnout syndrome, stress reduction.

RESUMEN

El objetivo de este estudio piloto fue obtener información sobre el beneficio de usar un tratamiento de 10 semanas que combinó un programa de relajación en tanque de flotación [Flotation-REST (*Restricted Environmental Stimulation Technique*)] y sesiones de psicoterapia, con personas que sufrían una elevada carga de estrés y síndrome *burnout*. Participaron cuatro mujeres y dos hombres con edades entre 33-57 años, diagnosticados al límite para la baja laboral y sufriendo “síndrome de *burnout*” con síntomas de fatiga y desorganización de su vida diaria. Durante el programa de tratamiento los participantes continuaron realizando sus actividades laborales, reservando 4 horas a la semana para su participación en el tratamiento. Los resultados indicaron un descenso significativo en las puntuaciones de depresión y ansiedad y un incremento en la valoración positiva de su vida. También se registraron descensos significativos en la extensión de las áreas doloridas y en la intensidad de la peor experiencia de dolor vivida. Tras el tratamiento todos continuaron trabajando y no necesitaron solicitar baja laboral. Se concluye que este programa combinado es prometedor y debería ser evaluado en un estudio controlado.

Palabras clave: Flotation-REST, síndrome de *burnout*, reducción del estrés.

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Relaxation can be used for stress reduction and increased wellbeing. There exists a multitude of techniques for relaxation and mindfulness training e.g. meditation, yoga, qigong (e.g., Craske, Turner, Zammit-Maempe, Lee, 2009; Hankey, 2006; Kjellgren, Bood, Axelsson, Norlander, & Saatcioglu, 2007; Kjellgren & Taylor, 2008; Sandlund & Norlander, 2000; Shapiro, Cook, Davydov, Ottaviani, Leuchter, & Abrams, 2007). Persons suffering from high stress load may get beneficial health effects from relaxation training. Participants in this study were all diagnosed as suffering from 'burn-out syndrome' with symptoms of stress, fatigue and problems organizing daily life. They experienced their ailments were not relieved by rest, and they were on the brink of immediate full-time sick leave. The method used for the relaxation in this study is treatment in a flotation tank.

Flotation-REST (Restricted Environmental Stimulation Technique) is a mild form of sensory isolation where a person is immersed in a tank of salt water (magnesium sulphate) heated to skin temperature (normally about 35-36 °C) (Suedfeld & Borrie, 1999). All incoming stimuli are reduced to a minimum, it is dark inside the tank and earplugs are used. The buoyancy of the salt water is high; a person can comfortably float lying on his/her back. A normal treatment period is 45 minutes, whereby a deep relaxation is achieved (Bood, 2007).

The early research during the 1970, 1980, and 1990's indicates (for reviews see Bood, 2007; Kjellgren, 2003) that the method leads to e.g. increased well-being (Mahoney, 1990), mild euphoria (Schulz & Kaspar, 1994), increased originality (Forgays & Forgays, 1992; Suedfeld, Metcalfe, & Bluck, 1987), improved sleep (Ballard, 1993), reduced stress, tension and anxiety (Fine & Turner, 1982; Schulz & Kaspar 1994; Suedfeld, 1983; Suedfeld & Borrie, 1995; Turner & Fine, 1984), and reduced blood pressure (Fine & Turner, 1982). A recent meta-analysis based on the 27 best-documented and conducted studies of the pioneering research with a total of 449 participants (van Dierendonck & Te Nijenhuis, 2005) showed that the floating-REST has positive effects on several physiological measures (eg, lower levels of cortisol and lower blood pressure) and that the method leads to increased prosperity and improved performance. However, in the meta-analysis there were no studies included with combinations of flotation-REST and other treatments.

Treatments with Flotation-REST have also in more recent studies generated a multitude of positive effects like inducing deep relaxation and stress reduction, increased sleep quality, significantly reducing stress-related pain, increasing optimism, and decreasing the degree of depression and anxiety (e.g. Bood, Sundequist, Kjellgren, Nordström, & Norlander, 2005; Bood, Sundequist, Norlander, Nordström, Nordenström, Kjellgren, & Nordström, 2006; Kjellgren, Lydén, & Norlander, 2008; Kjellgren, Sundequist, Norlander, & Archer, 2001). In many of these studies, a series of treatment sessions have been applied twice a week for 6 or more weeks (Bood, Sundequist, Kjellgren, Nordström, & Norlander, 2007). Positive effects typically were maintained four months after treatment (Bood *et al.*, 2006). Considerable improvements also have been documented for persons with 'burn-out syndrome', where anxiety and depression have diminished, sleep quality has improved and also an increased optimism (Bood *et al.*, 2005). It has been supposed that the positive effects are mediated mainly by the deep relaxation and stress reduction that follow the treatment.

In all these earlier studies the relaxation in the flotation tank has been used as the sole treatment, but the idea of combining this treatment with psychotherapy has emerged during the ten years we have been working with flotation tank treatments. We are interested in developing a treatment model where flotation-REST is combined with other treatments, thereby hoping getting even more successful effects. A case study with two patients (Åsenlöf, Olsson, Bood, Norlander, 2007) using psychotherapy combined with flotation-REST described beneficial psychological transformative effects, as well as successful rehabilitation for persons suffering from fibromyalgia and 'burn-out depression'. Despite extensive search in databases we have only found one other study investigating this combination of treatments (Jessen, 1990).

In order to get more knowledge about this combination of treatments the present study was designed. If this seems to be a promising area, our intentions are later performing a randomized controlled trial with a larger sample; but first we would like to make a small scale trial, in order getting information if it is worth proceeding. For each person in this study, there will be a total of three hours in the flotation-laboratory and one hour psychotherapy each week; this multiplied with the scheduled ten weeks treatment time generates a total of 40 hours per included person. Since the intention is not to compare the efficacy of psychotherapy and/or flotation-REST; we are designing this study as a small scale research ($N=6$) without a control group (despite that, six persons and ten weeks resulting in 240 hours treatment time). Before conducting a larger experimental study we would like getting a general overall picture of participants' experiences of this combined treatment. In order getting a comprehensive view of the outcome, several quantitative measures for assessing general health (e.g. sleep quality, pain, depression, anxiety) were applied as well as qualitative data (interviews).

The aim of the present study was to get information whether or not a 10-week combined treatment program with relaxation in a flotation tank and subsequent psychotherapeutic sessions, may be beneficial for persons suffering from 'burn-out syndrome' with symptoms of stress, fatigue and problems organizing daily life.

METHOD

Participants

Four women and two men (from Sweden) between the ages of 33 and 57 years old (mean age 42.7 years, $SD=9.27$) took part in the study. There was no significant difference in age between the males and the females (Mann-Whitney U-test, $p=0.80$). They were all full-time employed, but had sought help from their physicians at their respective occupational health clinic due to tiredness, depression, high stress load, pain in different parts of their bodies, and sleep problems at night. They were all diagnosed as suffering from 'burn-out syndrome' with symptoms of fatigue, stress and problems organizing daily life. They experienced their ailments were not relieved by rest, and they were on the brink of immediate full-time sick leave. Through the occupational health clinics, the clients were referred to the Stress Clinic at the Human Performance

Laboratory, Karlstad University, Sweden. All clients had previously tried different types of therapies such as acupuncture, relaxation techniques, light physical training regimens, as well as stress management courses, but without any significant improvements. All clients agreed to participate in the 10-week treatment program. During the 10 weeks they continued their usual work, but were able to leave for 4 hours a week for participating in the treatments.

Design

The treatment program included the two following components: (a) flotation-REST twice weekly for 45 minutes during a 10 week period and (b) conversational therapy for 60 minutes once a week immediately following after the floating-REST session, thereby yielding a total of 20 flotation-REST treatments and 10 individual conversational therapeutic treatments. During one occasion weekly, the floating session was directly followed by psychotherapy. During the other weekly floating session, the participant floated without psychotherapy. In order getting a thorough mapping of the health of the participants, several validated scales for assessing general health, depression, anxiety, optimism, sleep quality and pains were administered before and after the treatment program.

The purpose of the psychotherapeutic conversation with the psychologist was to make an inventory or analysis with each participant concerning life circumstances and situations one experienced as troubling. In the subsequent conversations, connections were made to the individual's current life situation and no fixed agenda was followed. Frequently, conversations began by elaborating on the flotation tank experience by the participant's own initiative. Experiences in the tank were not the central theme of the conversation but were often the catalyst for conversation in every session. All participants had the same psychologist for every session. The total treatment time for this study was 240 hours (6 persons x 4 hours per week x 10 weeks).

Procedure

Upon accepting participation in the project, each client signed a written agreement regarding their guarantee of confidentiality and their right to terminate whenever they wanted. Further, the written agreement determined that the collected material could only be used as a basis for publication on the condition that the confidentiality of the client was guaranteed.

Upon arrival at the first session quantitative data were gathered using the questionnaires listed below (see Instruments). Participants were then informed about all practical details regarding the flotation tank (e.g. showering before and after immersion, earplugs, buttons/switches for lights and alarms). All facilities such as toilets, meeting rooms, storage lockers, etc. were shown. Thereafter, they were given the opportunity to undergo their first flotation tank treatment for 45 minutes. The reservation of times for the subsequent weeks took place afterwards. Each following week, participants came in part for a "pure" flotation tank treatment and a session that included both a conversation

with the psychologist and a flotation-REST. During the tenth and final week of treatment the same data as the first time were gathered after their last treatment. Besides this, the participants were also interviewed twice during the treatment period about their experiences (these qualitative data are not presented in this paper).

Indicators

Flotation tank. A flotation tank (Bood *et al.*, 2005) measuring 270cm x 150cm x 130cm was used. The flotation tank was insulated to maintain constant air and water temperature and to offer total darkness and silence (earplugs are also used). The water temperature was maintained at 35-36 °C. The depth of liquid (salt water) is between 20 to 30 cm and was saturated with magnesium sulphate (density: 1.3 g/cm³). Each relaxation session lasted for 45 minutes, but total time including showering before/after and getting dressed is 1,5 hour.

The General Health Questionnaire (GHQ-12) is a self-administered screening instrument, used in primary health care settings, designed for screening minor psychiatric disturbances (Goldberg, 1972). The GHQ-12 is a shortened version (12 items) of the main questionnaire GHQ-60, aimed at detecting breaks in normal functioning and giving a general overview of health status. It consists of 12 items where the respondents giving their assessment of their present state relative their usual or normal state, with response alternatives on a Likert scale. Total points can vary between 0 (most healthy) to 36 points (worst), where 24 or more points indicating a psychiatric diagnosis ("being a case") (McDowell & Newell, 1987). GHQ-12 is considered at consistent and reliable instrument for repeated measuring (Pevalin, 2000).

Hospital Anxiety Depression Scale (HAD). The HAD is a rating scale concerning degree of anxiety and depression. It was constructed by Zigmond and Snaith (1983), for use with physically ill people. It has since been revised to be used as a rating scale for anxiety and depression (Herrman, 1997). The instrument consists of fourteen statements with four response alternatives (i.e., 0 to 3), ranging from positive to negative or vice versa. There are seven statements regarding anxiety and seven regarding depression. Life Orientation Test (LOT). The test (Scheier & Carver, 1985) consists of eight items, plus four filler items. The task of each participant is to decide whether or not one is in agreement with each of the items described, on a scale of 0-4, where 0 indicates "strongly disagree" and 4 indicates "strongly agree". The test measures dispositional optimism, defined in terms of generalized outcome expectancies. Parallel Test Reliability is reported to 0.76 and Internal Consistency to 0.76 and Test-Retest reliability to 0.75 (Norlander, Bergman, & Archer, 2002).

Pain Area Inventory (PAI). The test (Bood *et al.*, 2005) consists of two anatomical images of a human being, one frontal and one dorsal. The task of the participants was to indicate and color with a color pen their areas of pain. This test was given both before and after the treatment period. For scoring, a transparent, plastic film is then placed over the colored areas on both figures. Each figure is divided into 833 equal-sized squares (total 1666), and the number of colored squares was calculated. The test was validated (Bood *et al.*, 2005) through comparisons with other instruments by examining relationships with total number of pain types reported, number of connected pain areas, most severe pain intensity, normal pain intensity, and pain frequency. The data yielded acceptable values (Standardized item alpha= 0.84, *R*= 0.70). Test-Retest reliability was examined through using a group of pain patients who completed the PAI on two occasions, seven weeks apart (*r*= 0.92).

Normal Pain and Worst Pain-Visual Analog Scale (VAS). These scales were used for measuring normal pain and experienced worst pain. They consisted of a 100 mm horizontal line with the anchors “no pain” on the left extreme and “excruciating pain” on the right extreme. VAS is considered the “gold standard” for assessment of clinical pain, and changes in VAS score are regarded as significant evidence of individual response to treatment, placebo, or experimental manipulation (Yarnitski, Sprecher, Zaslansky, & Heimli, 1996). The accuracy and precision have been examined for both clinical and experimental pain, and found adequate (Price, 1988).

Sleep Quality (SQ). This instrument (Norlander, Johansson, & Bood, 2005) consists of 11 questions that tap the sleeping habits of the participants, such as “How often do you feel tired on week days?”, “How often do you feel you did not get enough sleep?”, “How do you feel you usually sleep?” Responses to 9 of the questions are given on 0-4 scales, to 1 question on a 0-5 scale, and finally to 1 question on a 0-8 scale. The psychometric properties were examined by comparing healthy and sick people, and using Cronbach’s alpha ($\alpha = 0.88$).

Результаты

Все анализы проводились с помощью рангового теста Wilcoxon, сравнивающего результаты до и после периода лечения.

Значительное уменьшение количества «областей боли» ($Z = 1,99$, $p = 0,046$) после периода лечения (см. Таблицу 1 для средних значений и стандартных отклонений). Существовало также значительное снижение опыта «Худшая интенсивность боли» ($Z = 2,20$, $p = 0,028$). Для «нормальной интенсивности боли» было небольшое уменьшение, но разница была незначительной ($p = 0,50$).

После периода лечения по сравнению с предшествующим периодом ($Z = 2,20$, $p = 0,028$) пункты общего анкетирования здравоохранения (GHQ-12) были значительно снижены (что указывает на улучшение общего состояния здоровья).

После периода лечения наблюдалось значительное снижение степени «беспокойства» ($Z = 2,26$, $p = 0,024$) и «депрессии» ($Z = 2,06$, $p = 0,039$), см. Таблицу 1.

Table 1. Values for the dependent variables, before and after the treatment.

Dependent Variables	Means (SD)		p^*	r^{**}
	Before	After		
Pain Areas (PAI)	35.83 (26.60)	11.00 (7.56)	0.046	0.57
Worst Pain (VAS)	46.67 (25.94)	33.58 (19.47)	0.028	0.63
Normal Pain (VAS)	18.91 (19.22)	15.50 (12.68)	0.50	0.19
General Health (GHQ-12)	15.67 (8.48)	8.33 (6.02)	0.028	0.63
Anxiety (HAD)	10.00 (3.69)	5.67 (2.80)	0.024	0.65
Depression (HAD)	6.83 (3.19)	2.17 (1.83)	0.039	0.59
Optimism (LOT)	18.83 (4.49)	21.50 (4.76)	0.026	0.64
Sleep Quality (SQ)	21.00 (10.90)	24.17 (8.56)	0.068	0.53

Notes: * = significance at 0.05 level; ** Effect sizes are presented as Pearson’s r .

Существовал также значительный рост «Оптимизма» ($Z = 2,22$, $p = 0,026$). Было небольшое незначительное увеличение опыта «качества сна» ($p = 0,068$).

Дискуссия

Цель настоящего исследования состояла в том, чтобы получить информацию о том, может ли 10-недельная комбинированная программа лечения с релаксацией в флотационном цикле и последующих психотерапевтических сеансах, может быть полезна для лиц, страдающих синдромом выгорания, с симптомами стресса, усталости и проблемы организации повседневной жизни.

Шесть исследуемых лиц значительно улучшились в течение десяти недель лечения и испытали много положительных эффектов. Когда программа началась, все они находились на грани полного выгорания, в конце концов, все участники испытали, что они полны энергии и силы, поэтому ни они, ни их врачи не оценили, что нужен больничный отпуск. Все они продолжали работать после периода лечения. Эти положительные результаты также соответствовали анализу собранных качественных данных (Kjellgren, Buhrkall, & Norlander, 2010). Эта комбинированная программа лечения представляется многообещающей и должна быть дополнительно оценена в будущем рандомизированном контрольном исследовании (РКИ) с более крупным количеством исследуемых. Потребность в RCT метода флотации-REST ранее была предложена ван Дирендонком и Те Нийенхуисом (2005).

Еще один интересный вывод в этом исследовании заключается в том, как такой короткий период лечения, равный 10 неделям, как представляется, дает общий и весь оздоровительный эффект для лиц, находящихся на грани долгосрочного больничного, из-за усталости и истощения. Все включенные лица страдали (до начала программы) от проблем со сном, болей, нехватки энергии и чувствовали себя настолько подавленными высокой стрессовой нагрузкой, что у них были проблемы с организацией их повседневной жизни.

Какая часть лечения, которая привела к наибольшему успеху в области здравоохранения, не может быть оценена на основе этого ограниченного исследования. Наше убеждение в том, что расслабленное состояние в капсуле, предшествовавшее психотерапевтическим сеансам, поддерживало и делало психотерапевтический процесс и развитие еще более эффективными. Разумеется, никакая причинность не может быть установлена из этого маломасштабного исследования без контрольной группы, но, несмотря на это, это может быть небольшим и ценным вкладом в эту область. Учитывая эти ограничения, результаты исследования обсуждаются ниже.

В ходе программы лечения произошло значительное улучшение общего состояния (как измерено с помощью GHQ-12). Это многомерный масштаб, который оценивает несколько аспектов проблем (например, Sánchez López & Dresch, 2008). В настоящем исследовании использовалось еще несколько инструментов, предназначенных для оценки симптомов на более подробном уровне. Результаты этих инструментов показали, что во время лечения произошло значительное снижение степени депрессии и беспокойства (шкала HAD). До начала лечения ни один из участников не находился в «нормальном» диапазоне ни для депрессии, ни для беспокойства; после десяти недель они показали степень депрессии и беспокойства, сходную с здоровыми людьми. Кроме того, для оптимизма (LOT-шкала) наблюдался значительный рост позитивного взгляда на жизнь, нахождение в соответствии с понижением тревоги и депрессии. Все это указывает на повышенное благополучие. Было также незначительное увеличение опыта качества сна (SQ-тест), что также может отражать об-

щую тенденцию к повышению уровня благосостояния и снижению стресса.

Шесть человек испытывали боли в разных частях своего тела (шея, плечи и поясница) как часть их клинической картины. В течение периода лечения наблюдалось значительное уменьшение масштабов болезненных областей (шкала PAI), а также значительное снижение их тяжелой болевой синдрома. Они также испытали незначительное снижение их нормальной интенсивности боли.

Наш вывод состоит в том, что эта программа лечения была успешной, а также очень высоко оценена участниками. Все они выразили огромную благодарность за то, что смогли принять участие в этом проекте. В течение периода лечения ни один участник не находился в отпуске по болезни, всем участникам было разрешено отсутствовать на занятиях около 4 часов в неделю в течение 10 недель, чтобы сделать возможным участие в программе. В метаанализе флотации-REST в качестве единственного лечения (van Dierendonck & te Nijenhuis, 2005) было обнаружено, что эффекты флотации-REST усиливаются за счет повторных экспозиций, и было высказано предположение, что участники научились получать больше прибыли от повторных сеансов и может лучше интегрировать эффекты. В настоящем исследовании использовалось 20 сеансов флотации-REST (а также 10 психотерапевтических сеансов), число которых, по-видимому, было достаточным для получения клинически значимого результата. Наше предложение состоит в том, что комбинация с психотерапией еще больше повысила способность участников получать положительный эффект.

Поскольку это не рандомизированное исследование, а контрольная группа отсутствует, невозможно оценить, какая переменная (релаксация в капсуле, психотерапевтические сеансы, плацебо) вызвала благоприятные эффекты лечения. Это необходимо оценить в будущих исследованиях. Кроме того, мы надеемся, этот многообещающий результат может вдохновить и вызвать энтузиазм по возможности в течение очень короткого периода (10 недель) прекратить огнеупорную состояние и вместо этого вызвать состояние хорошего самочувствия и уверенности.

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