



DISTANT HEALING INTENTION TO AUTISTIC PATIENTS: AN EXPLORATORY STUDY

Intención de curación a distancia para pacientes autistas: un estudio exploratorio
Intenção de cura à distância para pacientes autistas: um estudo exploratório

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Abstract

Purpose: We tested effects of Distant Healing (DH) for autistic patients who were at a hospital in south of Brazil using CARS (Childhood Autism Rating Scale).

Subjects: Target patients were 10 serious autistic patients (7 male, 3 female, average age of 18.5y) who did not other illness. They were categorized at random into Test group (3 male, 2 female, average age of 20.2y) or Control group (4 male, 1 female, average age of 16.8y). Healers were 10 healers who lived in Brazil, Chile, Peru and Japan. The distance between patients and healers were from approximate 130 km to 1.87x10⁴ km (Japan to Joinville).

Methods: Distant healing sessions were done in 2005, from November 16th to December 10th (25 days). Each healer did DH to a patient once a day looking at a photo of the patient. Each patient received healing service from 2 healers every 5-days. Every patient was also being cared with usual medical care during the healing research.

Evaluations: The conditions of patients' illness were evaluated by a psychologist using CARS before the healing session and 3 months after the session. In addition, patients' parents and teachers also evaluated their patients using exploratory instruments.

Results: In the whole patients, CARS, parents and teachers' evaluations decreased after the healing session. The differences were not significant (Pared t-test, one tail, n=10. CARS: p=0.056, Parent: p=0.128, Teacher: p=0.128). In comparing Test with Control, CARS, parents and teachers' evaluations of the test group were smaller than the control group although these differences were not significant (t-test for difference CARS: p=0.143, Parent: p=0.348, Teacher: p=0.261). Comparing pre and post data in Test and Control: the CARS of test group decreased significantly from pre to after evaluations, what is not observed in the Parents and Teacher's scores (CARS: p=0.004, Parent: p=0.237, Teacher: p=0.173). The parents' scores show a decreased after the intervention at 5% significance for the control group. The CARS and Teacher's scores don't show this effect. The CARS, parents and teachers' scores are not correlated with each other. (CARS-Parents r=0.240; CARS-Teachers r=0.021; Parents-Teachers r=0.059)

Discussion and conclusion: We conclude that both treatments of usual medical care and DH could not recover patient's health. If comparing pre and post data in Test and Control groups it was observed that the test group's CARS scores decreased significantly from pre to post evaluations, what is not observed in the control group. However it was found several medications changes during the research so it could be an artifact produced by these changes.

Keywords: Autism, distant healing, laying-on-of-hands, prayer

Resumen

Objetivo: Hemos evaluado los efectos de la curación a distancia (SD) para pacientes autistas que están en un hospital en el sur de Brasil usando CARS (*Childhood Autism Rating Scale*).

Participantes: Fueron 10 pacientes autistas severos (7 hombres, 3 mujeres, edad promedio de 18.5 años) que no sufrían de otra enfermedad. Ellos fueron categorizados al azar en grupo teste (3 hombres, 2 mujeres, edad promedio de 20.2 años) o grupo control (4 hombres, 1 mujer, edad promedio de 16.8 años). Los sanadores eran 10 sujetos que vivían en Brasil, Chile, Perú y Japón. La distancia entre pacientes y sanadores era desde aproximadamente 130 km a 1.87x10⁴ (Joinville a Japón).

Métodos: Sesiones de curación distante fueron hechas en 2005 desde el 16 de Noviembre al 10 de Diciembre (25 días). Cada sanador hizo curación a distancia a un paciente, mirando su foto. Cada paciente recibió un servicio de curación desde dos sanadores cada 5 días. Cada paciente también estaba siendo atendido con tratamientos médicos convencionales, durante la investigación.

Evaluaciones: La condición de la enfermedad de los pacientes fueron evaluadas por un psicólogo usando CARS antes del periodo de curación y tres meses después de finalizado el tratamiento. Además, los padres y profesores de los pacientes también los evaluaron, utilizando instrumentos exploratorios.

Resultados: En general, las evaluaciones referentes al CARS, padres y profesores, descendieron después de la sesión de curación. Las diferencias no fueron significativas (prueba pareada de t-una cola, n= 10. CARS: 0.056, padres: p = 0.128, profesores: p=0.128). Al comparar el grupo de prueba con el control, los resultados del CARS, padres y profesores fueron mas bajos, aunque estas diferencias no fueron significativas (prueba de t para diferencia CARS: p = 0.143, padres: p= 0.348, profesores: p = 0.261). Comparando pre y post datos en grupo de prueba y control: El CARS del grupo de prueba descendió significativamente desde la evaluación previa a la posterior, lo que no es observado en los puntajes de padres y profesores (CARS: p= 0.004, padres: p= 0.237, profesor: p = 0.173). Los puntajes de los padres mostraron un descenso después de la intervención al 5% de significancia. Los puntajes de los profesores y del CARS no mostraron este efecto. Los puntajes del CARS de los padres y de los profesores no se correlacionan entre si. (CARS-padres = r =0.240; CARS- profesores r = 0.021; padres-profesores r= 0.059).

Discusión y conclusiones: Concluimos que ambos tratamientos (curación distante, tratamiento medico) no han podido lograr la recuperación de la salud de los pacientes. Si se compara los datos previos y posteriores en los grupos de prueba y control se observa que los puntajes del CARS en el grupo de prueba, disminuyeron significativamente desde las evaluaciones previas a las posteriores, lo que no es observado en el grupo control. Sin embargo, se encontraron varios cambios de medicación durante la investigación por lo que estos resultados pueden ser un producto de estos.

Palabras clave: Autismo, la curación distante, imposición de manos, plegaria.



Resumo

Objetivo: Utilizando o CARS (*Childhood Autism Rating Scale*), nós testamos os possíveis efeitos da intenção de Cura à Distante (CD) com pacientes autistas internados em um hospital no sul de Brasil.

Participantes: Foram 10 pacientes autistas graves (7 homens, 3 mulheres, idade média de 18.5) que não tinham outra doença. Eles foram alocados ao acaso em dois grupos: Teste (3 homens, 2 mulheres, idade média de 20.2) e Controle (4 homens, 1 mulher, idade média de 16.8). Os "curandeiros psíquicos" foram em número de 10 e moravam no Brasil, Chile, Peru e Japão. A distância entre os pacientes e curandeiros foi de aproximadamente 130 km a 1.87x104 km (Japão para Joinville).

Métodos: Sessões de CD foram conduzidas em 2005, de 16 de novembro a 10 de dezembro (25 dias). Através de fotografias dos pacientes (do grupo teste), cada curandeiro fez uma sessão por dia de CD voltada a um paciente. Assim, cada paciente do grupo teste recebeu a intenção curativa distante de 2 curandeiros todos os dias. Durante a pesquisa, todos os pacientes foram também cuidados com procedimentos clínicos habituais.

Avaliações: As condições clínicas foram avaliadas por um psicólogo através o CARS, aplicado antes do início da pesquisa e 3 meses depois da mesma. Além disso, os pais e professores dos pacientes também avaliaram os avaliaram usando instrumentos exploratórios.

Resultados: No total dos pacientes, as avaliações do CARS, pais e professores diminuíram depois da intervenção de CD. No entanto as diferenças não foram significantes (t-teste pareado, unilateral, n=10. CARS: p=0.056, Pais: p=0.128, Professores: p=0.128). Comparando o grupo Teste com o grupo Controle, as avaliações do CARS, pais e professores do grupo de teste foram menores que o grupo de controle embora estas diferenças não foram significantes (t-teste da diferença CARS: p=0.143, Pais: p=0.348, Professores: p=0.261). Comparando dados prévios e posteriores (a intervenção) nos dados dos grupos teste e controle: as avaliações CARS do grupo teste diminuíram significativamente das avaliações anteriores para as posteriores, o que não foi observado nas avaliações dos Pais e Professor (CARS: p=0.004, Pais: p=0.237, Professores: p=0.173). As avaliações dos pais para o grupo de controle decresceram depois da intervenção ao nível de significância de 5%. As avaliações do CARS e dos professores não mostram este efeito. Os escores do CARS, Pais e Professores não correlacionaram entre si. (CARS-Pais r=0.240; CARS-Professores r=0.021; Pais-professores r=0.059)

Discussão e conclusões: Nós concluímos que ambos os tratamentos, cuidado clínico habitual e CD não puderam recuperar a saúde dos pacientes. Comparando-se as avaliações do grupo Teste e Controle, antes e depois da intervenção, foi observado que os escores do CARS para o grupo teste diminuíram significativamente de antes para depois da intervenção de CD, o que não foi observado no grupo de controle. Porém ocorreram várias mudanças de medicamentos durante a pesquisa, assim este efeito pode ter sido um produto produzido por estas mudanças.

Palavras Chave: Autismo, cura à distancia, imposição de mãos, reza.

INTRODUCTION

Concept and Synonymous

Distant Healing (DH) could be "defined as an act of mentation to benefit another person's physical and/or emotional well-being at a distance" (Sicher, Targ, Moore, Smith, 1998, p. 242). Other terms with similar meaning include: intercessory prayer, mental, spiritual or psychic healing, non-contact healing and laying-on-of-hands.

Some DH and Related Studies

A classical double-blind and random study verified the effect of intercessory prayer in a cardiac care unit. Along ten months Byrd (1988) observed the possible prayer effects on 393 patients hospitalized with heart diseases in the San Francisco General Hospital. The results showed that the test group patients (n=201) decreased medical complications and had a more positive course than those of the control group (n=192). Several criticisms were addressed to this study, including the short follow-up time limited to the time the subjects were in the hospital and the not predefined data measures. A latter attempt to replicate the Byrd's results was conducted by Harris and collaborators (Harris et al. 1999) and showed positive outcomes.

The widest systematic series of experiments on Direct Mental Interaction with Living Systems - DMILS (DH is considered a type of DMILS) with human beings and animals was carried out by psychologist William Braud and their colleagues, especially anthropologist Marilyn Schlitz, most of them developed in Mind Science Foundation. Their studies include the verification of mental influence on skin conductance, sanguine pressure, muscular tremor, fish orientation, locomotion of small animals, hemolysis tax. Braud, Schlitz (1991) and Radin (1997) summarizing these studies indicated that there were 655 sessions involving 449 receivers (people or animals), 153 human senders and 13 main researchers. 57% of those experiments were significant at 0.5 level of significance. The combined result of those experiments would be obtained by chance once to 100 trillion times.

It seems to exist some evidence about the DH effect. Benor (1992) revised more than 150 formal, controlled DH studies and found that more than 66% with significant results (p<0.05). Other more recent studies also indicate this possibility. Sicher, Targ, Moore, Smith, (1998) conducted two separated randomized and double-blind DH studies. Distant Healers around US made a 10-week DH intervention trying to benefit advanced AIDS patients in San Francisco Area. 20 and 40 subjects took part in the first (pilot) and second (replication) study respectively. After 6 month follow-up the statistical results supported the DH hypothesis. Giving continuity to this study Elizabeth Targ (1999), from California Pacific Medical Center conducted another DH Study with 40 AIDS patients. Again the results were statically significant suggesting the therapeutic effect of DH.

Another DH research was conducted by Binder, Ebnetter, Saller and Wallach (1999). This double-blind pilot study verified if 5 experienced distant dealers could affect 14 diabetes type II patients, that were observed for a 16 weeks period. The overall results were heterogeneous. The Friedman test indicated some significant medical changes but without statistical meaning. In the psychological data several improvements were observed for the participants.

In the countries were this paper authors live a few studies of DH were carried out. For instance in Brazil a very few ones have being published. One of them was conducted by Radin in collaboration with Machado and Zangari



(1998) from Sao Paulo. Two double-blind studies verified the subject's autonomic nervous system fluctuations in relation to DH intentions directed to them. The first study was conducted in real time and the healing group was a 200 meters away. In the second study healers were Umbanda mediums in Sao Paulo, Brazil, and they were sending their healing intention two months earlier to the subjects 6.000 miles away, in Las Vegas, Nevada. The first study showed significant outcomes in increasing breathing rate and decreasing electrodermal activity in the isolated subjects. The second one provided significant isolated subjects' increase in the fingertip blood volume and electrodermal activity.

Another Brazilian study was conducted by Tosta (2004) and collaborators from Laboratory of Cellular Immunology of the University of Brasilia. This study evaluated the effect of the daily distant intercessory prayer during one week on 52 healthy medicine students. They were divided in 26 equal couples, and only one volunteer of each couple received the prayer. This randomized double-blind and controlled study produced a significant variation of the monocytes and neutrocytes' phagocytosis, as in the comparative analysis among the two groups as in the analysis done before and after the intervention. Commenting the study outcomes, Tosta indicated that it suggest that the prayer can act balancing the function of the immunity system.

Controversy in the Results

Astin, Harkness and Ernst (2000) conducted a systematic meta-analysis of studies that evaluated DH effect in complement to medical treatments. They considered electronic data (MEDLINE, PsychLIT, EMBASE, CISCOP, and Cochrane Library databases) until 1999 that fit in the following criteria: "random assignment, placebo or other adequate control, publication in peer-reviewed journals, clinical (rather than experimental) investigations, and use of human participants." 23 studies (5 with prayer as DH, 11 with noncontact Therapeutic Touch and 7 with other DH forms) including 2774 patients were examined. 57% (13) of these studies showed positive and significant results, 39% (9) had no significant outcome in the contrast with control group and 4% (1) presented a negative effect. The authors concluded: "The methodologic limitations of several studies make it difficult to draw definitive conclusions about the efficacy of distant healing. However, given that approximately 57% of trials showed a positive treatment effect, the evidence thus far merits further study." By adopting this conclusion this paper was criticized and in a part of response authors said: "While it is true that the results were not uniformly positive, the mathematical odds (based on a simple binomial test) that 13 of 23 studies would show a significant treatment effect ($p < 0.05$) are greater than 1 in a million. It is therefore unlikely that these results are due to chance alone."

However, as others psi researches areas, there is a lot of controversy among results. Two medical old studies didn't find positive outcomes (Joyce, Weldon, 1965; Collipp, 1969) and the same happened with an attempt to improve the self-esteem, anxiety and depression in patients (O'laoire, 1997) and to help alcoholics in their treatment through DH intentions. (Walker, et al. 1997) DH also seems to fail in help warts treatment (Harkness, Abbot, Ernst, 2000) and heart treatment (Aviles, et al. 2001) or to reduce chronic pain (Abbot et al., 2001). Another negative result was obtained in a study of 14 days intercessory prayer on complication-free recovery patients from coronary artery bypass graft surgery. (Benson, et all., 2006).

Approach to Mechanism of Distant Healing

There are studies focused on mechanism of DH. For example, Takeshige (1993), and Takeshige and Aoki (1994) using rats and rabbits as subjects, examined the possibility that EEG readings could be changed by an increase in serotonin levels as a result of external qi directed towards the pineal gland. Takeshige and Aoki (1994) concluded that qi might hamper N-acetyltransferase, increase the secretion of serotonin from the pineal body, and accordingly, the EEG reading might be changed because the serotonin receptor is not antagonistic to methysergide.

Yamauchi, Saitou, Yamamoto et al. (1996) asked several healers to try to treat, without contact, two groups of HeLa cells (cultured cancer cells) at their logarithmically proliferating period: one group had been given an aminoglycoside antibiotic (G418) as a lethal compound; and the other had been exposed to X-ray radiation (5 Gy or 10 Gy) as ionizing radiation. Quantitative analyses revealed no difference between the experimental and the control groups under the G418 condition, but there was a slightly higher rate of colony formation in the experimental group than in the control under the 10 Gy X-ray radiation condition.

Kataoka, Sugiyama, and Matsumoto (1997a) investigated the possible mechanism of external qi effects by examining human neutrophils, a kind of leukocyte, taken out of peripheral blood collected from healthy volunteers. They prepared phosphate-buffered saline (PBS; pH 7.4) samples in sealed containers and divided them into two groups: the experimental group was treated by external qi administered from the outside of the containers without physical contact (Qi-PBS), and the control group was left untreated (N-PBS). By using the measurements of chemiluminescence, Qi-PBS seemed to open the calcium ion channels of the neutrophils, allowing extracellular calcium ions to flow into the cells, and that this activated migration and phagocytization of the neutrophils.

Kataoka, Sugiyama, and Matsumoto (1997b) also conducted an experiment with established human leukemia-T cells (MOLT-4) as the targets. Effect or cells, that is, lymphocytes containing NK cells from normal peripheral blood, were treated classified N-PBS or Qi-PBS. Both N-PBS and Qi-PBS were mix-cultured with fluorescent-dyed target cells. The cytotoxic activity of the effectors was measured by the volume of broken fluorescent cells leaked out of the target cells. Measured activity of the experimental cells (when using Qi-PBS) was about 1.5 times greater than that of the control cells (when using N-PBS).

Kokubo, one of the authors, et al. have studied biophotons emitted from pieces of cucumber (Kokubo et al., 2007a, b, c). They made cucumber sample pairs of control and experiment, and then asked healers to try to increase intensity of biophotons from experimental samples. Healers did DH for 30 min. Results, intensity of biophotons from



experimental samples increased in healing condition, while there was no difference in control conditions. Moreover, time transition of intensity suggested that DH affects certain biochemical systems (Kokubo & Yamamoto, 2008).

Those approaches suggest that there are sensitive biochemical systems for DH, in other words, DH can be prevented easily by inhibitors.

Autistic disorder

As it was observed none of the above studies are related to Autism. We couldn't find DH studies with this kind of disorder. The closest disturbance DH study found was with depression. In a randomized, double-blind, longitudinal design study, Bruce Greyson (1996, p.447) examined the therapeutic effect of DH in 40 patients with major depression which were allocated to control or experimental group. This group showed greater improvement but it didn't reach statistical significance in comparison with control group.

However Autism could be a worst disorder to verify DH effect. In Japan, many healers claim empirically that mental deceases such as autism are not easy to recover. In Brazil some psychic healers also informed that the Autism cannot be cured through DH due to be a spiritual disease.

Autism is long date studied in the psychopathology history. Important conception changes concerning the understanding of the Autism started from 70s and 80s, when it left be conceived as a specific type of psychosis (Facion, 2002). From this time the Autism was understood as a behavioral and emotional disorder that was derived of some physical dysfunction of the brain (Gauderer, 1997).

Several factors that have been related to autism, as the genetic ones, considering the largest incidence between siblings and the prevalence in the masculine gender; the factors pre, perinatal and postnatal, as some viral and/or congenital infections. (Campos, 2002; Camargos Jr, 2001; Facion, 2002; Gauderer, 1997).

According to DSM-IV-TR (American Psychiatric Association, 2003) the Autistic disorder was classified in the Development Invasive Disorder group close to the Rett and Asperger disorder, Childhood Degenerative Disorder, and Development Disorder Without Other Specification. These disorders present severe and invasive damages in the development, communication and behaviors areas. A lot of times they are accompanied of a neuropsychomotor retard, meaning a second diagnosis formulation. Among the Development Invasive Disorders the Autism is associated with serious behavior disturbances and consequently, with important difficulties of daily conviviality.

According to DSM-IV-TR (Ibid.) the essential Autistic characteristics are marked by: "Presence of a strongly abnormal development or prejudiced in the social interaction and communication and a remarkably restricted repertoire of activities and interests. The disorder manifestations vary vastly, depending on the development level and the individual's chronological age." (p. 99)

METHODS

Research Goal and Hypothesis

The study goal was to verify if the "psychic healers" could affect a group of autistic patients improving their treatment at distance. So we predicted that: the patients who receive the Distant Healing intention (test group) would present a significant reduction on Childhood Autism Rating Scale scores in relation to the ones who do not receive it (control group).

Instruments and variables

The dependent variable was the development of the patient's clinical condition for both test and control groups.

The evaluation was made on fifteen aspects: relationships, verbal and motor imitation, affectivity, body language, relationship with objects, adaptation to changes, visual response, auditory response, anxiety, verbal an nonverbal communication, activity level, intellect function and general impression. These aspects were measured through Childhood Autism Rating Scale (CARS) of Schoples, Schopler, Reichler, DeVellis and Daly (1980). Each aspect is evaluated within a range as from within the age limits of normality to severe disability allowing to put them into three categories: 1. Autistic; 2. Mild autistic and 3. Severe autistic. In a review hold in 1986, it was considered a need to adjustments to a Diagnoses Classification for adolescents and adults.

The CARS (Schopler, et al., 1988) was developed originally as an observational type instrument (Prizant, 1992). This scale this composed by 15 items with alternatives answer that evaluate the items in one Likert type 7 points scale (1 = inside of normal limits for the age, 1.5 = very lightly abnormal for the age, 2 = lightly abnormal for the age, 2.5 = from lightly to moderately abnormal for the age, 3 = moderately abnormal for the age, 3.5 = from moderately to severely abnormal for the age, and 4 = severely abnormal for the age). The items sum equally contribute to the total punctuation.

According to the CARS manual, the autism is diagnosed by a total punctuation of ≥ 30 points. According to the total punctuation it is obtained the following categories: Non autist (15-29.5); Autist Light or Moderate (30-36.5) and Autista Severo (37-60).

This instrument obtained a test-retest intern and reliability high consistence degree, as well as a high criterion validity and discriminating. (DiLalla, Rogers, 1994; Eaves, Milner, 1993; Garfin, McCallon, Cox, 1988; Lord, 1995; Nordin, Gillberg, Nydén, 1998; Schopler et al., 1988; Sevin et al., 1991).

Parks (1988) considers that scale a strong one due to its evaluation criteria is empirically derived, which allows a wide evaluation within each sub-scale which considers the important influence of the child's age and is also reliable. Besides, CARS determines some non specific areas of difficulties, for example, the mental retard, the



language delay and activity level, that are not included in the CID-10 or in the DSM-IV (Lord, Risi, 1998; Prizant, 1992).

For complementary and exploratory evaluation it was also used two instruments, one for the teacher and another for parents. Both were elaborated by psychologist Júlia Hein.

Parent's instrument presets a list of possible children's characteristics that should be marked by "x" according to the following frequency: 0=it doesn't happen, 1=it rarely happens, 2=it frequently happens and 3=it always happens. The characteristics includes: excess of activity and/or talk; aggressiveness; isolation from others; screams and cries, repetitive and stereotyped behavior; impulsivity; irritation and complaints; disobedience; resistance to physical contact; inattention and distraction; absence of verbal or gestures communication and repetition of words or sentences.

Classroom teacher's instrument was focused at children's activities realization in the classroom, physical education, snack and corporal hygiene. Considering this topics the teacher's observation was directed to a 4 possibilities: 1=the student accomplishes the whole activity without help; 2=the activity is not executed even if there is some help; 3=the activity is executed if there is some help; 4=the activity is executed if there is a lot of help;

The independent variable consisted on a systematic distant healing intention from different "psychic healers". Their activities followed a schedule and it was "controlled" through written reports by the healers that were made after each distant healing intention practice.

We also paid attention in some intervenient variables. Self suggestion or placebo effect was minimized by the fact of subjects were not aware of their participation in the experiment, only their family were aware by authorizing the study. Other crucial variable was the patients' medication. To reduce this patients are chosen by similarity in treatment and the changes in medications were recorded. Other intervenient possibility was the individual characteristics related to the process of illness. For dealing with that the chosen patients were the ones in severe conditions, who were characterized by a certain degree of stability or predictability in their clinical development.

Subjects

The agents (healers) were in number of 10. The inclusion criterion was: report of at least 1 year of experience in DH practices. They were from different countries, cultures, religions and philosophies. Among the Brazilian psychic healers, there was a female Umbanda spiritual medium, one male participant of Ramatis spiritualist group, and a female intuitive healer. The others were a female Peruvian healer who uses visualization techniques, three Reiki technique Chilean healers (females) and three Japanese healers; one male Popular psychic with original techniques, one female Civilian healer with techniques of pranic healing and a female Buddhist monk, a born healer. The distance from healers and patients was 130 km (Curitiba to Joinville) to 1.87×10^4 km (Japan to Joinville).

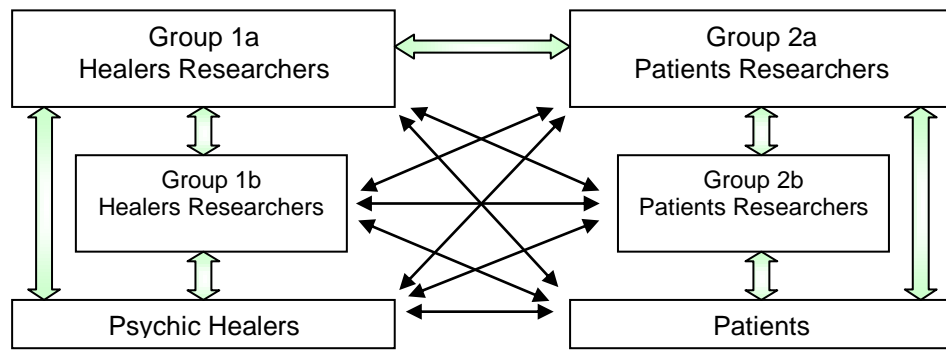
The receivers (patients) were also in number of 10 (average age was $18.5 \pm 4y$). They were categorized at random into Test group (3 males, 2 females, average age of 20.2y) or Control group (4 males, 1 female, average age of 16.8y). They were chosen by the following criteria: a) being under similar types of medical treatments; b) being diagnosed with severe autism and c) by not having other severe disturbs associated. The selection of the receivers to the control and test groups was made by the agents' researchers, and such information was completely unknown to the receivers' researchers.

Experimental environment

Since this was a study conducted from a distance, the subjects didn't share the experiment environment. The patients remained (before, during and after the procedures) in a clinic in South of Brazil. They were under the same treatment and they were constantly observed. The Psychic Healers didn't share the same experiment environment as well. Each one of them develop his or her activities in the places they normally do them. They were spread in different Brazilian states and also in other countries, such as Chile, Peru and Japan. Local Researchers (from group 1b) joined them. This design prevented interference, since the healers didn't leave the place where they usually work. The CIPE (Experimental Parapsychology Integrated Center) facilities (in Curitiba Brazil) were used to store the data produced.

Experimental Technique

The experimental technique was conducted by two groups of researchers: Group 1: organized and controlled the agents (healers) activities and Group 2: evaluated the physical and psychic behavior of the patients. The interaction between the two groups was as little as possible. There was only exchange of strictly necessary information. Fig. 1 shows the contact flow between the groups. Substantive headings can change to suit the type of paper being submitted but the style shouldn't be altered:



↔ No contact allowed
 ↔ Contact is permitted

Fig. 1 Possible contact and contact restrictions among the participants of the study

Both Groups 1a and 1b contacted the psychic healers, evaluated their profiles using the selection criteria, and selected them. By using a Registration Form, the Psychic Healers registered the techniques used, as well as philosophy or religion adopted and the explanation for the possible DH.

The DH intention chronogram was organized (Table 2), in such a way each patients received two intentions per day during 25 days of intervention. Each healer did his or her healing intention for 5 days to each patient. During the 20 first days the healers did their DH intentions at the best times for themselves, (desynchronized or free time); on the 5 remaining days they did their practices at the same time (during 1 hour) determined by the researchers. The tables 1 and 2 explicit the times. The researchers also organize a record of the healing intention practices through specific forms which was filled out by the healers, right after their distant healing practices. The researchers of the group 1a did their activities in Curitiba (Brazil) and nearby regions, while the others from Group 1b did it with healers from other places (different location or countries), which was in a larger number. The synchronized time for the practices during the last five days was from 9:00 am to 10:00 am, considering the Brazil (Brasilia) Standard Time. The participants in other countries in different time zones adapted their schedules to the Brasilia's.

Table 1 Healers and test group patients' codes

Healers				
01	02	03	04	05
06	07	08	09	10

Test Group Patients				
A (T4)	B (T3)	C (T1)	D (T5)	E (T2)

Table 2 Time table: Healers x Test group Patients

Day, month, time	healers x test group patients				
	16, 17, 18, 19 and 20 November - Free time	01A	02B	03C	04D
21, 22, 23, 24 and 25 November - Free time	06A	07B	08C	09D	10E
26, 27, 28, 29 and 30 November - Free time	01B	02C	03D	04E	05A
01, 02, 03, 04 and 05 December - Free time	06B	07C	08D	09E	10A
06, 07, 08, 09 and 10 December from 9:00 am to 10:00 am, Brazil Standard Time	01C	02D	03E	04A	05B
	06C	07D	08E	09A	10B
	01D	02E	03A	04B	05C
	06D	07E	08A	09B	10C
	01E	02A	03B	04C	05D
	06E	07A	08B	09C	10D

The Group 1a was responsible for the randomizing of the patients who took part in the experimental groups (test and control), which was held using the random tables. However, their identity was not known by this group. The data (names, photos) from the patients were handed in to Group 2a in sealed envelopes. After the randomization, the researchers sent the chosen envelopes to the researchers Group 1b by mail. The researchers successively handed in the envelopes to the healers, according to table 1. The healers opened the envelopes only at the moment of their practices. At the end of the first 5 days, they handed back envelopes to the researchers and received new ones for the next 5 days. Thus, only the healers saw the photos of the patients. The healers handed the envelopes along with the form containing a record of their practices as healers. The Group 1a researches also did these practices as they follow the healers.



Researchers from 2a and 2b group selected the patients under the authorization of the ones who are responsible for them. They took pictures of the patients and collected data for the envelopes sending them to Group 1a. The photos was printed in A4 paper and cut to fit the envelopes. There were 10 photos of each patient, with a total of 100 copies. Each photo within a group of 10 photos was placed in an individual envelope, which is sealed and then it was placed in a bigger envelope that was also sealed. Thus, there were 10 envelopes with 10 photos each.

The group 2b researcher followed and recorded the specific data related to the variables considered in the study. That observation started 20 days before the distance healing practices and was concluded after 3 months the practices are finished.

The psychic healers were told to do the distant healing practices once a day for 25 days. They were not supposed to change their practices, being able to do them whenever they feel like. However, they followed the schedule their researcher asked them to during the last 5 days. They were also supposed to fill out a form describing their experiences in details.

RESULTS

Healing Practice

Average DH practice was 32:01 hours per a patient (see Appendix-A). In the first 20 days, psychic healers practiced DH 3-200 min/day; average was 37.8 min/day. In the last 5 days, healers tried to do DH simultaneously for one hour, but the average was 49.0 min/day.

Four healers did not DH for a total of 6 days. Practice hour was not recorded in 14 data among 244 available data.

The instruments data

The following two tables shows the sum of scores obtained with the CARS, Parents and Teacher instruments, for both control and test groups.

Table 3. Sum of scores of CARS, Parents and Teacher instruments for the control group

Control Group	Sum of score of:					
	CARS		Parents		Teacher	
	Pre	Post	Pre	Post	Pre	Post
C1	53	54	36	35	13	14
C2	45.5	45.5	22	19	10	5
C3	44	43	27	21	14	13
C4	37	38	13	13	15	15
C5	33	31	17	15	7	9
Total	212.5	211.5	115.0	103.0	59.0	56.0
p value (one tail)	0.374		0.040		0.323	
Paired t-test between pre and post	n.s		5% signif.		n.s	

Table 4. Sum of scores of CARS, Parents and Teacher instruments for the test group

Test Group	Sum of score of:					
	CARS		Parents		Teacher	
	Pre	Post	Pre	Post	Pre	Post
T1	44.5	44	21	31	12	10
T2	42.5	42	33	5	10	12
T3	47.5	46.5	22	16	10	0
T4	36.5	35.5	24	25	9	8
T5	34.5	33	33	31	8	8
sum	205.5	201.0	133,0	108,0	49.0	38.0
p value (one tail)	0.004		0.237		0.173	
Paired t-test between pre and post	1% signif.		n.s		n.s	

These results show that the scores of CARS of test group decreased significantly from pre to post evaluations ($p=0.004$). The parents' scores show a decreased after the intervention at 5% significance for the control group what didn't happen in the test group. There was no decreased for the teacher scores both for test and control groups.

Tables 5 and 6 show the results calculated by sub-scales of scores.



Table 5. Paired t-test between Pre and Post evaluations for each control group patient

		patients	C1	C2	C3	C4	C5
Whole data	p value		0.601	0.063	0.024	0.616	0.312
	one tail		n.s	n.s	5% sig	n.s	n.s
Sub group data	CARS		0.918	0.500	0.217	0.833	0.167
	Parents		0.396	0.243	0.055	0.500	0.217
	Teacher		0.805	0.040	0.196	0.500	0.752

There is no significant difference between before and after CARS and Parents scores to the control group. In the teacher evaluations C2 subject show a significant difference. The whole of scores it is found a significant decrease between before and after scores for C3 participant.

Table 6. Paired t-test between Pre and Post evaluations for each test group patient

		patients	T1	T2	T3	T4	T5
Whole data	p value		0.941	0.004	0.016	0.435	0.200
	one tail		n.s	1% sig	5% sig	n.s	n.s
Sub group data	CARS		0.291	0.396	0.317	0.306	0.041
	Parents		0.994	0.0006	0.126	0.597	0.249
	Teacher		0.196	0.805	0.032	0.423	0.500

In Table 6, T5 participant shows a significant decrease from before to after CARS scores. The same occurs to subjects T2 for the Parents evaluations and T3 for the teacher's evaluations. These last two scores are responsible for a significant result in the whole t-test to the T2 and T3.

We thought it was important to verify the correlation between scales, especially because two of them were exploratory created (teachers and parent's ones) and because there was no training for their applications. To do this we evaluated the correlation between three scales as it is show in Tables 3 and 4. There was no significant relationship among scales (see Appendix-B).

DISCUSSIONS AND CONCLUSIONS

As it was said in other place the Parents and Teachers' instruments were exploratory created and so their results are less reliable than CARS scale. Then we considered them as a tentative to initially integrate these views with CARS data but we do not consider that data itself to evaluated our hypothesis. However we will be showing the results of all data.

Considering the whole patients data we observed that CARS' scores, parents' and teachers' evaluations decreased after the healing session. However, their differences were not significant (Pared t-test, one tail, n=10. CARS: p=0.056, Parent: p=0.128, Teacher: p=0.128). There was no significant difference between Test and Control groups although scores of the test group decreased than the control group.

If comparing pre and post data, we observe that the Test group CARS' scores decreased significantly from pre to after evaluations, what is not observed in the Control group CARS data (Test group CARS: p=0.004, control group CARS: p=0.374). This analysis could suggest some possible DH effect in the test group, but some reasons are against this possibility. The effects were too small and there was no significant difference between the test and control groups. It is a post hoc evaluation and so we can't consider it more than stimulation for a future exploration. We also found several medications changes during the research. The end of year was not a good period for conducting this research. In this period there was and there is much stress with changing of teacher and medications. For example the test group T5 participant's results show a significant decrease from before to after CARS scores. This participant had a medication change that could have created an artifact in the data.

For the control group, there was a significant decrease of sum of scores of Parents' evaluation after healing (p=0.04, one tail, paired t-test). However, the decrease was small. It could maybe show a reflection of parents' hope. The CARS and Teacher's scores don't show this effect. (CARS: p=0.374, Parent: p=0.040, Teacher: p=0.323) Evaluating the correlation between scales we found the CARS, parents and teachers' scores are not correlated with each other. Although psychologist, parents and teachers are considered to observe patients from different view points we evaluated that the Parents and Teachers' instruments should be improved and that a training session is need to correctly use them.

We also recorded qualitative data from both patients and psychic healers in hoping to correlate them but the intervenient variables; especially medications changes make unfeasible this analysis. RNG data was recorded too but we had technical problems in one of the computers and we lost the data.



In the present study, average of accumulation of healing hour was 32 hours and 1 min (1921 min) per a patient, what could be considered as enough for experiments if comparing it with other studies. Therefore, less of hours of practice is not considered as the reason of the effect of healing was small. There are two possibilities that DH is not effective to mental deceases such as autism, and that our instructions for healers were not suitable for autism. Later possibility suggests two aspects of problem of our instructions. One is that it is not clear what should healers do for mental illness in contrast with injuries or fractures. To do healing in usual ways may be unsuitable. Yamauchi's study with HeLa cells (1996) showed that DH can recover health of injured cells, but it is very difficult to recover health if a lethal compound exists. If autism is caused by some compounds in the patient's body, we, possibly, should ask healers to decrease them rather than to recover patient's health merely. The other point is that we did not ask healers to take effort to recover any concrete actions or symptoms of patients. Therefore each healer took effort to improve various actions or mentalities of patients as they like, and the effects of healers were diffused possibly. The word "autism" is too vague for healers relatively than wounds and fractures of bones. We should make instructions which define a specific action or mentality as a target. Such target is desirable to correspond to an item of CARS if we use CARS for detection of healing effects.

For future studies we intend to improve the research design, especially considering a period of year without great changes. We are also going to increase subjects sample and extend time/day of healing. This will maybe allow a better evaluation of the DH hypothesis.

For this study both treatments of medical care and DH could not recover patient's health notably. However, the care with DH seemed to be relatively more effective than the care without DH although the effect was very small.

As it is natural to expect, much more additional studies are need if it is intended to solve the controversy about the DH possible effect. These studies should address deeply the several methodological issues due the great variety of influence's factors on the results.

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Appendix -A: Accumulation of Healing Practice

Table shows healing times for patients and estimated accumulation of healing practice.

Table Estimated Values of Healing

Patient	Accumulation Hours	Accumulation Times
T1	37:34	46
T2	30:57	50
T3	39:05	50
T4	29:16	50
T5	25:14	48
Average	32:01	49

Appendix -B: Correlation between Scales

Table a. Individual Scores

	Subject	Gender	CARS		Parents		Teacher	
			Before	After	Before	After	Before	After
Control group	C1	F	53	54	36	35	13	14
	C2	M	45.5	45.5	22	19	10	5
	C3	M	44	43	27	21	14	13
	C4	M	37	38	13	13	15	15
	C5	M	33	31	17	15	7	9
Test group	T1	M	44.5	44	21	31	12	10
	T2	M	42.5	42	33	5	10	12
	T3	F	47.5	46.5	22	16	10	0
	T4	M	36.5	35.5	24	25	9	8
	T5	F	34.5	33	33	31	8	8

Table b Correlation between scales: sum of scores evaluation

Sum	r (correlation between scales)			p value of correlation efficiency (two tails)		
	r	CARS	Parents	p value	CARS	Parents
	Parents	0.306	-	Parents	0.389	-
Teacher	0.176	0.054	Teacher	0.626	0.881	

Table c Correlation between scales: before scores evaluation

Before	r (Correlation between scales)			p value of correlation efficiency (two tails)		
	r	CARS	Parents	p value	CARS	Parents
	Parents	0.397	-	Parents	0.256	-
Teacher	0.467	-0.094	Teacher	0.174	0.796	

Table d Correlation between scales: after scores evaluation

After	r (Correlation between scales)			p value of correlation efficiency (two tails)		
	r	CARS	Parents	p value	CARS	Parents
	Parents	0.240	-	Parents	0.252	-
Teacher	0.021	0.059	Teacher	0.477	0.436	