



Submit in 20/01/2011

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Type of research Original papers

Title of Abstract Personality Education in School and Osteopathy (PESO) trial: A new frontier for osteopathic treatment

Text of ABSTRACT

Personality Education in School and Osteopathy (PESO) trial: A new frontier for osteopathic treatment

Travaglini G, Delli Rocili A, Tonizzo C, Cerritelli F and Barlafante G.

Assessing how adolescents react to teaching is an important aspect to be taken into account when education is provided. The main concern is related to how the personality influences school performances. Some studies demonstrated this link using the Big Five Questionnaire Children (BFQ-C). No research were carried out testing the possible role of complementary therapies, particularly osteopathy, in personality changing and related school performances.

Aim of the study is to investigate the association between Osteopathic Manipulative Treatment (OMT) and changes in some aspects of personality among young adolescents.

Methods: A sample of 26 children from 8 to 10 years old were enrolled and randomly divided in two groups. 14 children undertook OMT and 12 did not receive any treatment.

The BFQ-C was used to evaluate the pre-post difference between the two groups. OMT was provided twice a month for 4 months follow-up. Each treatment lasted about an hour. After 4 months all the children were evaluated osteopathically and the second psychological assessment were performed.

Statistical analyses were based on univariate statistical test to detect possible differences without taking into account possible confounders and linear regression model to determine the real effect of OMT on the primary outcome considering all possible interaction factors. The level of significance was set at 0.05.

Results:

Univariate statistical test did not reveal any differences in mean between treated and control group at the beginning of the study. At the end of the follow-up, linear regression showed no significant differences on the primary outcome between the two groups taking into account also individual parameters (BMI, age, gender).

The regression model was used for both single index parameters, referring at each area score test, and for the overall score, considering the sum of all areas score tests.

The results obtained allowed to calculate the difference in mean between the two groups and compute the power for detecting a statistical significant difference between groups. Using, so far, an overall difference in mean of 9 points with a standard deviation of 20 and a level of statical significant of 0.05, the power of the study was of 0.35. Setting a statistical power of 80%, the sample size needed is 78 people per each arm of treatment.

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Discussion:

The present study was carried out to assess the possible effect of OMT on learning abilities and psychological behavior in a sample of students. The results obtained were not significant, but this condition might be due to an insufficient power of the study leading to a 2nd type bias. In fact using results obtained, the sample size needed is 78 people per each arm to be able to find out a statistical difference between groups. Therefore OMT seems to be potentially useful for improving learning abilities and psychological attitudes in students.

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