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Faculteit Revalidatiewetenschappen

master in de revalidatiewetenschappen en de kinesitherapie

Masterthesis

Differentiating progress in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program

Catharina Gilio
Sofie Verdickt

Scriptie ingediend tot het behalen van de graad van master in de revalidatiewetenschappen en de kinesitherapie, afstudeerrichting revalidatiewetenschappen en kinesitherapie bij kinderen

PROMOTOR :
dr. Maaike VAN DEN HOUTE

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Maasmechelen, 27/05/2021

G.C.
V.S.

Research context

The current study is situated within the research domain 'rehabilitation in medical psychology'. The population in this current study consists of fibromyalgia patients. It is estimated that 2-4% of the world population suffers from fibromyalgia symptoms. Also, in literature it is seen that this population will have poorer outcomes after a treatment program. Furthermore, many fibromyalgia patients have experienced trauma earlier in life. To make the combination of psychology and rehabilitation science, this study will focus on the differentiating progress in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program.

Fibromyalgia is a condition that is more frequently seen in general practice. As mentioned above, many fibromyalgia patients have experienced childhood trauma. It is important that physiotherapists are aware of the influence of childhood trauma in fibromyalgia patients on the outcomes of a treatment program. Primarily for the reason that therapists know what to expect from this population and not just compare the results of these patients with the general population. In summary, when treating this kind of patients, it is always very important to take all the comorbidities into account before starting with the treatment program.

The determination of the research design and the method of our study was drawn up by our promotor, Dr. Maaike Van Den Houte. This, because of the fact that this current study is an extension of a study of Dr. Maaike Van Den Houte from 2017. For the recruitment of patients and the data-extraction, we utilized the data that was obtained in the study mentioned above. Both students were incorporated in the data processing. Together with the promotor, the data from the study of 2017 was screened and the essential information was selected. The data processing was executed independently by the students. Except for the feedback of the promotor, the academical writing process was executed independently by the students.

Research design & method	Promotor
Recruitment & data-extraction	Promotor
Data processing	Students
Academical writing process	Students

Differentiating progress in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program

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ABSTRACT
Objective: Literature suggests a link between fibromyalgia syndrome and chronic stress due to a dysfunction of the HPA-axis. Furthermore, literature suggests that patients who experienced trauma also show a dysfunction of the HPA-axis which can lead to exhaustion of the immune system and thereby to a less well response to a treatment program. The aim of this study was to compare the effect of a multidisciplinary treatment program on pain disability and physical functioning between fibromyalgia patients with and without experiences of childhood trauma.
Methods: Fibromyalgia patients who followed a multidisciplinary treatment program filled in several questionnaires at three different time points (before treatment, after treatment and 12 weeks after the last day of the treatment). Fifty-five (N = 55; 51 women) patients participated in the follow-up study in 2015 in which the presence of childhood trauma was assessed. The presence of trauma, anxiety and depression were used as predictor variables. Outcome variables were pain disability and physical functioning. To investigate the effect of the predictor variables, mixed models with time as a fixed factor was used.
Results: Patients who experienced childhood trauma showed a higher score for pain disability and a lower score for physical functioning throughout the treatment course. Patients with less anxiety or less depression overall showed significant lower scores for pain disability and higher scores for physical functioning. On average, patients showed improvement of their physical functioning during the course of treatment, but the effect did not sustain at follow-up. There was no difference between patients who did and did not experience childhood trauma and was

not related to anxiety or depression. In contrast to pain disability where there were no changes over time and this was not moderated by childhood trauma, depression, or anxiety.
Conclusion: Patients who experienced any kind of trauma show higher scores for pain disability and lower scores for physical functioning. However, the level of anxiety or depression and the experience of trauma earlier in life did not affect the effect of the treatment. Nevertheless, it remains important to have knowledge of the experiences earlier in life of the patients to adapt the treatment when needed.

1. Introduction

Fibromyalgia (FM) is a condition characterized by chronic widespread pain (CWP). Besides this, sleeping problems, fatigue and cognitive problems are also common (Häuser & Mary-Ann Fitzcharles, 2018). About 2-4% of the entire world population is estimated to suffer from the typical FM symptoms, but the number of people diagnosed with FM is much lower (Häuser & Mary-Ann Fitzcharles, 2018; Wolfe et al., 1995). The condition is also more common in women than in men, about 3.5% of women suffer from FM, compared to only 0.5% in men (Wolfe et al., 1995). To be diagnosed with fibromyalgia, patients need to meet the criteria of the American College of Rheumatology (ACR). These were first drawn up in 1990, where the ACR states that people must have complaints of widespread pain for at least 3 months. Further, patients need to suffer from pain in 11 of 18 tender point sites on digital palpation (Wolfe et al., 1990). New criteria were drawn up in 2011, these criteria are based on the widespread pain index (WPI) score, the symptom Severity score (SSS), the intensity of the pain during three months and exclusion of other illnesses (Wolfe et al., 2011). Both the 1990 and 2011 criteria are still used by rheumatologists around the world.

Literature shows that the best treatment for FM is a multidisciplinary treatment, in which patients are treated accordingly to their needs. (Arnold & Clauw, 2017). It must be taken into account that treatment results appear to be highly dependent on comorbidities associated with FM, such as depression and anxiety disorders (Turk et al., 1998). For example, the study of Aleid de Rooij 2012, indicates that persons who suffer from FM and depression will have poorer outcomes after treatment. Poor pain coping and pain catastrophizing will also lead to poorer outcomes in patients with FM (Van Den Houte et al., 2017). Other factors that can have an influence on the treatment results are baseline pain, disability levels, baseline status and self-efficacy. In order to maximize the treatment effect, it is therefore important to have a good picture of the patient and his or her comorbidities (Turk et al.,1998).

Another factor that certainly should be taken into account is psychological trauma, because many fibromyalgia patients experienced trauma earlier in life (Gupta & Silman, 2004; Van Den Houte et al., 2017). A traumatic experience during childhood

increases the risk to develop FM (Van Houdenhove & Egle, 2004). In the literature, an important link between fibromyalgia and chronic stress is seen. Fibromyalgia is, by some, referred to as a stress-related disorder (Becker & Schweinhardt, 2012). Something often seen in patients who experienced trauma, is a dysfunction of the hypothalamic-pituitary-adrenal axis (HPA-axis). This dysfunction is often also seen in patients with FM. The impact of this dysfunction can vary, this can be explained by the fact that there can be both, hyper-corticolism or hypo-corticolism. The direction of the dysfunction depends on several factors including the chronicity of the stressor. The cortisol response of people with FM therefore often responds inadequately in certain situations (Van Houdenhove & Egle, 2004).

In many patients with FM, the chronic pain is maintained by two different proinflammatory cytokines, IL-6 and IL-8. The concentration of these cytokines is on average increased in patients with FM (Mendieta et al., 2016). These cytokines also influence the HPA-axis, and thus play an important role in the HPA-axis dysfunction (Mendieta et al., 2016)(Malek et al., 2015).

The aim of this study is to determine whether people with FM respond less well to treatment when they have been exposed to trauma earlier in life. It will also be examined whether the type of trauma, but also anxiety and depression have an additional effect on the treatment.

One of the hypotheses why the treatment will be less effective in patients who have experienced trauma, is the lower pain threshold in many of these patients. Because of this they may stop exercising more quickly. (Mendieta et al., 2016)(Van Houdenhove & Egle, 2004). Another hypotheses, is the fact that they have a higher risk to develop comorbidities such as depression or anxiety disorders, which also can have a impact on the treatment. (Morghen et al., 2011)

2. Methods

2.1 Patients

The patients in this study were all enrolled in a treatment for psychosomatic complaints in the psychiatric department of Ziekenhuis Oost-Limburg between 2004 and 2014. The criterium to be included in this study states that the patients have received an official diagnosis of FM before the start of the treatment. The average age of the patients on the start of the

treatment was 45,0 years old (SD = 8,77). There were four males and fifty-one females included in the study.

2.2. Design

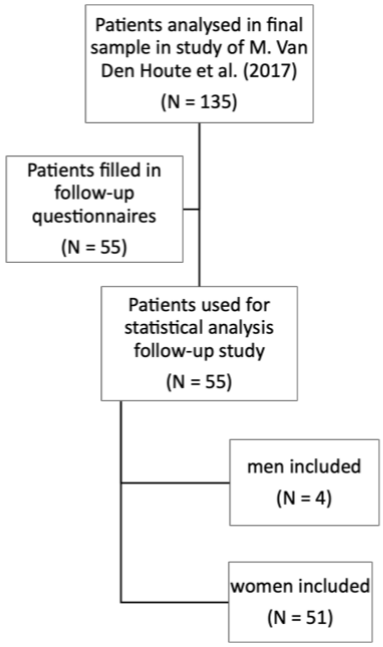
The current study is an extension of the study reported by (Van Den Houte et al., 2017). During the course of the treatment, patients needed to fill in the questionnaires at three time points. The first time point where data was obtained was on the first day of the treatment (= before treatment). The second time point was on the last day of the treatment (= after treatment) and the last time point was 12 weeks after the last day of the treatment (= follow-up).

From the sample of 135 patients from the study mentioned above, 55 patients participated in a follow-up study in 2015, in which childhood trauma experience was assessed. The data from this questionnaire of these 55 patients will be used in this retrospective study to compare the effects of the treatment on the outcome variables pain disability and physical functioning in patients that have and have not experienced trauma earlier in life. Because patients followed the treatment program between 2004 and 2014, the number of years since patients underwent the treatment program was different for all the participants. The average number of years was 5,8 years at the time of the follow-up study in 2015.

Patients included in the study are presented in the flowchart.

Figure 1

Flowchart Patients



2.3. Treatment program

Patients received a multidisciplinary group treatment program consisting of a combination of physiotherapy, occupational treatment, psychomotor treatment and psycho-education. The treatment ran for a period of 12 weeks, where the patient received treatment one day a week in the first two weeks and three days a week in the other ten weeks. Patients were treated in fixed groups of max. 9.

2.4. Measurements

2.4.1. "Predictor" variables

The presence of trauma was assessed with the Childhood Trauma Questionnaire (CTQ). This questionnaire was only administered at the follow-up study in 2015. The CTQ consists of 25 items to assess traumatic experiences in childhood including various forms of neglect and abuse. The CTQ is a self-report questionnaire that is divided into five subscales: physical abuse, emotional abuse, sexual abuse, physical neglect, and emotional neglect. Sexual abuse is the only subscale that was separately assessed in this study. For the remaining analyses, the total score of CTQ was used.

The CTQ shows a good reliability and validity. The test-retest reliability coefficients situate themselves between 0.79 to 0.86 and the internal consistency reliability coefficients between a median of 0.66 to a median of 0.92 (Scher et al., 2001).

Anxiety and depressive symptoms were measured with the Hospital Anxiety and Depression Scale (HADS). HADS is a self-report questionnaire that is divided into two parts: HADS-depression and HADS-anxiety. HADS-A consists of 7 specific items that assess severity of generalized anxiety and the cognitive and emotional aspects of anxiety (Julian, 2011).HADS-D consists of 7 specific items that assess cognitive and emotional aspects of depression (Smarr & Keefer, 2011).

The HADS shows a good validity and reliability. Cronbach's alpha was 0.83. The Pearson's correlation coefficients were all significant and the intercorrelations between the anxiety and the depression subscales and the anxiety subscale and HADS and depression subscale and the HADS were all significant. (Al Aseri et al., 2015)

2.4.2. "Outcome" variables

Pain-related disability was assessed with the Pain Disability Index (PDI). The PDI is a self-reported measure of pain-related disability, where the patient indicates the amount of perceived disability in seven areas of daily living: home, social, recreational, occupational, sexual, self-care and life support activities. For the analyses in this study, the total score of the PDI was used. The higher the score, the more the patient feels disabled. (Gauthier et al., 2008)

There is a good validity and reliability of the PDI. The internal consistency was measured with the Alpha Cronbach's

coefficient which was 0.871. Item-total correlation variated between 0.56 and 0.85. All correlations were significant. (Tait et al., 1987)

Physical Functioning was measured with the physical functioning subscale of the SF-36 Health Survey (SF-36). The SF-36 is a self-report measure of physical functioning. It contains 36 items and is divided into three areas and eight dimensions. The three areas are functional status, wellbeing and overall evaluation of health. The eight dimensions are physical functioning, social functioning, role limitations (physical problems/emotional problems), mental health, vitality, pain and general health perception. A higher score indicates better health for all subscales. The SF-36 shows a good reliability and validity. The internal consistency answers to the recommended values. (Cronbach's alpha > 0.85 and reliability coefficients > 0.75 for all dimensions except for social functioning). The test-retest reliability showed that 91-98% of the cases lay within the 95% confidence interval for all dimensions. (Brazier et al., 1992)

2.5. Statistical analysis

To investigate the effect of trauma, anxiety and depression on the evolution of both pain disability and physical functioning, marginal mixed models with time (three levels: before treatment, after treatment, and 12 weeks after treatment) as a fixed factor was used. First, the general progression of pain disability and physical functioning was analyzed. The second series of analyses investigated the effect of trauma as a continuous and as a dichotomous variable. As mentioned earlier, the effect of sexual abuse on the evolution of both pain disability and physical functioning was separately analyzed. The last analyses that were conducted investigated the effect of anxiety and depression at the start of treatment on the evolution of both pain disability and physical functioning.

3.Results

3.1. Demographic characteristics

Fifty-five patients (4 men, 51 women) were included in the study. Of all these patients 40 completed the questionnaires at the three time points and fifteen completed the questionnaires at two time points. The average age of the patients on the start of the treatment was 45.0 years old (SD = 8.77). Furthermore, twenty patients in the sample reported a traumatic experience in their childhood and thirty-five did not

perceive a traumatic experience in their childhood. For sexual abuse, sixteen patients experienced sexual abuse in their childhood and thirty-nine patients did not experienced sexual abuse in their childhood. The average total score for CTQ was 49.69 (SD = 22.57). For depression and anxiety, the average score on baseline was retrospectively 10 (SD = 4.77) and 10.62 (SD = 4.86).

3.2. Treatment effects: Mixed model analysis

For the general progression, pain disability shows no significant difference at the three time points ($F_{2,54}$= 1.50, p = 0.23), in contrast to physical functioning where there is a significant difference ($F_{2,54}$ = 3.69, p = 0.03). It is seen that physical functioning increased after treatment, (p=0.03), but the effect was not sustained at follow-up (difference between time point 1&3: p=0.15). The average values and standard deviations at the three time points in combination with the F and p values from the mixed model analysis are displayed in Table 1.

Table 1
Averages and Standard Deviations at the Three Time Points, and the F and P Values from the Mixed Model Analysis.

Outcome variables	Before		After		Follow-up		DF	F value	P value
	Average	SD	Average	SD	Average	SD			
PAIN DISABILITY INDEX (PDI)	43.87	1,85	41. 5932	1,87	42.38	1.85	2,54	1.50	0.23
PHYSICAL FUNCTIONING (SF-36)	32.59[a]	2,46	37.89[b]	2,84	36.68[ab]	2.97	2,54	3.69	0.03*

Table 1: Averages and standard deviations at the three time points for the outcome variables

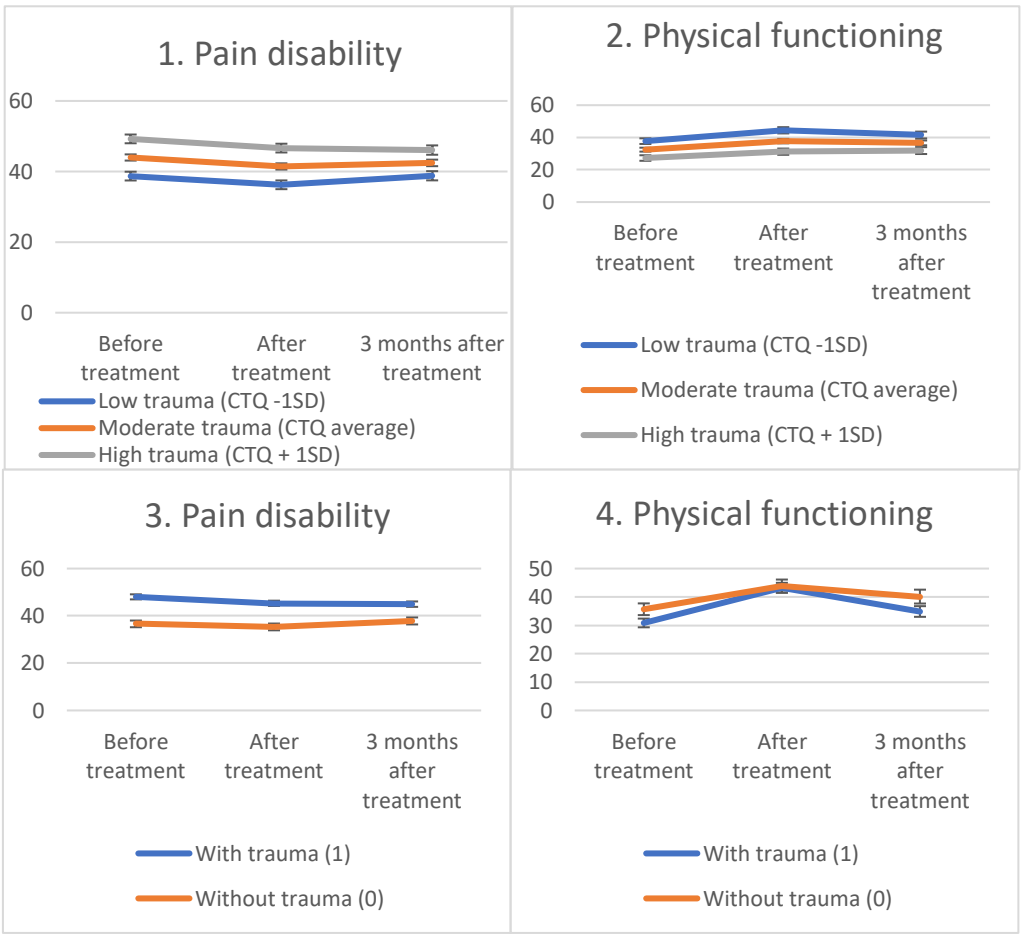
The average scores at the three time points for pain disability and physical functioning according to value of the different predictor variables are displayed in Fig2 (different levels for trauma (continuous and as a dichotomous variable)), Fig3&4 (sexual abuse), Fig5 (anxiety) and Fig6 (depression). We found that there was a

significant difference in pain disability (main effect of CTQ: $F_{1,52}$= 9.32, p= 0.0036;) and physical functioning (main effect of CTQ: $F_{1,52}$= 5.18, p= 0.0270) between patients with different levels of trauma. In the analysis of trauma as a dichotomous variable, there was only a significant difference in pain disability ($F_{1,53}$= 9.20, p= 0.0037). Patients with more trauma showed overall higher scores for pain disability and showed overall lower scores for physical functioning.

No significant interaction effect between trauma and time was found (respectively for the continuous and dichotomous analysis: pain disability: $F_{2,52}$=0.53, p=0.5917 / $F_{2,53}$= 0.88, p= 0.4199 and physical functioning: $F_{2,52}$=0.41, p=0.6680 / $F_{2,53}$= 0.80, p= 0.4542), which means that there was no difference for the different levels of trauma and between patients who perceived trauma earlier in life or not, in the progression patients make throughout the treatment both for pain disability and physical functioning.

Figure 2

Average Scores at the Three Time Points



Graf1: average scores for pain disability for trauma as a continuous variable. Graf2: average scores for physical functioning for trauma as a continuous variable. Graf3: average score for pain disability for trauma as a dichotomous variable. Graf 4: average scores for physical functioning for trauma as a dichotomous variable.

In the analysis of sexual abuse, no significant difference between patients who experienced sexual abuse and patients who did not experience sexual abuse earlier in life was seen for pain disability (main effect of SEXUAL ABUSE: $F_{1,53}$ = 1.06, p= 0.3090) and physical functioning (main effect SEXUAL ABUSE: $F_{1,53}$ = 0.45, p= 0.5065). Furthermore, there was no difference in progression these patients made throughout the treatment for both pain disability (interaction effect: $F_{2,53}$= 2.42, p= 0.0983) and physical functioning (interaction effect: $F_{2,53}$= 0.64, p= 0.5291).

Figure 3

Average Scores and Standard Deviations at the Three Time Points of Pain Disability for Sexual Abuse

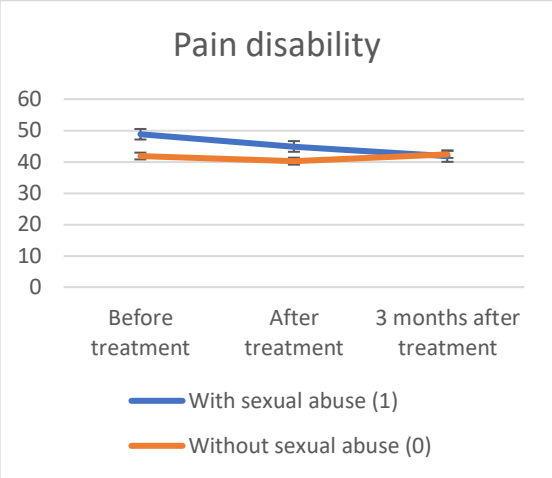
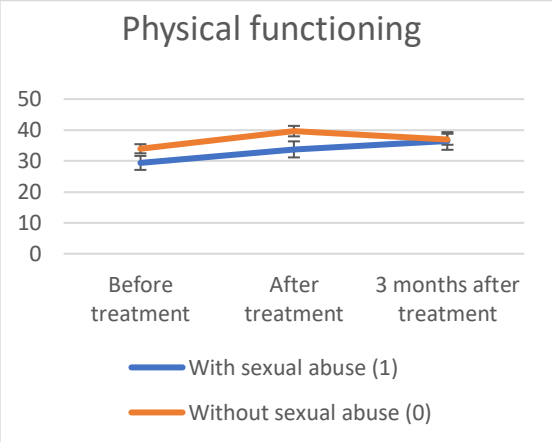


Figure 4

Average Scores and Standard Deviations at the Three Time Points of Physical Functioning for Sexual Abuse

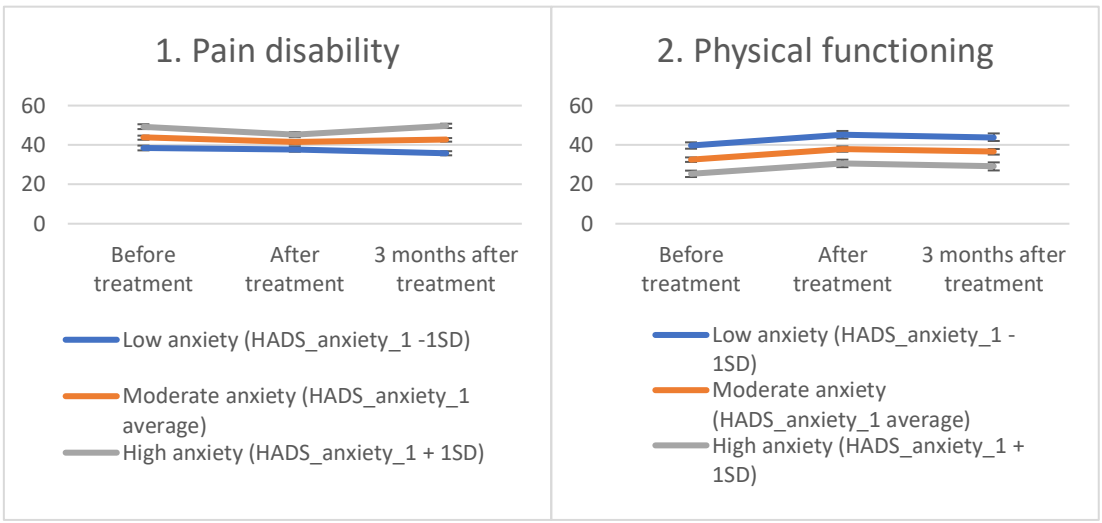


Patients with higher levels of anxiety at baseline had overall higher levels of pain disability (main effect of anxiety: $F_{1,53}$= 13.72, p= 0.0005) and lower levels of physical functioning (main effect of anxiety: $F_{1,53}$=10.06, p= 0.0025). Patients with higher levels of depressive symptoms at baseline had higher levels of pain disability (main effect of depression: $F_{1,52}$= 26.86, p<0.0001) and lower levels of physical functioning (main effect of depression: $F_{1,52}$=11.33, p=0.0014).

The interaction effects between anxiety or depressions and time were not significant; thus there was no influence of anxiety on the progression these patients made throughout the treatment for both pain disability (interaction effect: $F_{2,53}$= 2.07, p= 0.1363) and physical functioning (interaction effect: $F_{2,53}$= 2.07, p= 0.1363). Furthermore, there was no influence of depression on the progression these patients made throughout the treatment for both pain disability ($F_{2,52}$= 2.04, p= 0.1409) and physical functioning ($F_{2,52}$= 0.27, p=0.7648).

Figure 5

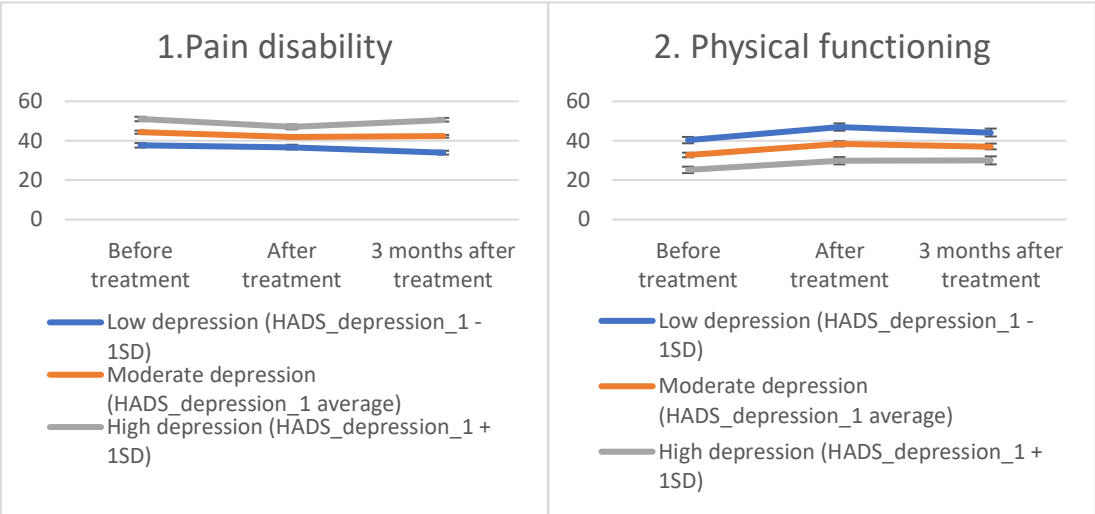
Average Scores and Standard Deviations at the Three Time Points



Graf1: average scores for pain disability for anxiety as a continuous variable. Graf2: average scores for physical functioning for anxiety as a continuous variable.

Figure 6

Average Scores and Standard Deviations at the Tree Time Points



Graf1: average scores for pain disability for depression as a continuous variable. Graf2: average scores for physical functioning for depression as a continuous variable.

4. Discussion

The first aim of this study was to determine whether people with FM respond less well to treatment when they have been exposed to trauma earlier in life. In the literature it is described that trauma often occurs in persons with FM, more than in the average population (Gündüz et al., 2018). Within our study population, more than half of the patients experienced trauma. This is in line with the literature. The results show that people who have experienced trauma have higher scores for pain disability and lower scores for physical functioning, but there is no difference in the progression patients make due to the treatment. There are several reasons as to why people with FM who have experienced trauma are expected to have less benefit from treatment. One of these is the fact that trauma in many cases causes the pain threshold to be lower, this due to the increase in IL-6. (Mendieta et al., 2016). Therefore patients can experience pain more quickly and therefore cease faster with the exercises (Van Houdenhove & Egle, 2004).

Second, people who have experienced trauma earlier in life, have a higher risk to develop a depression or an anxiety disorder. In literature, it is seen that this patient population shows lower outcome results due to a treatment program. (Morghen et al., 2011)

Furthermore, it could be that patients who experienced trauma have a lower level of self-confidence and therefore have less confidence in themselves when it comes to treatment.

Furthermore, this study shows that there is an effect of the treatment on physical functioning, but the effect was not sustained at follow up. So we can conclude that the effect on physical functioning was rather low. In contrast to pain disability, where there was no effect on the treatment experienced.

Another factor to take into account is the presence of anxiety and depression, people with anxiety often also show higher pain disability scores and lower scores for physical functioning, this is also seen in patients with depression. However, patients with depression, anxiety, or any kind of trauma show no difference in terms of progression made due to the treatment. Nevertheless, it remains important to know because people with depressive symptoms often exercise less intensively, stop exercising more quickly, are more tired or less motivated. This can have a major impact on the results you can achieve after 12 weeks. People with high levels of anxiety often have less confidence in themselves, but also often less confidence in rehabilitation. Both groups also have a great need for supervision, which may be the reason why the results do not improve after the treatment or even return to baseline (Dunn et al., 2005)(Ströhle, 2009).

In this study, the patients received a 12 week multidisciplinary treatment. The study of Ströhle et al. 2009, shows that an effective training schedule has a duration of 8-12 weeks. Based on this article it can be said that the duration of the study would be long enough to be able to observe an effect. The study also used a multidisciplinary treatment approach, previous studies showed this to be the most effective method for treating patients with FM (Arnold & Clauw, 2017). Despite this, the results were not as expected. This can be due to the fact that it was a very intensive treatment, patients received treatment for 12 hours per week. This intensity could be too high for people who are already low functioning, resulting in an opposite effect from what is expected. Better results could be expected when the treatment is more individually determined, based on the patient's needs. Also seen in literature is that patients with FM often require more supervision during treatment

(Larsson et al., 2015). This can be one of the reasons why the improvements decreased after the treatment.

This study had some limitations. First of all, the CTQ is a self-report retrospective questionnaire; this may cause the questionnaire to not be completed correctly, because of information that has been forgotten over time. As a result, we see this as a form of potential recall bias. Another consequence of using the CTQ to measure trauma, is the fact that it only measures trauma during childhood. Trauma that occurred later in life is therefore not taken into account during the study, despite the fact that it can have a very important influence on FM. Taking into account that the patients only filled in the CTQ, can cause the actual percentage of people who experienced trauma to be even higher. A second limitation is the fact that only questionnaires were administered to check the physical functioning of the patients. FM is often also accompanied by reduced self-efficacy, which means that people have little faith in their own abilities. We would therefore also question the reliability of these results (Moyano et al., 2019). In this case, taking objective tests to measure physical capacity would give additional information on how people can estimate their own capabilities. This certainly would have been an added value for the research. A third limitation of our study is the fact that for 15 patients that were included, we only have data at two time points instead of three. The FM population is a very diverse group of patients. All patients had specific characteristics such as different medication intake, several comorbidities, fatigue, muscle stiffness,…. These are all factors that weren't taken into account and can influence the outcome variables. It should also be taken into account that there was no control group. Because of this, it is uncertain whether the effects are due to the treatment. Finally, the sample size was rather small, this results in a lower statistical power, which makes it more difficult to find an effect. The small sample size also has a negative effect on the generalizability of the research.

5. Conclusion

In conclusion, the present study showed that the effect of a multidisciplinary treatment program on FM patients who experienced childhood trauma did not differ from the effect on FM patients who didn't experience childhood trauma. Also,

the effect is not moderated by the presence of depression and anxiety. It should be noted that patients showed an improvement of physical functioning throughout the course of the treatment and that there was no improvement seen of pain disability.

Furthermore, patients who experienced childhood trauma have lower scores for physical functioning and higher scores for pain disability in comparison to patients who haven't experienced childhood trauma.

Although the presence of childhood trauma does not affect the effect of the treatment program, it remains important to take all the comorbidities of our patients into account when we start our treatment program.

For future studies, we suggest comparing a control group who will not perceive a treatment program to an experimental group who will perceive a treatment program. In that case we can evaluate if the progression these patients make is due to the treatment program. Furthermore, it is important to have a larger sample size and to use objective outcome measures to measure physical functioning.

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7. Attachments

Inschrijvingsformulier verdediging masterproef academiejaar 2020-2021,
Registration form jury Master's thesis academic year 2020-2021,

GEGEVENS STUDENT - *INFORMATION STUDENT*

Faculteit/School: **Faculteit Revalidatiewetenschappen**
Faculty/School: ***Rehabilitation Sciences***

Stamnummer + naam: **1644227 Verdickt Sofie**
Student number + name

Opleiding/*Programme*: **2 ma revalid. & kine kinderen**

INSTRUCTIES - *INSTRUCTIONS*

Neem onderstaande informatie grondig door.

Print dit document en vul het aan met DRUKLETTERS.

In tijden van van online onderwijs door COVID-19 verstuur je het document (scan of leesbare foto) ingevuld via mail naar je promotor. Je promotor bezorgt het aan de juiste dienst voor verdere afhandeling.

Vul luik A aan. Bezorg het formulier aan je promotoren voor de aanvullingen in luik B. Zorg dat het formulier ondertekend en gedateerd wordt door jezelf en je promotoren in luik D en dien het in bij de juiste dienst volgens de afspraken in jouw opleiding.
Zonder dit inschrijvingsformulier krijg je geen toegang tot upload/verdediging van je masterproef.

Please read the information below carefully.

Print this document and complete it by hand writing, using CAPITAL LETTERS.

In times of COVID-19 and during the online courses you send the document (scan or readable photo) by email to your supervisor. Your supervisor delivers the document to the appropriate department.

Fill out part A. Send the form to your supervisors for the additions in part B. Make sure that the form is signed and dated by yourself and your supervisors in part D and submit it to the appropriate department in accordance with the agreements in your study programme.
Without this registration form, you will not have access to the upload/defense of your master's thesis.

LUIK A - VERPLICHT - IN TE VULLEN DOOR DE STUDENT
PART A - MANDATORY - TO BE FILLED OUT BY THE STUDENT

Titel van Masterproef/*Title of Master's thesis:*

O behouden - *keep*

● wijzigen - *change to*: Differentiating program in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program

/:

O behouden - *keep*

O wijzigen - *change to*:

In geval van samenwerking tussen studenten, naam van de medestudent(en)/*In case of group work, name of fellow student(s)*:

● behouden - *keep* catharina Bilo

O wijzigen - *change to:*

LUIK B - VERPLICHT - IN TE VULLEN DOOR DE PROMOTOR(EN)
PART B - MANDATORY - TO BE FILLED OUT BY THE SUPERVISOR(S)

Wijziging gegevens masterproef in luik A/*Change information Master's thesis in part A:*

☒ goedgekeurd - *approved*

O goedgekeurd mits wijziging van - *approved if modification of:*

Scriptie/*Thesis:*

☒ openbaar (beschikbaar in de document server van de universiteit)- *public (available in document server of university)*

O vertrouwelijk (niet beschikbaar in de document server van de universiteit) - *confidential (not available in document server of university)*

Juryverdediging/*Jury Defense:*

De promotor(en) geeft (geven) de student(en) het niet-bindend advies om de bovenvermelde masterproef in de bovenvermelde periode/*The supervisor(s) give(s) the student(s) the non-binding advice:*

☒ te verdedigen/*to defend the aforementioned Master's thesis within the aforementioned period of time*

☒ de verdediging is openbaar/*in public*

O de verdediging is niet openbaar/*not in public*

O niet te verdedigen/*not to defend the aforementioned Master's thesis within the aforementioned period of time*

LUIK C - OPTIONEEL - IN TE VULLEN DOOR STUDENT, alleen als hij luik B wil overrulen
PART C - OPTIONAL - TO BE FILLED OUT BY THE STUDENT, only if he wants to overrule part B

In tegenstelling tot het niet-bindend advies van de promotor(en) wenst de student de bovenvermelde masterproef in de bovenvermelde periode/*In contrast to the non-binding advice put forward by the supervisor(s), the student wishes:*

O niet te verdedigen/*not to defend the aforementioned Master's thesis within the aforementioned period of time*

O te verdedigen/*to defend the aforementioned Master's thesis within the aforementioned period of time*

LUIK D - VERPLICHT - IN TE VULLEN DOOR DE STUDENT EN DE PROMOTOR(EN)
PART D - MANDATORY - TO BE FILLED OUT BY THE STUDENT AND THE SUPERVISOR(S)

Datum en handtekening student(en)
Date and signature student(s)

14/05/2021
Sofie Verdickt
~~Verdickt~~

Datum en handtekening promotor(en)
Date and signature supervisor(s)

26/05/2021

Dr. Maaike Van Der Houtte

UHASSELT
KNOWLEDGE IN ACTION

Inschrijvingsformulier verdediging masterproef academiejaar 2020-2021,
Registration form jury Master's thesis academic year 2020-2021,

GEGEVENS STUDENT - *INFORMATION STUDENT*

Faculteit/School: **Faculteit Revalidatiewetenschappen**
Faculty/School: ***Rehabilitation Sciences***

Stamnummer + naam: **1644162 Gilio Catharina**
Student number + name

Opleiding/*Programme*: **2 ma revalid. & kine kinderen**

INSTRUCTIES - *INSTRUCTIONS*

Neem onderstaande informatie grondig door.

Print dit document en vul het aan met DRUKLETTERS.

In tijden van van online onderwijs door COVID-19 verstuur je het document (scan of leesbare foto) ingevuld via mail naar je promotor. Je promotor bezorgt het aan de juiste dienst voor verdere afhandeling.

Vul luik A aan. Bezorg het formulier aan je promotoren voor de aanvullingen in luik B. Zorg dat het formulier ondertekend en gedateerd wordt door jezelf en je promotoren in luik D en dien het in bij de juiste dienst volgens de afspraken in jouw opleiding.
Zonder dit inschrijvingsformulier krijg je geen toegang tot upload/verdediging van je masterproef.

Please read the information below carefully.

Print this document and complete it by hand writing, using CAPITAL LETTERS.

In times of COVID-19 and during the online courses you send the document (scan or readable photo) by email to your supervisor. Your supervisor delivers the document to the appropriate department.

Fill out part A. Send the form to your supervisors for the additions in part B. Make sure that the form is signed and dated by yourself and your supervisors in part D and submit it to the appropriate department in accordance with the agreements in your study programme.
Without this registration form, you will not have access to the upload/defense of your master's thesis.

LUIK A - VERPLICHT - IN TE VULLEN DOOR DE STUDENT
PART A - MANDATORY - TO BE FILLED OUT BY THE STUDENT

Titel van Masterproef/*Title of Master's thesis:*

O behouden - *keep*

X wijzigen - *change to*:
DIFFERENTIATING PROGRESS IN A CLINICAL GROUP OF FIBROMYALGIA PATIENTS WITH OR WITHOUT THE EXPERIENCE OF CHILDHOOD TRAUMA FOLLOWING A MULTIDISCIPLINARY TREATMENT PROGRAM

/:

O behouden - *keep*

O wijzigen - *change to*

In geval van samenwerking tussen studenten, naam van de medestudent(en)/*In case of group work, name of fellow student(s)*:

X behouden - *keep* Sofie Verdickt

O wijzigen - *change to*:

LUIK B - VERPLICHT - IN TE VULLEN DOOR DE PROMOTOR(EN)
PART B - MANDATORY - TO BE FILLED OUT BY THE SUPERVISOR(S)

Wijziging gegevens masterproef in luik A/*Change information Master's thesis in part A*:

X goedgekeurd - *approved*

O goedgekeurd mits wijziging van - *approved if modification of*:

Scriptie/*Thesis*:

X openbaar (beschikbaar in de document server van de universiteit)- *public (available in document server of university)*

O vertrouwelijk (niet beschikbaar in de document server van de universiteit) - *confidential (not available in document server of university)*

Juryverdediging/*Jury Defense*:

De promotor(en) geeft (geven) de student(en) het niet-bindend advies om de bovenvermelde masterproef in de bovenvermelde periode/*The supervisor(s) give(s) the student(s) the non-binding advice*:

X te verdedigen/*to defend the aforementioned Master's thesis within the aforementioned period of time*

X de verdediging is openbaar/*in public*

O de verdediging is niet openbaar/*not in public*

O niet te verdedigen/*not to defend the aforementioned Master's thesis within the aforementioned period of time*

LUIK C - OPTIONEEL - IN TE VULLEN DOOR STUDENT, alleen als hij luik B wil overrulen
PART C - OPTIONAL - TO BE FILLED OUT BY THE STUDENT, only if he wants to overrule part B

In tegenstelling tot het niet-bindend advies van de promotor(en) wenst de student de bovenvermelde masterproef in de bovenvermelde periode/*In contrast to the non-binding advice put forward by the supervisor(s), the student wishes*:

O niet te verdedigen/*not to defend the aforementioned Master's thesis within the aforementioned period of time*

O te verdedigen/*to defend the aforementioned Master's thesis within the aforementioned period of time*

LUIK D - VERPLICHT - IN TE VULLEN DOOR DE STUDENT EN DE PROMOTOR(EN)
PART D - MANDATORY - TO BE FILLED OUT BY THE STUDENT AND THE SUPERVISOR(S)

Datum en handtekening student(en)
Date and signature student(s)

14/05/2021

Gibo

Datum en handtekening promotor(en)
Date and signature supervisor(s)

26/05/2021

Vandenh

Dr. Maaike Van Den Houte

In te vullen door de promotor(en) en eventuele copromotor aan het einde van MP2:

Naam Student(e): Catharina Gilio **Datum:** 26/05/2021

Titel Masterproef: Differentiating progress in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program.

1) Geef aan in hoeverre de student(e) onderstaande competenties zelfstandig uitvoerde:
   - NVT: De student(e) leverde hierin geen bijdrage, aangezien hij/zij in een reeds lopende studie meewerkte.
   - 1: De student(e) was niet zelfstandig en sterk afhankelijk van medestudent(e) of promotor en teamleden bij de uitwerking en uitvoering.
   - 2: De student(e) had veel hulp en ondersteuning nodig bij de uitwerking en uitvoering.
   - 3: De student(e) was redelijk zelfstandig bij de uitwerking en uitvoering
   - 4: De student(e) had weinig tot geringe hulp nodig bij de uitwerking en uitvoering.
   - 5: De student(e) werkte zeer zelfstandig en had slechts zeer sporadisch hulp en bijsturing nodig van de promotor of zijn team bij de uitwerking en uitvoering.

Competenties	**NVT**	**1**	**2**	**3**	**4**	**5**
Opstelling onderzoeksvraag	O	O	O	O	X	O
Methodologische uitwerking	X	O	O	O	O	O
Data acquisitie	X	O	O	O	O	O
Data management	O	O	O	O	X	O
Dataverwerking/Statistiek	O	O	O	O	O	X
Rapportage	O	O	O	X	O	O

2) Niet-bindend advies: Student(e) krijgt toelating/~~geen toelating~~ (schrappen wat niet past) om bovenvermelde Wetenschappelijke stage/masterproef deel 2 te verdedigen in bovenvermelde periode. Deze eventuele toelating houdt geen garantie in dat de student geslaagd is voor dit opleidingsonderdeel.

3) Deze wetenschappelijke stage/masterproef deel 2 mag wel/~~niet~~ (schrappen wat niet past) openbaar verdedigd worden.

4) Deze wetenschappelijke stage/masterproef deel 2 mag wel/~~niet~~ (schrappen wat niet past) opgenomen worden in de bibliotheek en docserver van de UHasselt.

Datum en handtekening Student(e)	Datum en handtekening promotor(en)	Datum en handtekening Co-promotor(en)
	26/05/2021	

In te vullen door de promotor(en) en eventuele copromotor aan het einde van MP2:

Naam Student(e): Sofie Verdickt **Datum:** 26/05/2021

Titel Masterproef: Differentiating progress in a clinical group of fibromyalgia patients with or without the experience of childhood trauma following a multidisciplinary treatment program.

1) Geef aan in hoeverre de student(e) onderstaande competenties zelfstandig uitvoerde:
   - NVT: De student(e) leverde hierin geen bijdrage, aangezien hij/zij in een reeds lopende studie meewerkte.
   - 1: De student(e) was niet zelfstandig en sterk afhankelijk van medestudent(e) of promotor en teamleden bij de uitwerking en uitvoering.
   - 2: De student(e) had veel hulp en ondersteuning nodig bij de uitwerking en uitvoering.
   - 3: De student(e) was redelijk zelfstandig bij de uitwerking en uitvoering
   - 4: De student(e) had weinig tot geringe hulp nodig bij de uitwerking en uitvoering.
   - 5: De student(e) werkte zeer zelfstandig en had slechts zeer sporadisch hulp en bijsturing nodig van de promotor of zijn team bij de uitwerking en uitvoering.

Competenties	NVT	1	2	3	4	5
Opstelling onderzoeksvraag	O	O	O	O	X	O
Methodologische uitwerking	X	O	O	O	O	O
Data acquisitie	X	O	O	O	O	O
Data management	O	O	O	O	X	O
Dataverwerking/Statistiek	O	O	O	O	O	X
Rapportage	O	O	O	X	O	O

2) Niet-bindend advies: Student(e) krijgt toelating/~~geen toelating~~ (schrappen wat niet past) om bovenvermelde Wetenschappelijke stage/masterproef deel 2 te verdedigen in bovenvermelde periode. Deze eventuele toelating houdt geen garantie in dat de student geslaagd is voor dit opleidingsonderdeel.

3) Deze wetenschappelijke stage/masterproef deel 2 mag wel/~~niet~~ (schrappen wat niet past) openbaar verdedigd worden.

4) Deze wetenschappelijke stage/masterproef deel 2 mag wel/~~niet~~ (schrappen wat niet past) opgenomen worden in de bibliotheek en docserver van de UHasselt.

Datum en handtekening Student(e)	Datum en handtekening promotor(en)	Datum en handtekening Co-promotor(en)
	26/05/2021	

www.uhasselt.be
Campus Hasselt | Martelarenlaan 42 | BE 3500 Hasselt
Campus Diepenbeek | Agoralaan gebouw D | BE 3590 Diepenbeek
T + 32(0)11 26 81 11 | E-mail: info@uhasselt.be

UHASSELT

INVENTARISATIEFORMULIER WETENSCHAPPELIJKE STAGE DEEL 2

DATUM	INHOUD OVERLEG	HANDTEKENINGEN
13/10	google meet HP bespreking, verloop nieuwe studie.	Promotor: Vanden Copromotor/Begeleider: Student(e): [illegible] Student(e):
4/11	Data bespreking + omvormen tabellen Leuven.	Promotor: Vanden Copromotor/Begeleider: Student(e): [illegible] Student(e):
21/12	google meet Uitleg statistiek	Promotor: Vanden Copromotor/Begeleider: Student(e): [illegible] Student(e):
9/02	google meet. feedback statistiek	Promotor: Vanden Copromotor/Begeleider: Student(e): [illegible] Student(e):
26/02	google meet verdere bespreking, uitschrijven van bsc + inl.	Promotor: Vanden Copromotor/Begeleider: Student(e): [illegible] Student(e):
		Promotor: Copromotor/Begeleider: Student(e): Student(e):
		Promotor: Copromotor/Begeleider: Student(e): Student(e):
		Promotor: Copromotor/Begeleider: Student(e): Student(e):
		Promotor: Copromotor/Begeleider: Student(e): Student(e):
		Promotor: Copromotor/Begeleider: Student(e): Student(e):