



Data Article

Assessing the outcomes of manual physical therapy and conventional treatment for chronic pediatric constipation: A dataset analysis of quality of life



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ABSTRACT

The dataset presented in this article was used in a pilot randomized and controlled trial that evaluated the effectiveness of manual physical therapy (MPT) compared to conventional pharmacologic treatment (CPT) for treating chronic pediatric functional constipation (CPC). The pilot trial was carried out at the Central University Hospital of Asturias in Oviedo, Spain, with 47 children between 2 and 12 years old being evaluated by a Pediatric Gastroenterologist. Participants received 9 sessions of MPT which were spaced out weekly for the first two months and bi-weekly for the third month. The Pediatric Quality of Life questionnaire (PedsQLTM) scores were assessed at the start of the trial (Time 1),

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its end (Time 2), and 5 years later (Time 3). The dataset contains the collected raw data, including participant demographics data and PedsQL™ scores categorized by question group, as well as total scores for each participant at each time point. This dataset can be used to further analyze the results and the study can be potentially replicated.

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Specifications Table

Subject	Perinatology, Paediatrics and Child Health.
Specific subject area	Quality of Life in Paediatric patients with chronic constipation.
Type of data	Table
How the data were acquired	Participants were recruited at the Central University Hospital of Asturias (HUCA), Oviedo, which is in the north of Spain after being assessed by a Pediatric Gastroenterologist and diagnosed with Chronic Pediatric Constipation (CPC). Demographic data were collected in the first interviews. Quality of Life data were collected using the Pediatric Quality of Life Inventory (PedsQL™) questionnaire. All data were collected on paper and subsequently introduced into an excel file. The questionnaire is referred in References.
Data format	Raw Analyzed
Description of data collection	Demographic (age, sex, type of birth, type of lactation) and Pediatric Quality of Life Inventory (PedsQL™) questionnaire data collected for a pilot randomized controlled trial in different stages of the treatment, with a difference of years between the first and the last test data that were collected. Forty-seven participants previously diagnosed in a public hospital with paediatric chronic constipation were included. Recruitment started in 2011 and finished in 2013. The results of the quality of life questionnaire were collected at baseline and at the end of the intervention. After 5 years, the results of the PedsQL™ questionnaire were collected again to monitor the participants' progress.
Data source location	Physiotherapy and Translational Research Group (FINTRA-RG). Institute of Health Research of the Principality of Asturias (ISPA). Faculty of Medicine and Health Sciences University of Oviedo - Spain.
Data accessibility	Repository name: Mendeley Data Data identification number: DOI: 10.17632/2n9btyxmy3.1 Direct URL to data: https://data.mendeley.com/datasets/2n9btyxmy3
Related research article	María Blanco Díaz, Carlos Bousoño García, Diana Katherine Segura Ramírez, and Álvaro Manuel Rodríguez Rodríguez. Manual Physical Therapy in the Treatment of Functional Constipation in Children: A Pilot Randomized Controlled Trial. The Journal of Alternative and Complementary Medicine. Jul 2020.620-627. http://doi.org/10.1089/acm.2020.0047

Value of the Data

- This dataset provides a comparison of quality of life in paediatric patients diagnosed with chronic constipation at different times of treatment through the use of a validated and extensively used quality of life measurement questionnaire.
- These data can be of great use to researchers and clinicians conducting studies on the quality of life of paediatric patients with chronic constipation-related diseases. This raw dataset can also be used as a control or comparison group for future quality of life studies of paediatric patients with chronic functional constipation.

- This dataset presents the results of the PedsQL™ tests at baseline, at the end of the treatment of this condition and after 5 years to get a complete picture of the patients' evolution. As this questionnaire is widely used in different settings (clinical care and research), this dataset is useful for clinicians and researchers who wish to analyze the evolution of patients or compare with their own.
- These data include those aspects related to Physical, Emotional, Social and School Functioning at all points in time at which the test results were taken, which allows to analyze and compare different aspects of the patient's evolution under different perspectives of their psychosocial and medical development.
- Considering that these data include these perspectives, it is thus possible to anticipate the patient's needs in different areas according to his or her development compared to different age and/or gender groups.

1. Objective

A pilot randomized and controlled trial [1] that aimed to make a preliminary assessment of the efficacy of manual physical therapy (MPT) compared to conventional pharmacologic treatment (CPT) in chronic pediatric functional constipation (CPC). This dataset [2] is related to the mentioned pilot randomized and controlled trial which was conducted Central University Hospital of Asturias (HUCA), which is in the city of Oviedo, in the north of Spain, and 47 children between the ages of 2 and 14 were recruited and assessed by a Pediatric Gastroenterologist. Participants received MPT consisting of nine sessions of MPT with a 45-min initial session and 30 min for the rest of sessions distributed weekly during the first and second months and bi-weekly in the third month. The Pediatric Quality of Life questionnaire (PedsQL™) [3,4] scores that are presented in the raw dataset were assessed at Time 1 (at the start of the study), Time 2 (at the end of the study) and Time 3 (5 years later). As Seidler et al. did in their work, where they collected the results of the PedsQL™ questionnaire before starting the bowel management program treatment and 9 months after completing it [5]. Also Joshi et al. collected the results at baseline and at 4 weeks after the intervention took place [6] and Knaus et al. did it at baseline, 1 and 3 months follow-up [7].

This dataset contains the raw data collected during the trial, which can be used to further analyze the results and potentially replicate the study.

2. Data Description

The following table describes the attached file containing the raw dataset [2]. It contains demographic data of the participants in the first columns (columns B to H) and, after them, the results of each question that each participant answered to in the three moments (Time 1, Time 2 and Time 3) at which the questionnaire was answered (columns I to BY).

The PedsQL™ questionnaires are a set of validated surveys that measure the quality of life in children. They evaluate overall quality of life from four different perspectives, including Physical Functioning, Emotional Functioning, Social Functioning, and School Functioning [4].

After these scores for the PedsQL™ questionnaire, columns BZ to CK present the results for each of the groups of questions into which the questions of this questionnaire are grouped. Thus, the first 8 questions are grouped in the area of Physical Functioning (marked as Section A), the next 5 questions correspond to the area of Emotional Functioning (marked as Section B), the next 5 questions correspond to the area of Social Functioning (marked as Section C) and the last 5 questions correspond to the area of School Functioning (marked as Section D). These columns (BZ to CK) are the sum results for each of these areas/sections of the questionnaire corresponding to each of the three times when the questionnaire was applied.

The last columns (CL to CN) are the total questionnaire results for each participant at each of the three stages at which the PedsQL™ questionnaires were answered. These total results are

the sum of each section (A, B, C and D) which, at the same time, group the 8, 5, 5, 5 and 5 questions corresponding to each of them. Thus, these last columns are the ones that group all the previous answers of each participant to each section in the three stages when the questionnaire was applied.

It should be noted that the questionnaire for participants aged 2-4 years only presents 3 questions in the last section (Section D or School Functioning) instead of 5 as for the other two age groups (4-7 years and 8-12 years).

The mean age of the 47 participants was 5,11 years (Standard Deviation: 2,08). Attending to their sex, 21 participants (44,7%) were girls and 26 (55,3%) were boys. Due to their age and because the PedsQL™ questionnaire presents three different forms for the same number of age groups, 34,0% of the participants answered the 2-4 years-old questionnaire, 23,4% of them answered the 4-7 years-old questionnaire and the rest 42,6% of the participants answered the 8-12 years-old questionnaire.

The types of birth considered for this study are “Natural”, “Caesarean” and “Instrumented”. Natural birth refers to a birth that occurs spontaneously without the use of medical intervention, such as instruments or a Caesarean section. Caesarean birth, also known as a C-section, is a surgical procedure in which the baby is delivered through an incision in the mother’s abdomen. Instrumented birth is a type of birth in which instruments such as forceps or a vacuum extractor are used to assist with the delivery of the baby, typically in cases where there are complications during the birth process or when it is deemed necessary for the safety of the mother and baby. In our dataset, the type of birth was Caesarean in 23,4% of the cases, Instrumented in 21,3% of them and natural birth in 55,3% of the cases. According to the type of lactation in the early months of life, 59,6% of the cases received artificial lactation, 23,4% of the participants received exclusive breastfeeding (more than 3 months), 8,5% of them received incomplete breastfeeding (less than 3 months) and 8,5% of the children received mixed breastfeeding.

The raw data for this table is attached and is also available on an open data repository.

Data Upload: The raw data is uploaded in *.xlsx format (PedsQL data.xlsx).

Supplemental Data: Original Article: The original research article, published in the Journal of Alternative and Complementary Medicine, is attached.

A brief description of each of the columns of the raw dataset is presented in the table below:

Column	Title	Details of the data shown in the column
A	Empty	Empty
B	Participant	Correlative number assigned to each participant.
C	Informed Consent	Confirmation that the participant signed the informed consent
D	Age	Age of the participant at the moment of the first questionnaire
E	Sex	Sex of the participant: Female or Male
F	Type of Birth	Type of birth of the participant: Natural, Caesarean or Instrumented
G	Lactation	Type of lactation of the participant: Artificial breastfeeding, Exclusive breastfeeding (>3 months), Incomplete breastfeeding (<3 months) or Mixed breastfeeding.
H	Survey Age	Survey age. PedsQL questionnaire presents three different test depending of the age of the participant: 2-4, 4-7 or 8-12 (years old).
I	T1A - P1	Time 1, PedsQL questionnaire, Section A (Physical), Question 1
J	T1A - P2	Time 1, PedsQL questionnaire, Section A (Physical), Question 2
K	T1A - P3	Time 1, PedsQL questionnaire, Section A (Physical), Question 3
L	T1A - P4	Time 1, PedsQL questionnaire, Section A (Physical), Question 4
M	T1A - P5	Time 1, PedsQL questionnaire, Section A (Physical), Question 5
N	T1A - P6	Time 1, PedsQL questionnaire, Section A (Physical), Question 6
O	T1A - P7	Time 1, PedsQL questionnaire, Section A (Physical), Question 7
P	T1A - P8	Time 1, PedsQL questionnaire, Section A (Physical), Question 8
Q	T1B - P1	Time 1, PedsQL questionnaire, Section B (Emotional), Question 1
R	T1B - P2	Time 1, PedsQL questionnaire, Section B (Emotional), Question 2
S	T1B - P3	Time 1, PedsQL questionnaire, Section B (Emotional), Question 3
T	T1B - P4	Time 1, PedsQL questionnaire, Section B (Emotional), Question 4

(continued on next page)

Column	Title	Details of the data shown in the column
U	T1B - P5	Time 1, PedsQL questionnaire, Section B (Emotional), Question 5
V	T1C - P1	Time 1, PedsQL questionnaire, Section C (Social), Question 1
W	T1C - P2	Time 1, PedsQL questionnaire, Section C (Social), Question 2
X	T1C - P3	Time 1, PedsQL questionnaire, Section C (Social), Question 3
Y	T1C - P4	Time 1, PedsQL questionnaire, Section C (Social), Question 4
Z	T1C - P5	Time 1, PedsQL questionnaire, Section C (Social), Question 5
AA	T1D - P1	Time 1, PedsQL questionnaire, Section D (School), Question 1
AB	T1D - P2	Time 1, PedsQL questionnaire, Section D (School), Question 2
AC	T1D - P3	Time 1, PedsQL questionnaire, Section D (School), Question 3
AD	T1D - P4	Time 1, PedsQL questionnaire, Section D (School), Question 4
AE	T1D - P5	Time 1, PedsQL questionnaire, Section D (School), Question 5
AF	T2A - P1	Time 2, PedsQL questionnaire, Section A (Physical), Question 1
AG	T2A - P2	Time 2, PedsQL questionnaire, Section A (Physical), Question 2
AH	T2A - P3	Time 2, PedsQL questionnaire, Section A (Physical), Question 3
AI	T2A - P4	Time 2, PedsQL questionnaire, Section A (Physical), Question 4
AJ	T2A - P5	Time 2, PedsQL questionnaire, Section A (Physical), Question 5
AK	T2A - P6	Time 2, PedsQL questionnaire, Section A (Physical), Question 6
AL	T2A - P7	Time 2, PedsQL questionnaire, Section A (Physical), Question 7
AM	T2A - P8	Time 2, PedsQL questionnaire, Section A (Physical), Question 8
AN	T2B - P1	Time 2, PedsQL questionnaire, Section B (Emotional), Question 1
AO	T2B - P2	Time 2, PedsQL questionnaire, Section B (Emotional), Question 2
AP	T2B - P3	Time 2, PedsQL questionnaire, Section B (Emotional), Question 3
AQ	T2B - P4	Time 2, PedsQL questionnaire, Section B (Emotional), Question 4
AR	T2B - P5	Time 2, PedsQL questionnaire, Section B (Emotional), Question 5
AS	T2C - P1	Time 2, PedsQL questionnaire, Section C (Social), Question 1
AT	T2C - P2	Time 2, PedsQL questionnaire, Section C (Social), Question 2
AU	T2C - P3	Time 2, PedsQL questionnaire, Section C (Social), Question 3
AV	T2C - P4	Time 2, PedsQL questionnaire, Section C (Social), Question 4
AW	T2C - P5	Time 2, PedsQL questionnaire, Section C (Social), Question 5
AX	T2D - P1	Time 2, PedsQL questionnaire, Section D (School), Question 1
AY	T2D - P2	Time 2, PedsQL questionnaire, Section D (School), Question 2
AZ	T2D - P3	Time 2, PedsQL questionnaire, Section D (School), Question 3
BA	T2D - P4	Time 2, PedsQL questionnaire, Section D (School), Question 4
BB	T2D - P5	Time 2, PedsQL questionnaire, Section D (School), Question 5
BC	T3A - P1	Time 3, PedsQL questionnaire, Section A (Physical), Question 1
BD	T3A - P2	Time 3, PedsQL questionnaire, Section A (Physical), Question 2
BE	T3A - P3	Time 3, PedsQL questionnaire, Section A (Physical), Question 3
BF	T3A - P4	Time 3, PedsQL questionnaire, Section A (Physical), Question 4
BG	T3A - P5	Time 3, PedsQL questionnaire, Section A (Physical), Question 5
BH	T3A - P6	Time 3, PedsQL questionnaire, Section A (Physical), Question 6
BI	T3A - P7	Time 3, PedsQL questionnaire, Section A (Physical), Question 7
BJ	T3A - P8	Time 3, PedsQL questionnaire, Section A (Physical), Question 8
BK	T3B - P1	Time 3, PedsQL questionnaire, Section B (Emotional), Question 1
BL	T3B - P2	Time 3, PedsQL questionnaire, Section B (Emotional), Question 2
BM	T3B - P3	Time 3, PedsQL questionnaire, Section B (Emotional), Question 3
BN	T3B - P4	Time 3, PedsQL questionnaire, Section B (Emotional), Question 4
BO	T3B - P5	Time 3, PedsQL questionnaire, Section B (Emotional), Question 5
BP	T3C - P1	Time 3, PedsQL questionnaire, Section C (Social), Question 1
BQ	T3C - P2	Time 3, PedsQL questionnaire, Section C (Social), Question 2
BR	T3C - P3	Time 3, PedsQL questionnaire, Section C (Social), Question 3
BS	T3C - P4	Time 3, PedsQL questionnaire, Section C (Social), Question 4
BT	T3C - P5	Time 3, PedsQL questionnaire, Section C (Social), Question 5
BU	T3D - P1	Time 3, PedsQL questionnaire, Section D (School), Question 1
BV	T3D - P2	Time 3, PedsQL questionnaire, Section D (School), Question 2
BW	T3D - P3	Time 3, PedsQL questionnaire, Section D (School), Question 3
BX	T3D - P4	Time 3, PedsQL questionnaire, Section D (School), Question 4
BY	T3D - P5	Time 3, PedsQL questionnaire, Section D (School), Question 5
BZ	T1A	Time 1, PedsQL questionnaire, Sum of Section A (Physical) scores
CA	T1B	Time 1, PedsQL questionnaire, Sum of Section B (Emotional) scores
CB	T1C	Time 1, PedsQL questionnaire, Sum of Section C (Social) scores

(continued on next page)

Column	Title	Details of the data shown in the column
CC	T1D	Time 1, PedsQL questionnaire, Sum of Section D (School) scores
CD	T2A	Time 2, PedsQL questionnaire, Sum of Section A (Physical) scores
CE	T2B	Time 2, PedsQL questionnaire, Sum of Section B (Emotional) scores
CF	T2C	Time 2, PedsQL questionnaire, Sum of Section C (Social) scores
CG	T2D	Time 2, PedsQL questionnaire, Sum of Section D (School) scores
CH	T3A	Time 3, PedsQL questionnaire, Sum of Section A (Physical) scores
CI	T3B	Time 3, PedsQL questionnaire, Sum of Section B (Emotional) scores
CJ	T3C	Time 3, PedsQL questionnaire, Sum of Section C (Social) scores
CK	T3D	Time 3, PedsQL questionnaire, Sum of Section D (School) scores
CL	T1	Time 1, PedsQL questionnaire, Sum of Sections A, B, C and D scores
CM	T2	Time 2, PedsQL questionnaire, Sum of Sections A, B, C and D scores
CN	T3	Time 3, PedsQL questionnaire, Sum of Sections A, B, C and D scores

3. Experimental Design, Materials and Methods

This dataset derives from a randomised controlled pilot trial that was conducted between 2011 and 2014. Five years after the end of the trial, patients were re-contacted, between 2016 and 2019, to collect follow-up data on their quality of life status and how they had evolved within the years since the end of the treatment. Participants were aged 2-14 years, residing in northern Spain, and were recruited from the Pediatric Gastroenterology Department of the Central University Hospital of Asturias (HUCA) in Oviedo. They were evaluated and diagnosed with CPB by a paediatric gastroenterologist, using both the Rome III Criteria for children under 4 years and for adults over 4 years, with rectal faecal impaction confirmed during a physical examination.

At the time of the study, the recently published Rome IV Criteria had introduced changes to the diagnostic criteria for CHD, such as the collection of biopsychosocial and gender information, the reduction of imprecise terms and the inclusion of information on the patient's disease experience. However, both old and new criteria were taken into account for the study.

Exclusion criteria for the study included patients with organic causes of constipation such as neurological disorders, systemic illnesses, active infections, congenital anal lesions, etc., or those in whom constipation was due to medication. The study was conducted in accordance with official regulations, on April 18th 2011 it received approval from the community Research Ethics Committee (code "CEImPA Study 26/2011"), and was in compliance with the guidelines of the World Medical Association and the Declaration of Helsinki. Children's legal tutors were asked to sign informed consent forms, and anonymity and confidentiality of data were maintained throughout the study.

Ethics Statements

The study was conducted in accordance with official regulations and received approval from the community Research Ethics Committee on April 18th 2011 (code "CEImPA Study 26/2011"). The directives of the World Medical Association and the Declaration of Helsinki were complied with, and the legal guardians of the children were asked to sign informed consent forms for their participation in the study. Anonymity and confidentiality of data were preserved during the entire study to ensure the protection of participants' information.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

Dataset of Pediatric Quality of Life (PedsQL) Scores for children with paediatric chronic functional constipation. (Original data) (Mendeley Data).

CRedit Author Statement

Maria Blanco-Díaz: Conceptualization, Methodology, Validation, Resources, Writing – original draft, Writing – review & editing, Visualization, Supervision; **Alvaro Manuel Rodríguez-Rodríguez:** Methodology, Validation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision; **Marta De la Fuente-Costa:** Validation, Formal analysis, Investigation; **Mario Escalera-de la Riva:** Validation, Investigation, Resources; **Sergio Hernández-Sánchez:** Resources, Data curation; **Borja Pérez-Dominguez:** Resources, Data curation; **Jose Casana-Granell:** Methodology, Validation; **Isabel Escobio-Prieto:** Conceptualization, Resources, Visualization.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.dib.2023.109001](https://doi.org/10.1016/j.dib.2023.109001).

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