ERICKSONIAN HYPNOSIS IN SEXUAL REHABILITATION OF PATIENTS WHO UNDERWENT RADICAL, NERVE-SPARING PROSTATECTOMY

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ABSTRACT

The objective of the present research is to assess the effectiveness of an intervention based on Ericksonian hypnosis in patients who underwent radical, nerve-sparing, prostatectomy in order to improve healthcare programmes. This study aims at: 1) testing the potential of hypnosis as a tool to reduce the time needed to recover sexual function in patients who underwent nerve-sparing radical prostatectomy; 2) assessing the potential impact of the hypnotic treatment on perceived quality of life. Patients were randomly assigned to the control and experimental groups; in the experimental group, participants received, along with the standard rehabilitation programme, a hypnotic intervention programme which consisted of 30 minutes individual hypnosis sessions, twice a month for nine months. The results of this preliminary study indicate that neither group showed a complete recovery of erectile function, but the use of Ericksonian hypnosis can speed up the recovery of erectile dysfunction and improve the quality of life of patients who underwent nerve-sparing radical prostatectomy and opens the path to new studies in this field.

Key words: Nerve-sparing radical prostatectomy, erectile dysfunction, hypnotic programme for sexual rehabilitation, quality of life.

INTRODUCTION

During the early years of the twentieth century, Milton Erickson, physician and psychiatrist, following the lead of the Nancy School, directed by Hppolyte Bernheim (1840–1919), provided a pioneering and innovative contribution in the field of hypnosis. He rejected all supernatural or pathological interpretation of the phenomenon: hypnosis was redefined as a peculiar state of consciousness that is *physiological*, natural and reversible. It is a different but ordinary state of consciousness that allows individuals to influence physical, psychical and behavioural conditions. Ericksonian hypnosis is a psychotherapeutic technique that stems from a naturalistic view of the trance state and is based on identifying and respecting the subject's personal characteristics. The subject, in other words, doesn't take a passive and submissive role, but becomes an active protagonist of the inductive process in which he is involved. During a hypnotic induction, patients are helped by Ericksonian therapists to direct their attention internally in order to come into contact with their qualities and personal resources

to use them during the whole therapeutic process. The hypnotherapeutic work is a space co-constructed by the subconscious of the person who seeks help, that of the therapist and by the relationship that is established between them. The peculiar empathetic relationship between therapist and patients is called the '*hypnotic bubble*' and constitutes an essential condition to lead to therapeutic change (Gava et. al., 2012). An optimal rapport is built and maintained by using several techniques, among which *responsive observation* is particularly important. The therapist must be trained to precisely detect all signals, both verbal and non-verbal, that allow him or her to deepen the knowledge of the patient's inner world. Hypnosis, as we defined it, is a relational experience that occurs within the subject, is based on his symbolic system and has behavioural consequences: it leads individuals to modify and adapt their relational style. In the Ericksonian idea of hypnotherapy, the subconscious is viewed as a place that contains all past experiences, present expectations of the future and all the skills contained in every human being. The hypnotherapist ultimately aims to let the abilities and resources of the individuals he is working with emerge in order to allow them to express themselves in a balanced and harmonic way. Empirical evidence, coming both from the medical and the psychotherapeutic fields, supports the effectiveness of hypnosis. Since distant times, and in several cultures, different forms of hypnosis have been used therapeutically to manage pain (Greene & Reyher, 1972; Lennox,.1970; Lynch 1999; Crasilneck & Hall, 1973). Eventually, hypnosis became more widely known as a specific way of functioning of the human being. As a consequence, besides being used in clinical fields – as in several medical specialisations, in dentistry and psychology (Armfield & Heaton, 2013; Patel et al., 2000; Shaw & Niven, 1996; Lievens and de Leenheer, 1991) – it is also used in extra-therapeutic contexts such as in stage hypnosis, in sport and in research. It is also increasingly adopted with good results in the management of emotions (anxiety disorders, panic attacks, management of anger and sadness) and in the treatment of chemical addictions (Nash et al., 2009; Hammond, 2010; Barnes et al., 2010; Page & Handley, 1993; Steggles, 1999; Der & Lewington, 1990; Swartz, 1981). It is used in obstetrics and in preparing women for childbirth (Goldman, 1992; Llanos, 1985; Madden et al., 2012; Mehl-Madrona, 2004) and in dermatology to cure several psychosomatic conditions (Shenefelt, 2003; Frederick & Phillips ,1992). In recent years hypnosis has also been used in oncology as a psychological support and emotion regulation tool and to manage side effects of medical therapies such as nausea, vomiting and fatigue (Sohl et al, 2010; Jakubovits, 2010; Carlson & Bultz, 2008). Its use is also correlated with a higher survival rate (Spiegel & Moore, 2007) and can contribute to reducing hot flashes, anxiety and insomnia in breast cancer survivors (Elkins et al., 2008).

At the present time there are no studies investigating the effectiveness of hypnosis in rehabilitating patients who have undergone radical, nerve-sparing prostatectomy. In 2012 around 36,000 new cases of prostate tumour have been reported in Italy (Associazione Italiana Registro Tumori, 2012). This condition onsets around 55 years of age and reaches its maximum incidence starting at 65 years of age. Prostate tumour originates from an uncontrolled growth of the cells inside the gland. In its initial phases, the condition is asymptomatic while when the tumoural mass grows it leads to urological symptoms. Diagnosis is made by measuring PSA (prostatic-specific antigen) in the bloodstream: values ranging from 0 ng/ml and 4 ng/ml are considered 'normal' while when values range between 4 and 10 ng/ml there is a 25 per cent probability of finding a carcinoma; this percentage reaches 50 per cent for values higher than 10 ng/ml. The PSA measurement is followed by a transrectal prostate ultrasound. If

the PSA values are high and the images of the ultrasound show 'dubious' areas, a transrectal ultrasound guided prostate biopsy is carried out to take small samples of prostate tissue that will undergo histologic examination to verify the presence of the tumour. The treatments for prostate tumours include radical surgery, radiotherapy, brachytherapy and hormone therapy. Each of these has specific benefits and side effects that can heavily influence the patient's quality of life. The choice of the therapeutic strategy is guided by several factors: the size of the tumour (and the potential involvement of lymph nodes), age of the patient, his general health condition and his expectations regarding the preservation of the sexual function. The most common and feared side effects caused by these treatments are urinary incontinence and erectile dysfunctions. Often the emotional impact that follows a diagnosis of prostate tumour is so strong that it can compromise sexual functioning, even before the beginning of treatment. Patients are so scared by the disease and are so intensely focused on the desire to overcome it that they tend to move sexual intimacy to the background. After being diagnosed, the loss or reduction of sexual pleasure are strictly related to anxiety, depression, and frequently to communication problems with the partner (Wade et al., 2013). In other cases the fear of functional damage prevails and leads to changes in the patient's sexual behaviour, in some sort of preventive preparation for the worse to come. Prostatic pathology compromises a patient's own self-perception and the ability to relate with both women and men. The impact can provoke a sense of detachment from the patient's own body image, it can damage his virility and lead to a sense of inadequacy toward the sexual partner. Therefore, prostate tumour marks a 'before' and an 'after' in the history of the individual and of his sexuality: there is a past that is remembered as the time of wellbeing, of pleasure, seduction, desire and 'power'; and then there is the present time, characterised by physical decadence, by the self-representation of being a mutilated man, by the alteration of self-esteem, shame and embarrassment. Rehabilitative options involving drugs that guarantee erections often lead to the sensation of non-naturalness and spontaneity. Anxiety for the loss of sexual competence grows and the intimate confidence of the couple is reduced in favour of embarrassment and hesitation (Lintz et al., 2003; et al, 2002; Lafaye et al, 2014). Considering these aspects it is evident that patients who suffer from prostate tumours need specific interventions involving a multidisciplinary team as suggested by the 'Guidelines for the Diagnosis and Treatment of Prostate Carcinoma' (Rete Oncologica Nazionale, 2009). This position is also supported by a document issued on 23 June 2008 by the Council of the European Union:

> To attain optimal results, a patient-centred comprehensive interdisciplinary approach and optimal psycho-social care should be implemented in routine cancer care, rehabilitation and post-treatment follow-up for all cancer patients.
>
> (Council of the European Union, 2008; art. 5)

The same institution also invited the members of the EU to consider the patients' psychosocial needs as a priority (ibid; art. 19).

The rehabilitative intervention carried out during and after treatment (Lintz et al. 2003) has the following general goals: first, to lead the patient and the couple to a redefinition of the self that takes into account the limits imposed by the disease and, second, to stimulate in the patient and in the couple new adjustment strategies (sexual counselling addressed to the individual or to the couple as a complement to medical treatments).

The objective of the present research is to assess the effectiveness of an intervention based on Ericksonian Hypnosis in patients who underwent radical, nerve-sparing prostatectomy in order to improve healthcare programs. More specifically this study aims at: 1) testing the potential of hypnosis as a tool to reduce the time needed to recover sexual function in patients who underwent nerve-sparing radical prostatectomy; 2) assessing the potential impact of the hypnotic treatment on perceived quality of life.

METHODS

PARTICIPANTS

Patients aged 45–70 who underwent radical, nerve-sparing prostatectomy during the six months preceding the beginning of the study were enrolled at the urology department of the Ospedali Riuniti di Rivoli. All patients gave their consent to participate to the study, which had been approved by the ethics committee (Comitato Etico Interaziendale ASO San Luigi Gonzaga di Orbassano). Exclusion criteria included previous psychiatric diagnoses and deficits in cognitive functions.

PROCEDURES

Patients were randomly assigned to two groups: the control group, in which patients were offered the standard medical programme offered by the rehabilitation clinic; and the experimental group, in which participants received, along with the standard programme, a hypnotic intervention programme. Patients of both groups were regularly checked at the rehabilitation clinic, in order to monitor their psychological condition and to intervene pharmacologically in cases of incontinence or erectile dysfunction when needed. Patients in the experimental group also took part in 30 minutes individual hypnosis sessions, twice a month for nine months. Hypnotic interventions consisted in verbal inductions targeting erectile dysfunction mainly through the use of metaphors aimed at promoting the healing of the nerves that were damaged during surgery. Additional objectives were the improvement of the patient's general wellbeing and the management of anxiety and/or depressive disorders that could occur during the period of recovery of erectile function. A retrospective analysis of the clinical records of patients who underwent radical, nerve-sparing prostatectomy between 2009 and 2012, indicates that the spontaneous recovery of erectile function starts on average around 18–24 months after the intervention (Sivarajan et. al. 2014).

MEASURES

Both groups were assessed on four occasions: enrolment (T0); three months from enrolment (T1); six months from enrolment (T2); nine months from enrolment (T3). During these four assessments the following questionnaires were administered to assess the differences of the two groups both in the physical and psychological domains.

- Male sexuality domains were assessed with the IIEF5, a brief five-item version of the original International Index for Erectile Function scale (Rosen et al., 1999), which contains 15 items. The test is a five-level Likert scale, where low scores indicate reduced sexual function. Scores range from 5 to 25. The severity of erectile dysfunction can be classified

in five categories based on score ranges: severe (5–7); moderate (8–11); mild to moderate (12–16); mild (17–21); no dysfunction (22–25).

- Quality of life was assessed with the Psychological General Well-Being Index – PGWBI (Depuy, 1984), Italian version (Grossi et al. 2002) which was developed to provide an index measuring individual wellbeing or suffering. The 22 items of the questionnaire pertain to six subscales: anxiety, depression, positivity and well-being, self-control, general health and vitality, and provide an index of general wellbeing. Around ten minutes are needed to complete the questionnaire.
- The Hospital Anxiety and Depression Scale – HADS (Zigmond& Snaith, 1983), Italian version (Costantini et al., 1999) is a questionnaire specifically developed to identify anxiety and depression states in patients affected by medical diseases. The questionnaire comprises two subscales of seven items each, one for anxiety and one for depression. Each item is scored on a four-level Likert scale ranging from 0 to 3. Normative data indicate scores ranging from 0 to 7 as normal, from 8 to 10 as borderline while scores equal or greater than 11 characterise individuals with clinically relevant depression or anxiety.
- The Emotion Regulation Questionnaire – ERQ-10 (Gross & John, 2003), Italian version (Balzarotti et al., 2010), was used to assess the participants' style in regulating emotions. More specifically, ERQ investigates the presence of two regulation strategies: *reappraisal* and *suppression*. Reappraisal defines the ability to modulate the interpretation of emotional stimuli in order to modify their impact; suppression defines the tendency to suppress one's own emotions. The questionnaire is a 10-item self-report and each item is scored on a seven-level Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).
- Finally, the administration of the ITAPI-S (short version of the Italian Inventory of Personality; Perussia, 2005) was used to assess personality traits of the participants. The traits included in the questionnaire are: Dynamism (F1); Vulnerability (F2); Empathy (F3); Conscientiousness (F4); Imagination (F5); Defensiveness (F6); Introversion (F7).

DATA ANALYSIS

All data were checked for deviations from normal distributions with Shapiro–Wilk test (SWtest). Data were analysed with a mixed-factors analysis of variance (ANOVA) when the SW test was not significantly different from normality ($p > 0.05$) and Newman–Keuls was used for post-hoc testing. All mixed factors ANOVA were structured as 4 × 2 ANOVAs where 4 represented the number of time points where psychological testing took place (i.e. T0, T1, T2 and T3) and 2 represented the number of the groups (i.e. the group treated with hypnosis and the group not treated with hypnosis). When data were significantly different from normality ($p < 0.05$) we first performed a Friedman ANOVA on each group and then, in the case of a significant ANOVA result, post-hoc effects were analysed with a Wilcoxon signed-rank test in each group. Finally, when non-parametric tests were used, interesting between-groups differences were analysed with a Mann-Whitney U test.

RESULTS

ITAPI AND ERQ

Before analysing the scale we checked for potential baseline differences between control and experimental (hypnosis) groups. Mixed factors ANOVA found no differences either in the ITAPI or in the ERQ scale, showing that participants of both groups did not differ with respect to their personality traits and emotions regulation.

IIEF

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(2) = 16.41$, $p = 0.01$]. Wilcoxon tests reported a significant difference between IIEF scores in T3 in respect to all other time points (for all comparisons, $p < 0.05$) and in T2 compared to T0 ($p < 0.05$). In this group, T1 was not different from T0. In the control group, Friedman's ANOVA did not show any significant difference between time points. However, the Mann-Whitney U test did not find any significant difference between groups, possibly due to the high variance of the samples.

PGWBI GLOBAL

Mixed-factor ANOVA showed a significant effect of the between-factor Group [$F(1,18) = 5.9$; $p = 0.02$], a significant main effect of the within-factor Time [$F(3,54) = 23.12$; $p = 0.00$*] and a significant effect of the interaction [$F(3,54) = 3.8$; $p = 0.02$]. Since the interaction encompassed both main factors, we further examined it with a Newman–Keuls post-hoc analysis, finding in the experimental group a difference between T3 and all other time points (for all comparisons, $p < 0.01$) and between T2 and the other time points (for all comparisons, $p < 0.01$). T1 did not differ from T0. In the control group only T3 was different from T1 ($p < 0.05$) and T0 ($p < 0.01$). Finally, the analysis showed a significant difference between the two groups in T3 ($p < 0.01$).

PGWBI DEPRESSION

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 20.34$, $p = 0.001$]. The Wilcoxon test reported a significant difference between T3 and all the other time points (for all comparisons, $p < 0.05$), in T2 compared to T1 ($p < 0.01$) and a tendency toward significance in T2 compared to T0 ($p = 0.09$). In this group, T1 was not different from T0. In the control group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 8.31$, $p = 0.04$]. However, the Wilcoxon test revealed a significant difference only between T3 and T2 ($p < 0.05$). Mann-Whitney U tests found significant differences between the two groups at T2 and T3 (for both comparisons, $p < 0.01$).

PGWBI POSITIVITY

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 23.09$, $p = 0.0004$]. The Wilcoxon test showed a significant difference between T3 and all the other time points (for all comparisons, $p < 0.01$) and in T2 compared to all other time points (for all comparisons, $p < 0.01$). In this group, T1 was not different from T0. In the control group, Friedman's ANOVA showed a significant difference between time points

[$\chi^2(3) = 14.27$, $p = 0.003$]. Wilcoxon revealed only a significant difference between T3 and all other time points (for all comparisons, $p < 0.05$). Mann-Whitney U found significant differences between the two groups at T2 ($p < 0.05$) and T3 ($p < 0.01$).

PGWBI AUTO-CONTROL

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 16.82$, $p = 0.001$]. Wilcoxon test reported a significant difference between T3 and all the others time point (for all comparisons, $p < 0.05$). In the control group, Friedman's ANOVA did not show a significant difference between time points. Mann-Whitney U test found significant differences between the two groups at T3 ($p < 0.01$).

PGWBI HEALTH

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 10.14$, $p = 0.02$]. Wilcoxon test reported a significant difference between T3 and all other time points (for all comparisons, $p < 0.01$) and in T2 compared to all other time points (for all comparisons, $p < 0.05$). In this group, T1 was not different from T0. In the control group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 20.52$, $p = 0.0001$]. Wilcoxon test reported a significant difference between T3 and all other time points (for all comparisons, $p < 0.05$) and between T2 compared to T1 ($p < 0.05$) but not compared to T0. No difference was found between T1 and T0 in the control group. Mann-Whitney U test found significant differences between the two groups at T3 ($p < 0.01$).

PGWBI VITALITY

In the hypnosis group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 23.34$, $p = 0.0003$]. Wilcoxon test reported a significant difference between T3 and all other time points (for all comparisons, $p < 0.05$). No difference was found between T2, T1 and T0 in the hypnosis group. In the control group, Friedman's ANOVA showed a significant difference between time points [$\chi^2(3) = 8.14$, $p = 0.04$]. Wilcoxon test reported a significant difference between T3 compared to T2 ($p < 0.05$) and compared to T1 ($p < 0.05$) but not compared to T0. No difference was found between T2, T1 and T0 in the control group. Mann-Whitney U test found significant differences between the two groups at T2 ($p < 0.05$) and T3 ($p < 0.01$).

DISCUSSION

This study aimed at 1) assessing the effectiveness of Ericksonian hypnosis in reducing erectile dysfunction recovery time, which normally lasts around 18–24 months; and 2) investigate whether a connection exists between hypnosis administration and improvement of quality of life.

ITAPI AND ERQ

The groups did not differ in ITAPI or ERQ scores, which means that 1) participants form a heterogeneous group with regard to personality traits and emotion regulation styles and 2)

that randomisation produced comparable groups. More specifically participants generally used an emotion regulation style that consists in modifying emotional impact through a different interpretation of emotional events.

IIEF

Both groups showed no significant differences between T0 and T1. The experimental group showed improvement in the recovery of spontaneous erection in terms of higher frequency of tumescence compared to the control group, especially between T2 and T3. Therefore we could hypothesise that those who received hypnosis had faster recovery. This result is coonsistent with studies that found that hypnosis can shorten recovery from surgical wounds (Ginandes et al., 2003) and bone fractures (Ginandes et al., 1999). It may be interesting to extend the follow up observation in order to verify a potential ceiling effect (Figure 1)

PGWBI

At T0 the groups showed no differences in the global wellbeing index, confirming that the sample was heterogeneous as shown by the results of ERQ and ITAPI. More specifically, the experimental group showed a significant increase of perceived wellbeing both between T1 and T2, and between T2 and T3. In the control group this improvement was significant only at T3, in other words it began later and was less gradual. This result is consistent with other studies that demonstrated the effectiveness of hypnosis in rehabilitation contexts and to regain wellbeing (Figure 2).

More specifically, the depression subscale (D) showed improvement after T1 confirming the result of the general analysis. Both groups showed a significant increase in depression at T1 but hypnosis allowed participants in the experimental group to significantly improve scores after six months and at nine months. The control group also improved but only between T2 and T3. The increase in depression scores three months after surgery may be related to the unmet expectations of the patients. Despite the fact that medical staff explain that there will

Figure 1. IIEF scores. Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs (standard errors of the mean).

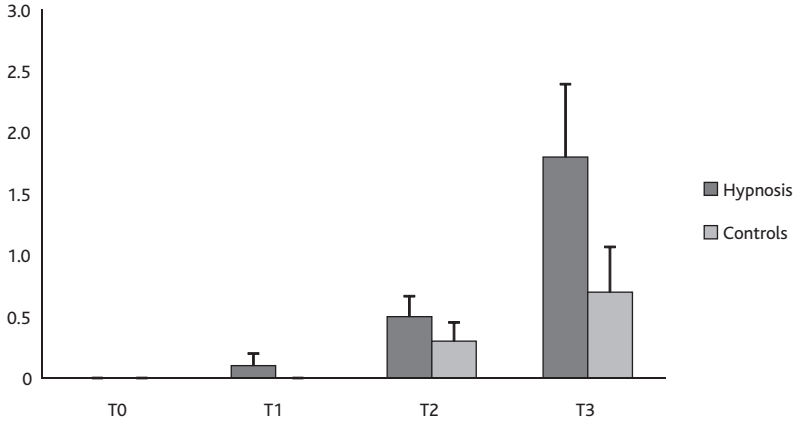


Figure 2. PGBI global (G) scores.Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs.

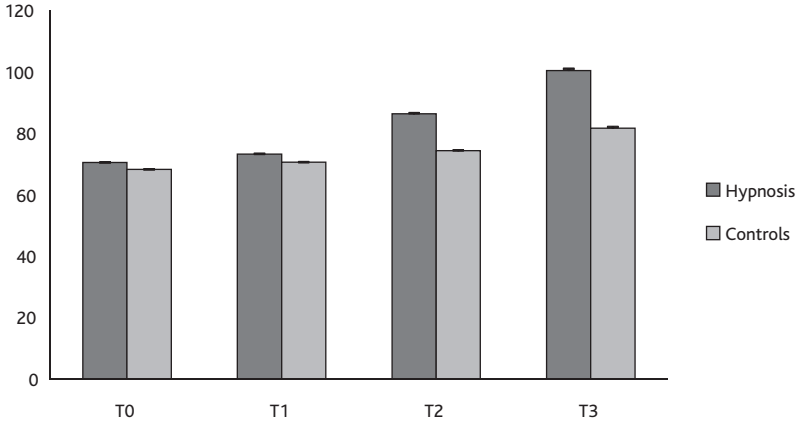
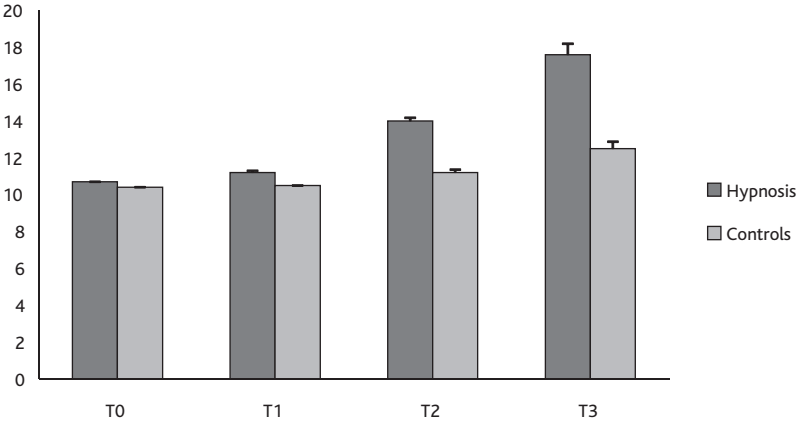


Figure 3. PGBI depression (D) scores. Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. The depression index is an inverse index so that the higher the score on the y *axis, the less the depression felt by participants. Error bars represent SEMs.*



be no immediate recovery of erectile function, patients usually expect a quick recovery of sexual functions once incontinence is resolved. When they realise that that is not the case, they often feel discouraged and frustrated. Hypnosis increased their ability to react to such frustration. This result is coherent with other studies that demonstrated that hypnosis can alleviate depressive and anxious states in oncologic patients (Bakke et al. 2002; Untas et al. 2013) (Figure 3).

The positivity subscale (P), which measures the degree of general satisfaction regarding everyday life and mood, showed no difference in the experimental group between T0 and T1, while after T2 we observed a significant improvement compared to T1; the improvement was constant and the difference between T2 and T3 was significant and greater compared to previous comparisons. This result is consistent with the findings of a very recent study that

Figure 4. PGBI positivity (P) scores. Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs.

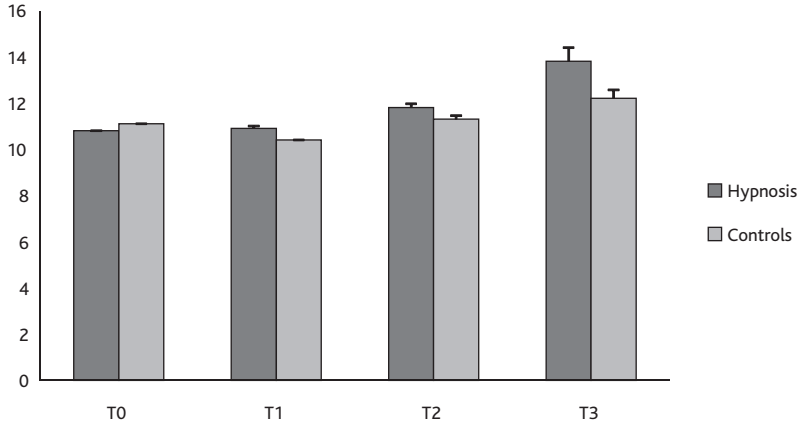
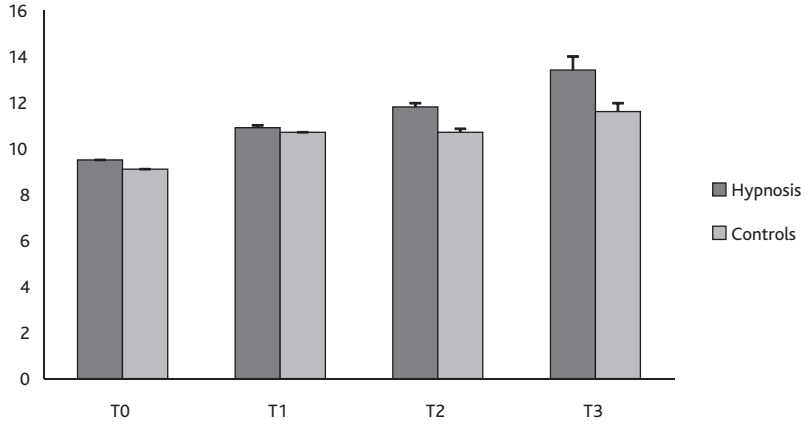


Figure 5. PGBI auto-control (AU) scores.Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs.



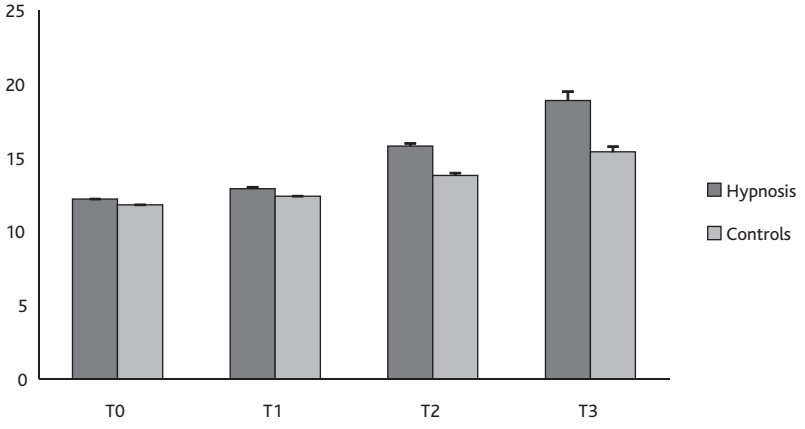
showed that the use of hypnosis can contribute to increase the level of perceived happiness (Ruysschaert, 2014). (Figure 4)

In the self-control subscale (AU), which describes the perception of emotional stability and self-confidence, the experimental group showed an improvement at nine months while the control group showed none. We observed greater coherence in the answers provided by the experimental group along the first three assessments compared to the control group that showed greater variability (Figure 5).

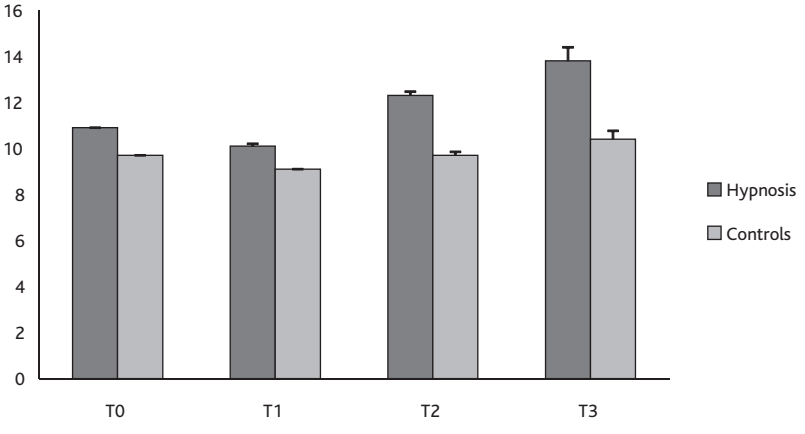
In the health subscale (H), the experimental group showed a significant difference compared to T2 and T1 at nine months. The control group showed similar results but it seems that a relapse occurred at T2; therefore the peak seems to be at T1 and then at T3 (Figure 6).

The vitality (V) subscale, which indicates the perception of strength and physical and mental activity, showed an improvement in the experimental group coherently with the results of the other tests. More specifically we observed a significant difference between T2 and T1, and T3

Figure 6. PGBI health (H) scores. Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs



Figigure 7. PGBI vitality (V) scores.Dark grey bars represent scores from the hypnosis group while light grey bars represent scores from the control group. Error bars represent SEMs.



and T2, the latter difference being the greater of the two changes. The control group showed an improvement at nine months whereas there was no significant change at T1. Also in this case we observed greater coherence in the results of the experimental group (Figure 7).

Finally, we observed significant differences between the two groups in all subscales at nine months. In other words the experimental group expressed greater wellbeing compared to the control group. Results showed that patients who underwent hypnotic sessions twice a month for nine months experienced a more rapid recovery of tumescence, which is usually a prelude to recovery of spontaneous erection. Thus hypnotic techniques may have contributed to speed up the natural healing process of the nerves involved in erection. The experimental group perceived a higher quality of life, and this finding supports our initial hypothesis: hypnosis can positively influence the mood of patients in the post-operative phase. More specifically, it helped subjects react to mood deterioration three months after surgery, allowing for faster recovery by stimulating the use of personal resources and by increasing vitality. In conclusion,

neither group showed a complete recovery of erectile function, but participants in the hypnosis group reported more frequent episodes of tumescence. Furthermore, the perception of the quality of life of these individuals was better than in the control group, and this improvement can have an influence on the ability of the body to restore nerve pathways responsible for erection (Penedo et al.,2006; Andersen et al. 2007; Graab et al., 2006) and on the ability of the subject to react to the frustration that perceiving a loss of virility can cause. We can now suggest that the use of Ericksonian hypnosis with patients who underwent radical, nerve-sparing prostatectomy can speed up recovery processes of erectile function through two pathways: on the one hand, by directly stimulating the body to 'repair' the nerves that were damaged during the intervention; on the other, by indirectly favouring a faster recovery from depressive symptomatology, which characterises the post-operative phase, improving emotional stability, positivity and vitality. Further research could focus on determining the impact of hypnosis on each of these pathways by monitoring the development of proteins and cells involved in nerve restoration. Ultimately this process improves the patients' perceived quality of life. Following the now widely accepted conception of the individual viewed as a whole comprising both mind and body (Aisenstein, 2006; Kepner, 1997), a state of psychological wellbeing can positively affect the functioning of the body and thus the repairing mechanisms of tissues. The results of this preliminary study indicate that the use of Ericksonian hypnosis can speed up the recovery of erectile dysfunction and improve the quality of life of patients who underwent nerve-sparing prostatectomy and opens the path to new studies in this field.

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