

Preliminary Results of a Study on the Effects of Painless Deep Tissue Massage on Participants with Fibromyalgia, Chronic Pain Syndrome, and/or Chronic Fatigue Syndrome

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ABSTRACT

Purpose: There have been a variety of studies and anecdotal data indicating that massage can have significant effects, both positive and negative, on fibromyalgia, chronic pain, and chronic fatigue. Over the last 15 years, the investigator has been developing a style of massage that appears consistently beneficial. This study is to test Painless Deep Tissue Massage on participants with difficult prognoses.

Methods: This is a small-scale, long-term, ongoing observational study to determine if Painless Deep Tissue Massage warrants a larger study. Primary outcome measure was the Fibromyalgia Impact Questionnaire (FIQ) total score (score range 0–100, with 0 indicating no impact). The initial 6 participants all had been diagnosed with fibromyalgia for between 3 and 17 years.

Results: Over the course of up to 4 years, 67% of the initial participants completing at least two sets of questionnaires had FIQ scores of less than 40 at some point, indicating good function in normal living conditions. Average initial FIQ was over 60. Substantial improvements were seen for many within 3 months. Other research suggests that a 14% reduction in FIQ is clinically relevant (Bennett et al. 2009).¹ There were 12 in the initial group. Two dropped out because of other health issues (brain tumor / liver problems). One dropped out for unknown reasons after 9 massages. Of the remaining 9 participants, 8 attained FIQ scores of less than 40, or 89%. And the ninth participant continues massages to enable her to continue to function adequately.

67% of the initial participants had reverses over the course of 2 years, which are due to other factors than myofascial dysfunction in their lives. So long as the other factors exist, massage can support better function, including going back to school or work. When massage is stopped, function returns to a poor level. The degradation in function is reversible by restarting massages. In addition, so long as massage is maintained at a maintenance level, participants were able to reduce or eliminate pain medications.

Participants who were able to change their behavior patterns were able to eliminate or dramatically reduce their need of maintenance massages. One massage every 6+ weeks is reasonable for anyone living an active life. The clients who have made the most progress are those who can calm their minds, maintain a reasonable level of discipline around food and drink, and have a stable support system. (See Appendix A, p20 and Appendix B, p21.)

Conclusions: Painless Deep Tissue Massage warrants a larger-scale test, as part of a multi-disciplinary program for fibromyalgia, chronic pain, and chronic fatigue. Painless Deep Tissue Massage appears to be the most effective way to reverse the physical-function degradations, shown by the FIQ. Without effective additional support, many participants will need continuing high-level massage support. See Appendix A for our recommendations as to possible support.

A possible complementary program would be "Treat-to-target strategy for fibromyalgia"². Also appropriate, the German S3 Guidelines for Fibromyalgia Syndrome.³ To the author's knowledge, there is no study that shows such a significant improvement in participants FIQ scores nor is there any study over such a long time period.

Keywords: massage, fibromyalgia, chronic pain, chronic fatigue, long-term

¹ BENNETT, R. M. , BUSHMAKIN, A. G., CAPPELLERI, J. C., ZLATEVA, G.& SADOSKY, A. B. (2009). Minimal clinically important difference in the fibromyalgia impact questionnaires. *The Journal of Rheumatology*, 36.6, 1304–11.

² Hauser W, Clauw DJ, Fitzcharles MA. Treat-to-target strategy for fibromyalgia: Opening the dialogue: Treat to target for fibromyalgia, *Arthritis Care & Research*, DOI 10.1002/acr.22970

³ T. Dreher, W. Häuser, M. Schiltenwolf, Fibromyalgia Syndrome - Updated S3 Guidelines, *Z Orthop Unfall* 2013; 151: 1–7

INTRODUCTION

2a Background

A Chinese study⁴ published in 2014 showed that massage therapy with a duration of over 5 weeks had beneficial effects on improving pain, anxiety, and depression in patients with FM. "Massage therapy should be one of the viable complementary and alternative treatments for FM. However, given fewer eligible studies in subgroup meta-analyses and no evidence on follow-up effects, large-scale randomized controlled trials with long follow-up are warranted to confirm the current findings."

Other studies have shown both positive and negative results from massage. In addition, the various studies use poorly defined and controlled styles of massage. An example quotation that the author was told while studying deep tissue massage, "I had a deep tissue massage once. Never again. I couldn't get out of bed for three days afterwards." The author's response, "You had a sadist."

2b Objectives

This study began because of a lack of long-term studies using a well-defined massage technique that has been useful for reducing chronic pain. The initial objective was to determine if Painless Deep Tissue Massage could be of use in the treatment of difficult-to-treat conditions like fibromyalgia, chronic pain, or chronic fatigue. The initial 2 participants were extremely pleased with the results, but the results were difficult to quantify.

METHODS

3a Trial Design

This is a long-term Observational Study. Documentation of the study started with participant-reported Emotional_Distress, Sleep_Problems, Current_Pain, and Pain_After_Massage on a 0-10 NRS (Numerical Rating Scale).

3b Changes to trial design

After 6 months, a variety of additional participant-reported questionnaires were added, thanks to Dr. Gregoire COZON of the Hôpital Edouard Herriot, Lyon, France, including FIQ (Fibromyalgia Impact Questionnaire), Beck Anxiety Inventory, HAD (Hospital Anxiety and Depression Scale), PCLS (Posttraumatic Stress Checklist), and SF36 (Short-Form Health Survey). More recently, QDSA and PANAS were added.

4a Eligibility criteria for participants

Participants are self-selected, but must have a doctor's diagnosis of fibromyalgia, chronic pain or chronic fatigue. All have had their diagnosis a number of years and have all tried a variety of interventions, the best of which did some good, but not enough to satisfy them. Participants were excluded if they had health conditions for which massage would be contra-indicated (for example - undergoing chemotherapy, etc.).

4b Study settings

Participants are treated in a private massage office in Lyon, France. All are French.

⁴ Li Yan-hui, Wang Feng-yun, Feng Chun-qing, Yang Xia-feng, Sun Yi-hua, Massage Therapy for Fibromyalgia: A Systematic Review and Meta-Analysis Of Randomized Controlled Trials, doi:10.1371/journal.pone.0089304

5 Interventions

All participants were treated with Painless Deep Tissue Massage, initially 2 times per week. This style of massage is very slow, with the pressure determined by the comfort of the client. The client is instructed to inform the massage therapist when the pressure is too much, who then reduces the pressure and sometimes also the speed, as necessary. Since clients will tend to under-report discomfort levels, it is essential that the therapist also monitor physical signs and check in frequently with the client to properly control the pressure. This is important to minimize negative day-after effects. When clients understand that too much pressure during the massage will lead to discomfort in the next 1-3 days, they are more open and comfortable with expressing when the pressure is excessive.

It is more important that the massage be painless (especially at the beginning) than particularly deep.

For clients with fibromyalgia, the initial massages are frequently EXTREMELY gentle. After 5-20 massages, the pressure acceptable to the client increases and the massage becomes deeper.

6a Outcomes

Initial outcomes were simply participant-reported on a 0-10 NRS.

6b Changes to outcomes

Results for the initial 2 participants looked very promising, but lacked rigor. Client001 had participated in studies with Doctor COZON of the Hôpital Edouard Herriot, Lyon, France, and was able to put the author in contact with him. Dr COZON provided a complete set of the questionnaires he uses to monitor results of his studies on fibromyalgia. These included French-approved versions of the FIQ (Fibromyalgia Impact Questionnaire), Beck Anxiety Inventory, HAD (Hospital Anxiety and Depression Scale), PCLS (Posttraumatic Stress Checklist), and SF36 (Short-Form Health Survey). Client001 left Lyon before these questionnaires became available, but Client002 completed them after 170 days of treatment (and 36 massages). Thereafter, all clients completed the questionnaires before treatment started and every 3-6 months after. After June 2016, clients were requested to complete questionnaires every month or so. Dr COZON was also able to provide results of the FIQ for many of the participants from 268 to 1112 days before they joined this study.

7a SAMPLE SIZE - How sample size was determined

The study is ongoing. The goal is to determine if it is worthwhile to expand the study. So far there are 8 participants with sufficient results to include (3 or more sets of questionnaires completed).

7b Interim analyses and stopping guidelines

8a Randomization

This a study to determine if it should be included as one of the comparison groups in a larger study.

12a Statistical methods

None used.

12b Additional analyses

None

RESULTS

13a Participant flow

13b Losses and exclusions

14a Recruitment

14b Reason for stopped trial

15 Baseline Data

Dr. COZON provided FIQ results for Client-003, Client-004, Client-005, Client-006, Douleur-013, and Fatigue-014. These results are included with the FIQ graph descriptions.

16 Numbers analysed

17a Outcomes and estimation

17b Binary outcomes

18 Ancillary analyses

19 Harms

No harms were reported by participants.

DISCUSSION

20 Limitations

The study is extremely small and is an attempt to determine the effectiveness of a single modality. It has become apparent that many of the participants would also benefit from additional support, including psychological, employment administrative assistance to help them re-start work at a level that they can physically support, support to improve their diet and eating habits, effective training to reduce stress and respond more effectively in stressful situations, support to find appropriate levels and types of exercise, support to improve sleep and sleeping patterns, as a minimum. Not all future participants will need all these. Many of the current participants have already found their own support systems, and others could use some of these additional supports.

21 Generalisability

The participants self-selected to be willing to receive a massage from a male therapist. This eliminated those possible participants who had overpowering fears of being touched by a man.

The author has trained women to do this kind of massage, especially if they have been trained in "traditional" deep tissue massage, have experience, maturity, and an eagerness to learn how to help reduce pain more effectively.

This would leave those possible participants who have a generalized fear of being touched by anyone and those who are content to be disabled.

22 Interpretation

OTHER INFORMATION

23 Registration

24 Protocol

25 Funding

Self-funded by the author

Graphs:

The first 4 graphs are from self-reported levels of Emotional Distress, Sleep Problems, Current Pain, and Pain after the Massage. Clients provide this information before and after every massage.

The fifth graph shows the results of the FIQ questionnaire, up to 400 days. The sixth shows results of the FIQ up to 800 days. The FIQ seems to best relate to the clients' functional capabilities - the higher the numbers, the less they are able to do. When clients have reverses, there are always real, reasonable causes: car accident, a long vacation without maintenance, return to stressful work, emotional breaks with family, health issues, etc.

Subsequent charts show the results from the Beck Anxiety Inventory, HAD (Hospital Anxiety and Depression scale), PCLS (Posttraumatic Stress Disorder Checklist), SF-36 Short-form Health Survey, and more recently, QDSA (Questionnaire de Saint Antoine), and PANAS (Positive and Negative Affect Schedule).

Analysis:

The author expected to see pain levels reduce, then function (as measured by FIQ) improve, if massage even had any effect.

This is not what appears to happen.

Self-reported pain levels take about 6 months to reach a lower level.

During this interval, self-reported Emotional Distress and Sleep Problems vary, often increasing.

Function improves over the course of 3-4 months, with 2 massages per week, so long as there is no adverse event, to a nearly normal level, as shown by the FIQ. (The FIQ chart is notated to show adverse external events.)

Anxiety, per Beck, HAD-Anxiety, generally decreases.

Depression, per HAD-Depression, generally remains low or decreases, so long as there is no adverse event.

PCLS (Post-Traumatic Stress) also has a general downward trend, sometimes very significant.

SF36-Physical Functioning has a general upward trend over the long-term.

SF36-Role Functioning is variable.

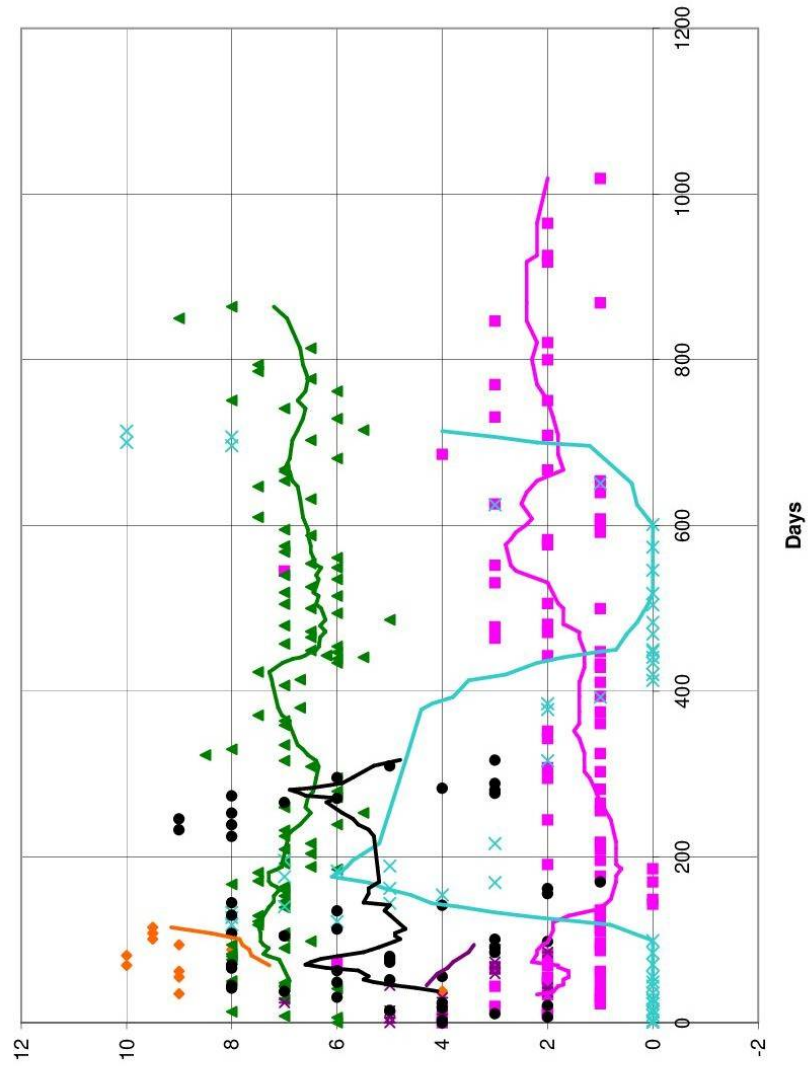
The rest of the SF36 results typically show a moderate improvement over the long-term.

QDSA and PANAS are still too short-term to determine what they show.

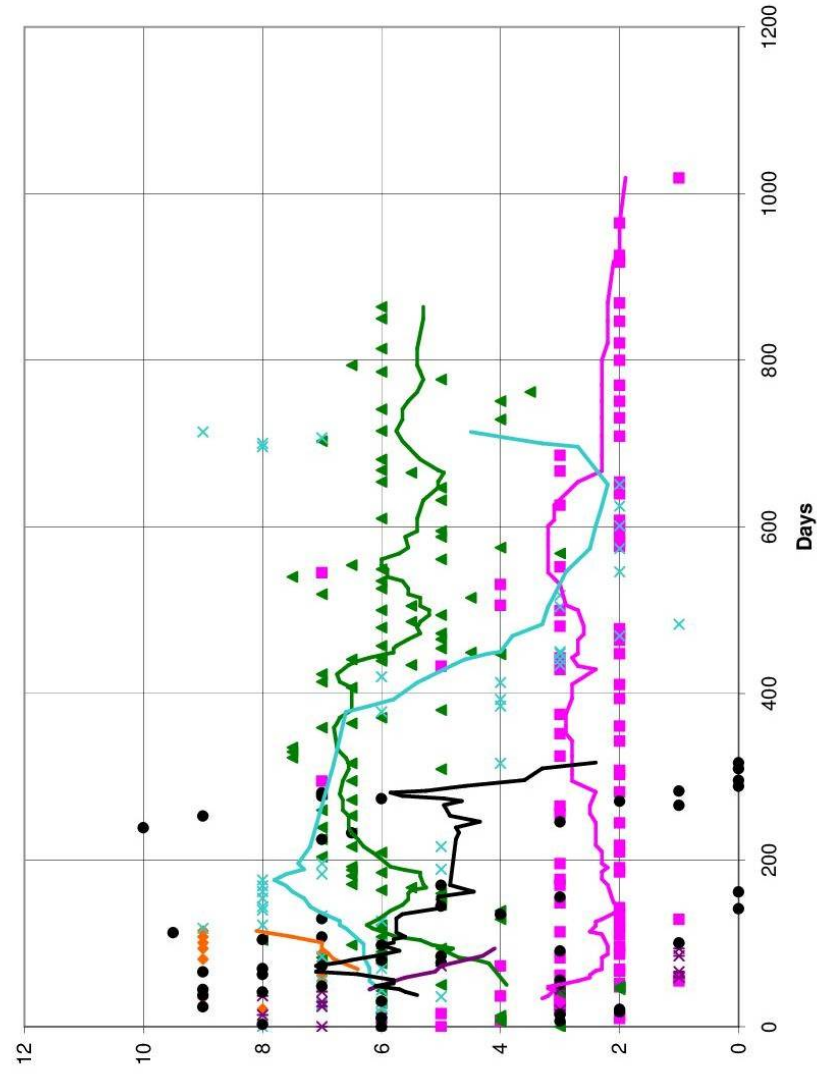
To the author's knowledge, there has never been:

- 1) Any study that shows this kind of improvement to FIQ.
- 2) Any study extending over this kind of time interval.

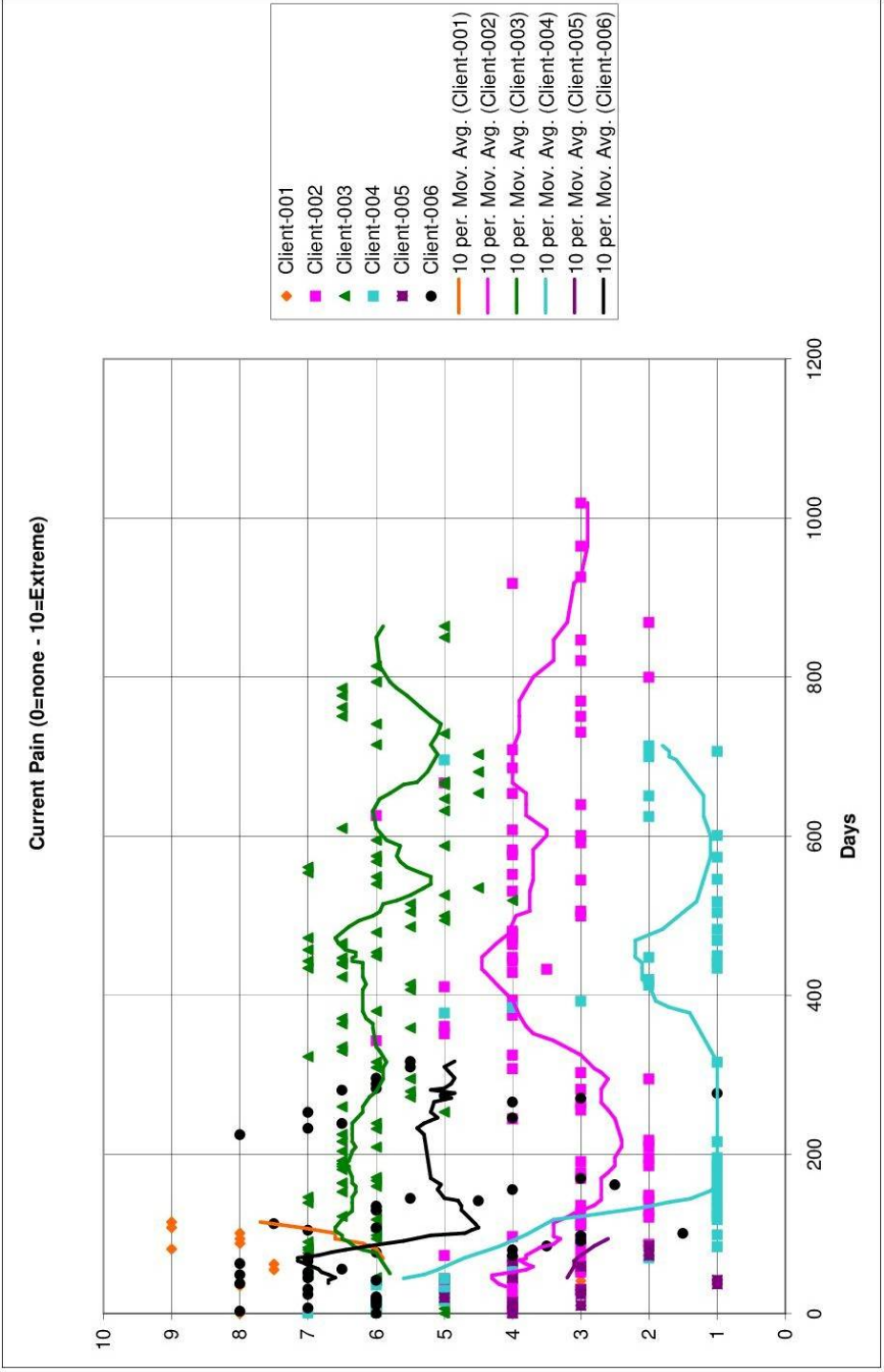
Emotional Distress (0=none - 10=Extreme)



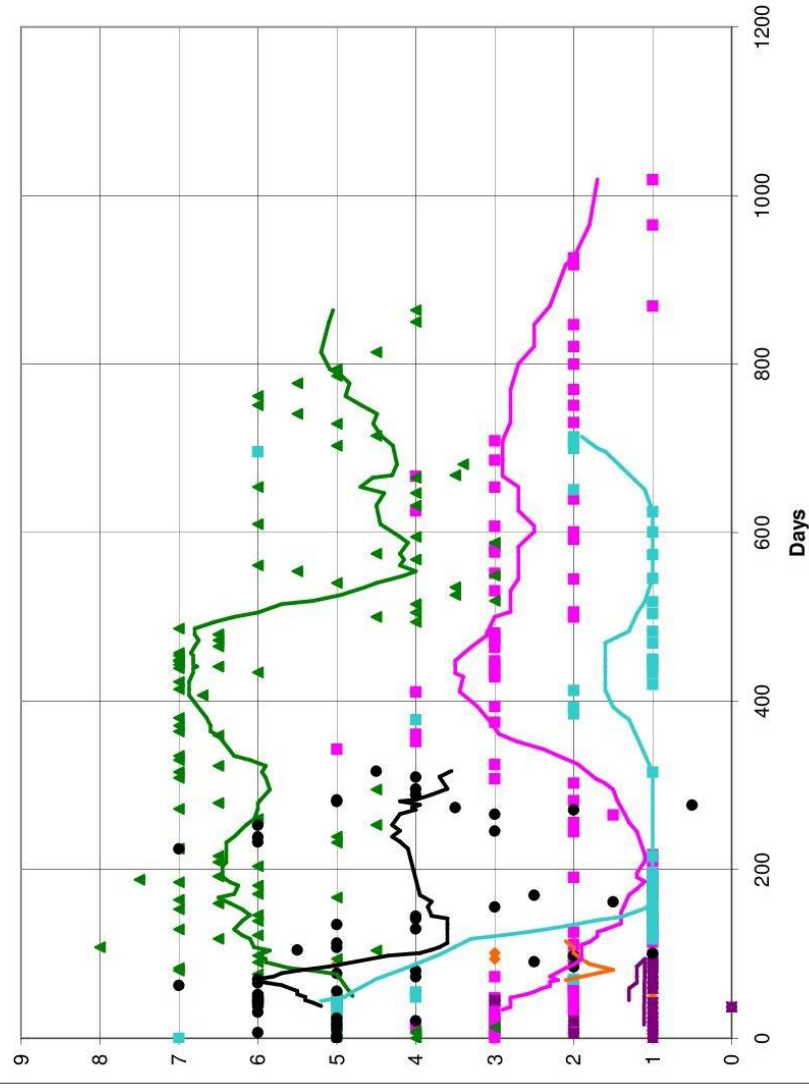
Sleep Problems (0=none - 10=Extreme)



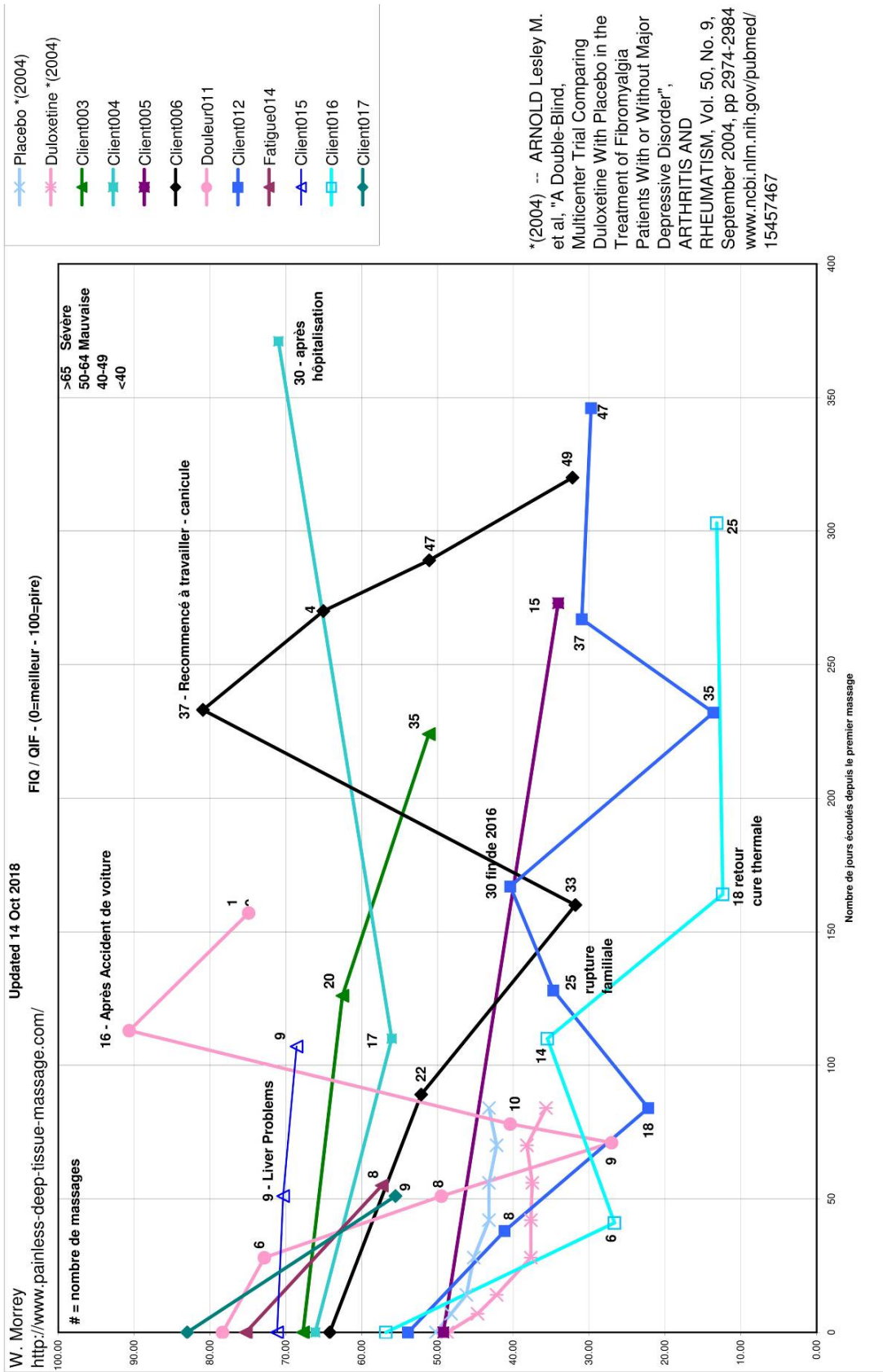
- Client-001
- Client-002
- Client-003
- Client-004
- Client-005
- Client-006
- 10 per. Mov. Avg. (Client-001)
- 10 per. Mov. Avg. (Client-002)
- 10 per. Mov. Avg. (Client-003)
- 10 per. Mov. Avg. (Client-004)
- 10 per. Mov. Avg. (Client-005)
- 10 per. Mov. Avg. (Client-006)



Pain After Massage (0=none - 10=Extreme)



- Client-001
- Client-002
- Client-003
- Client-004
- Client-005
- Client-006
- 10 per. Mov. Avg. (Client-001)
- 10 per. Mov. Avg. (Client-002)
- 10 per. Mov. Avg. (Client-003)
- 10 per. Mov. Avg. (Client-004)
- 10 per. Mov. Avg. (Client-005)
- 10 per. Mov. Avg. (Client-006)



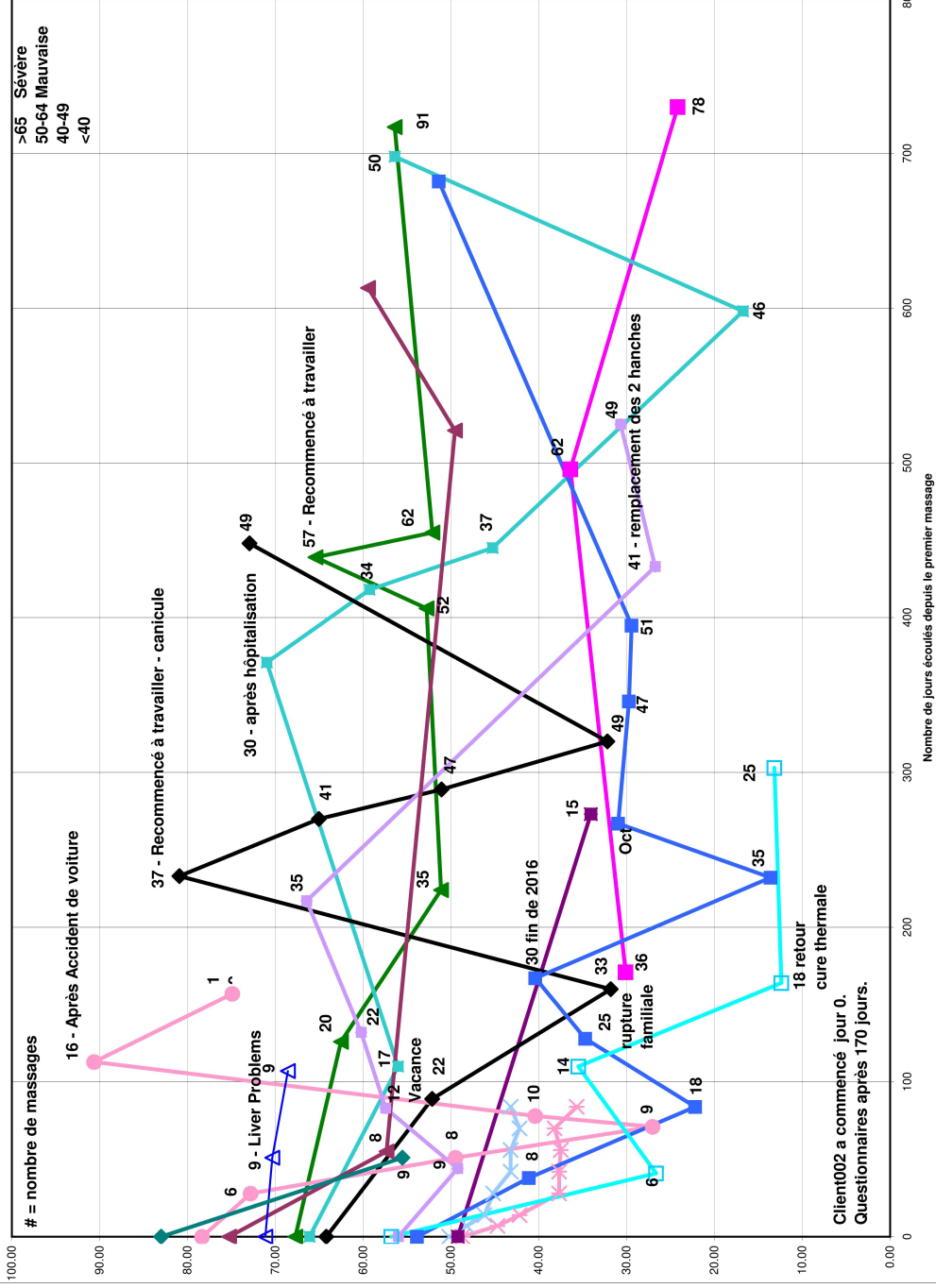
Client003 at 377 days before starting the study had a FIQ of 71.11 (vs 67.73 @ start)
 Client004 at 268 days before starting the study had a FIQ of 41.84 (vs 66.12 @ start)
 Client005 at 379 days before starting the study had a FIQ of 43.58 (vs 49.22 @ start)
 Client006 at 467 days before starting the study had a FIQ of 65.34 (vs 64.20 @ start)
 Douleur013 at 1112 days before starting the study had a FIQ of 54.81 (vs 56.01 @ start)
 Fatigue014 at 669 days before starting the study had a FIQ of 55.82 (vs 75.26 @ start)

W. Morrey

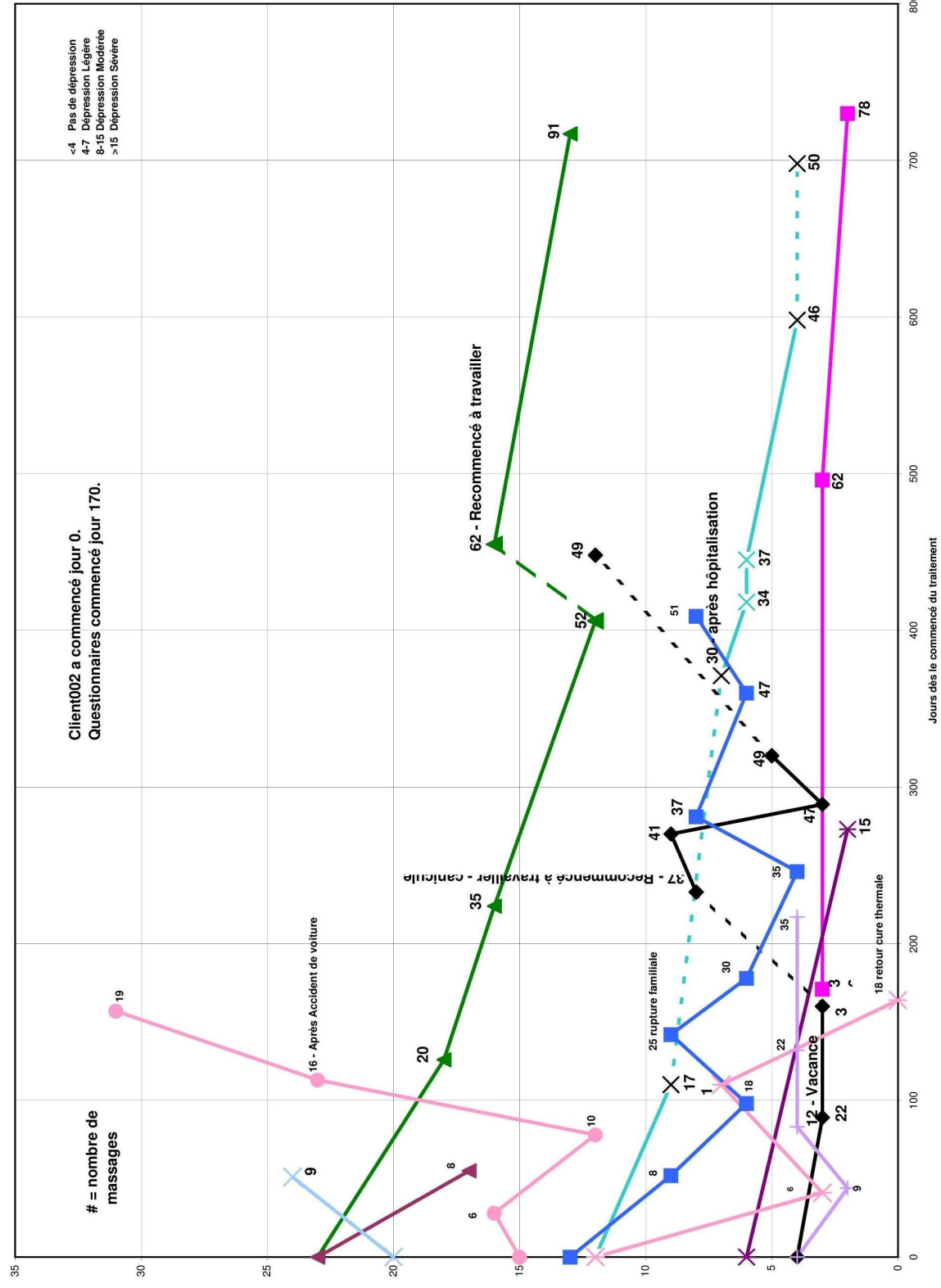
Updated 14 Oct 2018

<http://www.painless-deep-tissue-massage.com/>

FIQ / QIF - (0=meilleur - 100=pire)

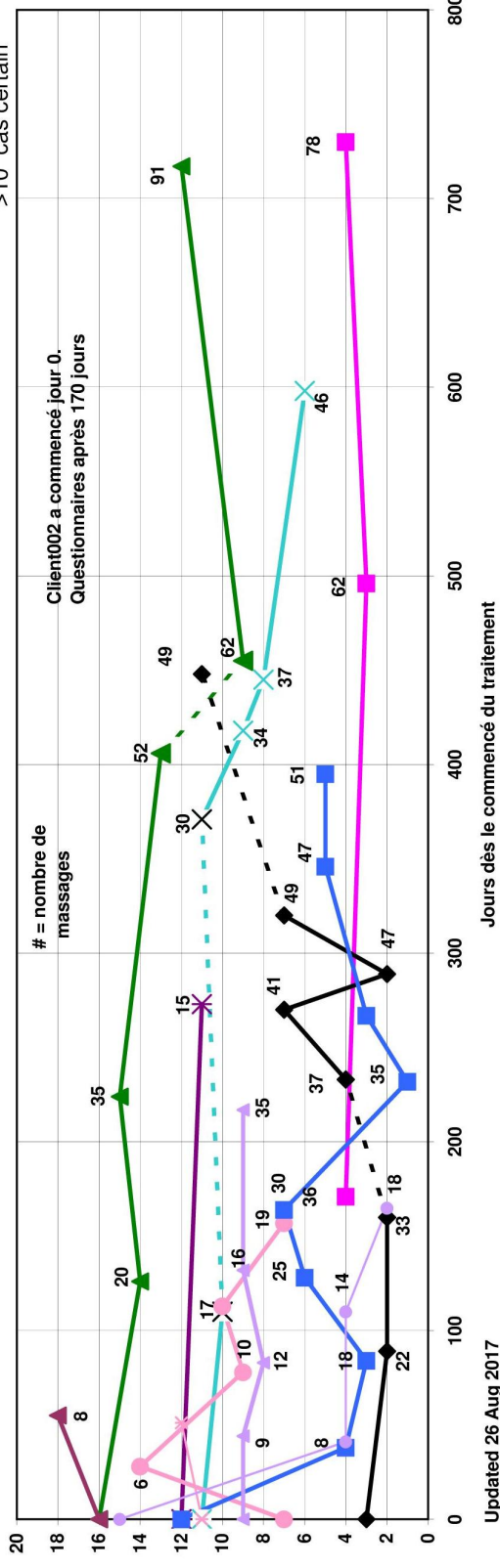


*(2004) -- ARNOLD Lesley M. et al, "A Double-Blind, Multicenter Trial Comparing Duloxetine With Placebo in the Treatment of Fibromyalgia Patients With or Without Major Depressive Disorder", ARTHRITIS AND RHEUMATISM, Vol. 50, No. 9, September 2004, pp 2974-2984 www.ncbi.nlm.nih.gov/pubmed/15457467



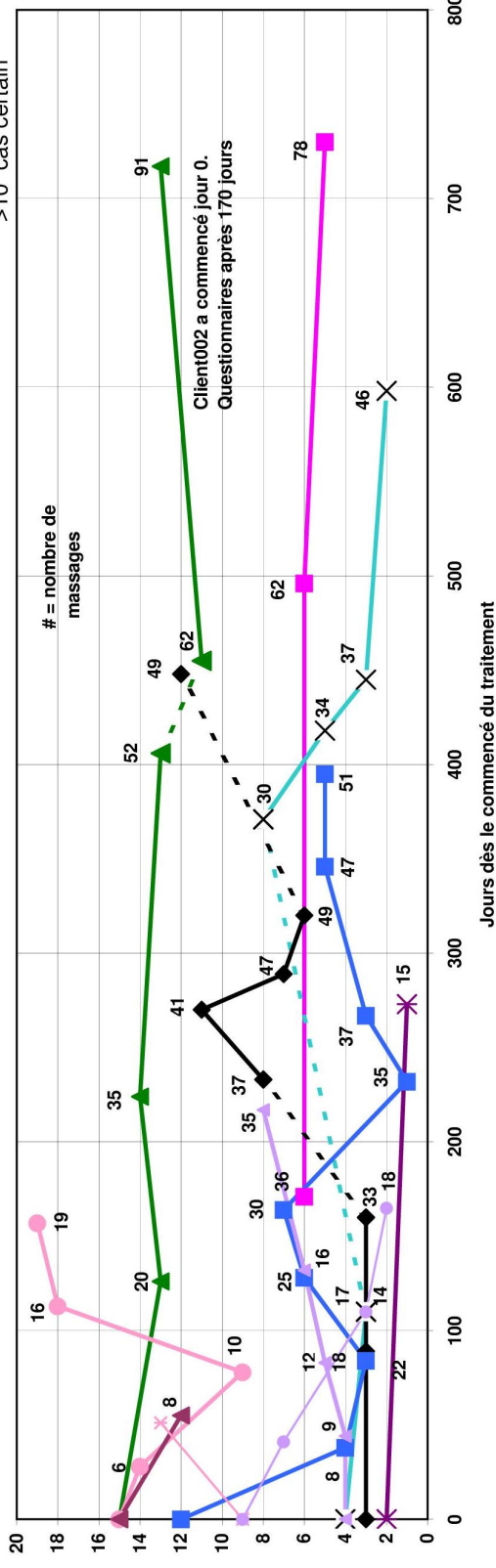
HAD - Anxiety - (0 - 21)

<7 pas de cas
8-10 cas douteux
>10 cas certain



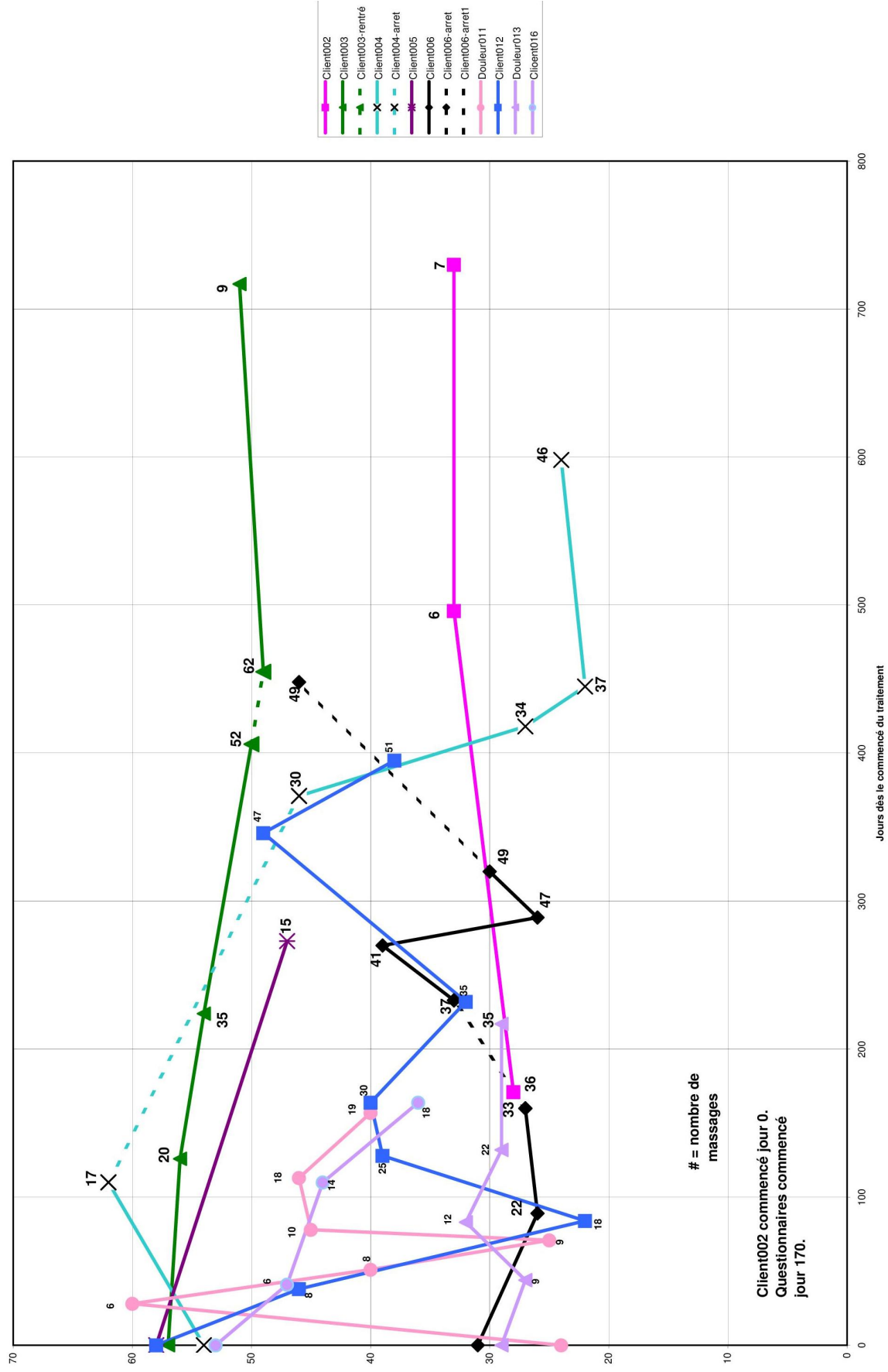
HAD - Depression - (0 - 21)

<7 pas de cas
8-10 cas douteux
>10 cas certain



PCLS - (17 - 85)

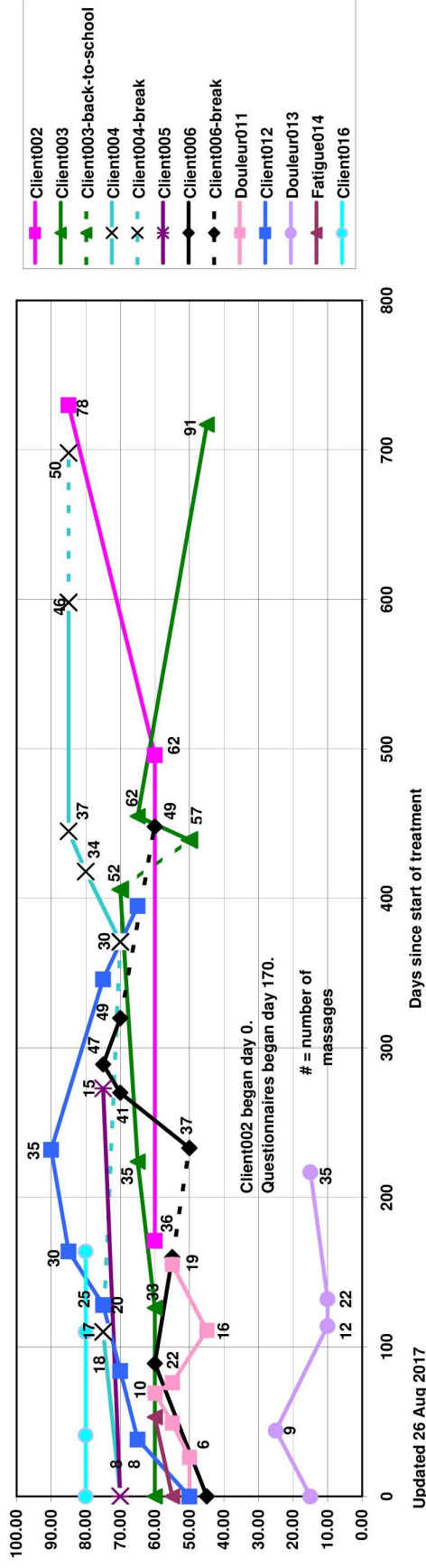
<35 - PTSD <16% probable
36-44 - PTSD 16-35% probable
>45 - PTSD >40% probable



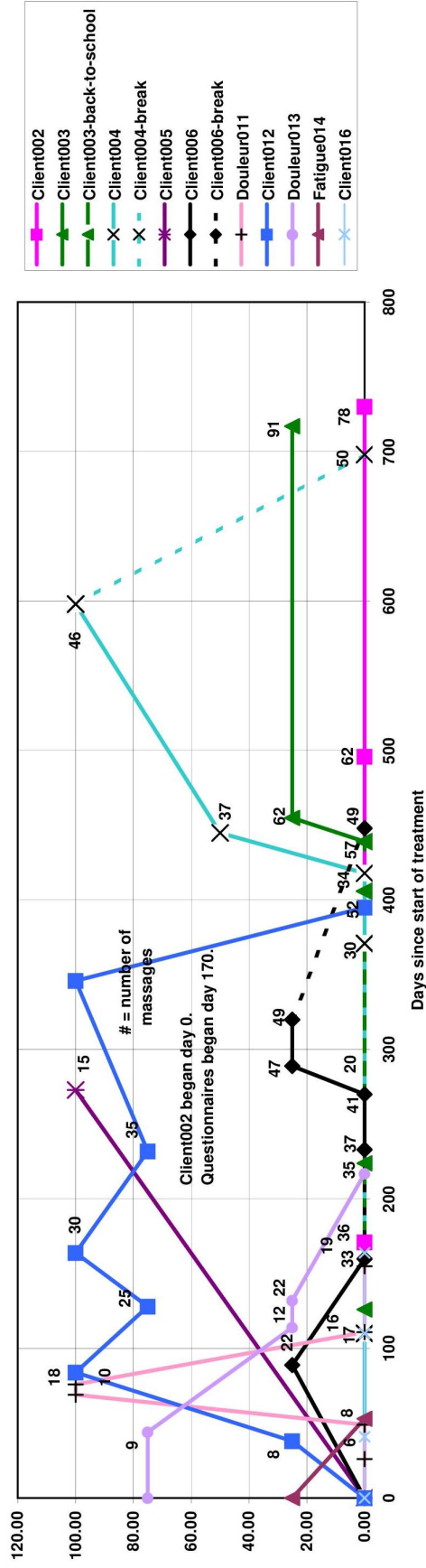
W. Murray

<http://www.painless-deep-tissue-massage.com/>

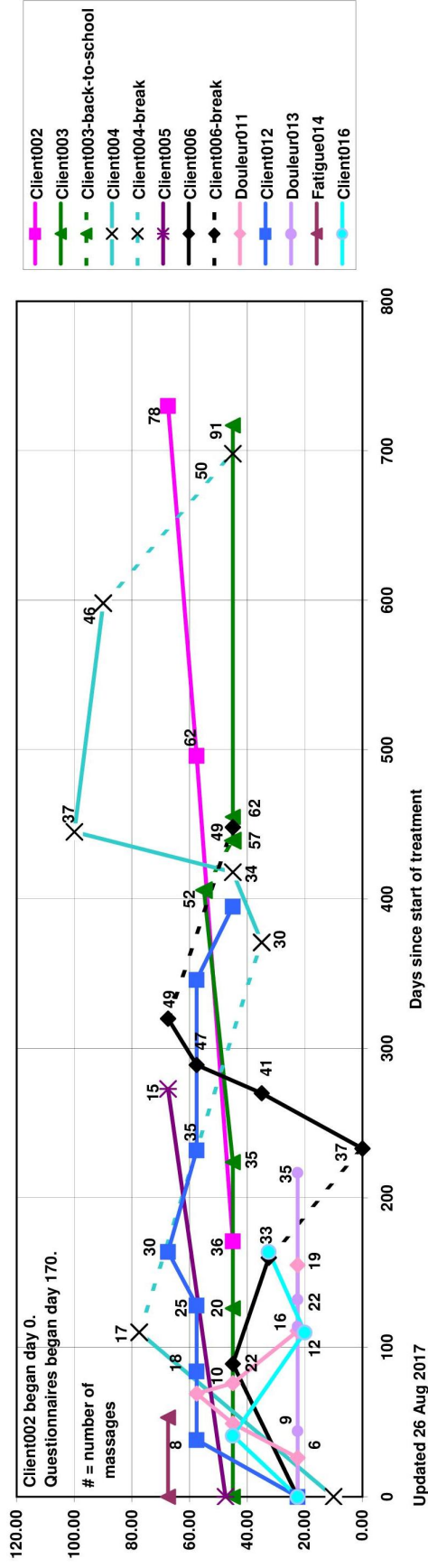
SF36 - PF - Physical Functioning - (Normalized - 0=worst - 100=best)



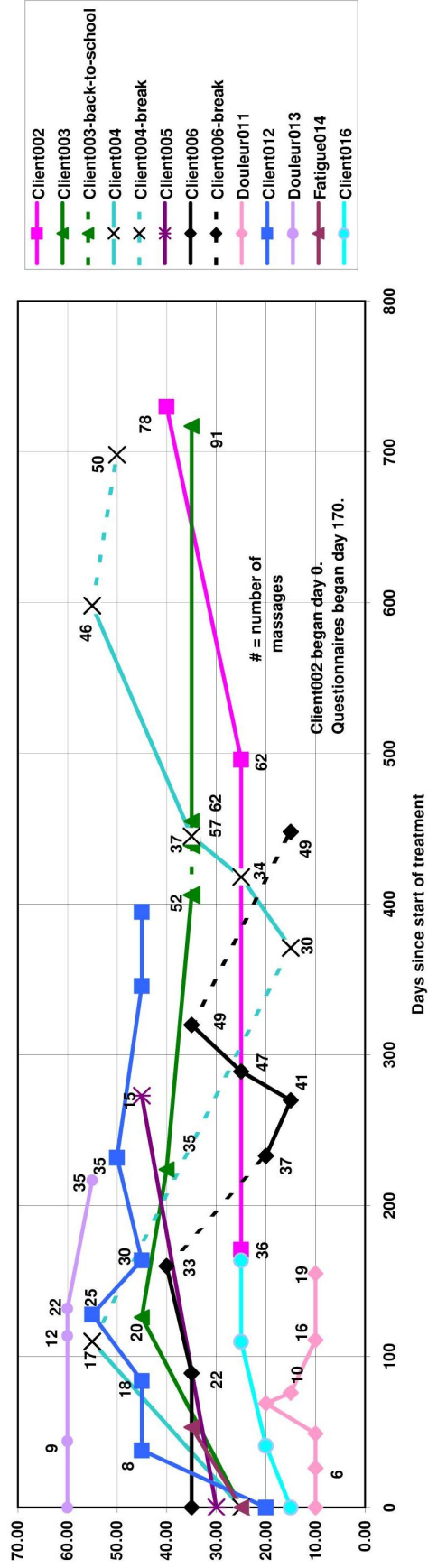
SF36 - RP - Role Functioning / physical - (Normalized - 0=worst - 100=best)



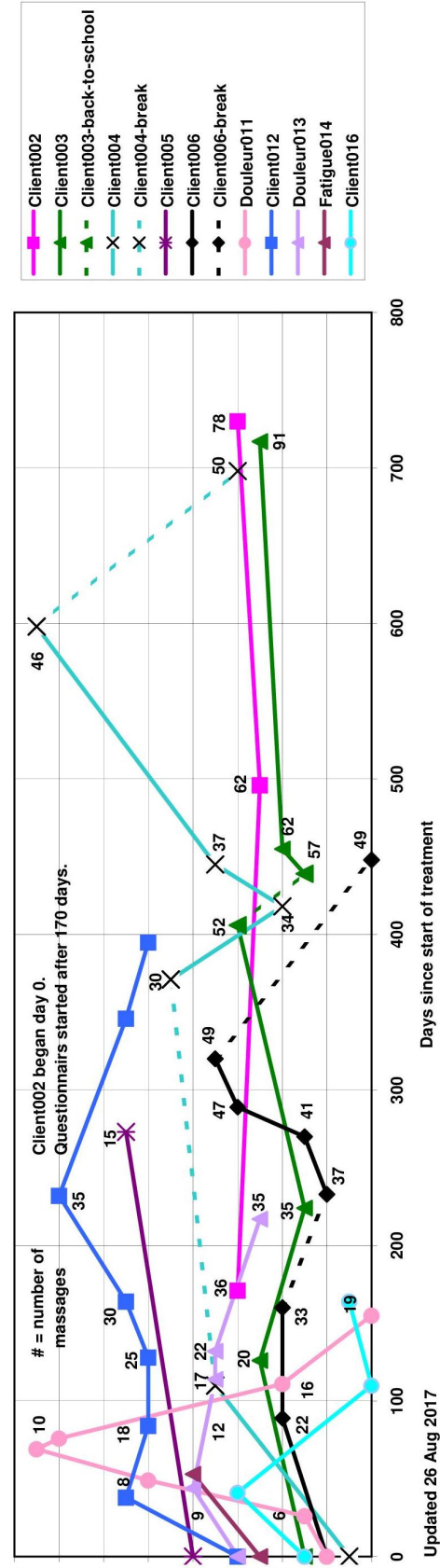
SF36 - BP - Quality-of-Life due to Pain - (Normalized - 0=worst - 100=best)



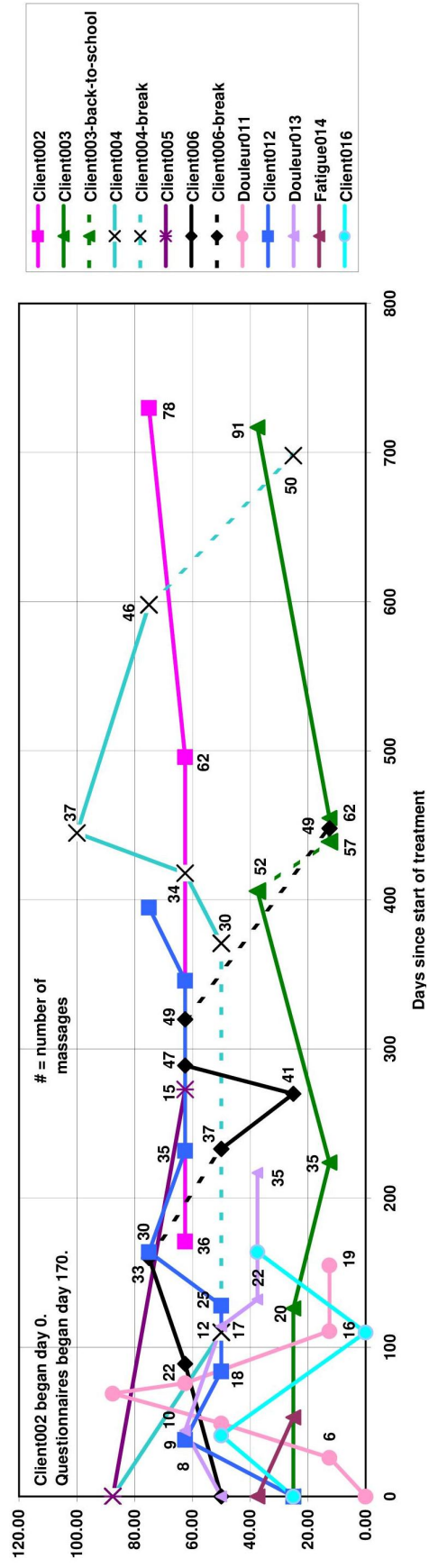
SF36 - GH - General Health - (Normalized - 0=worst - 100=best)



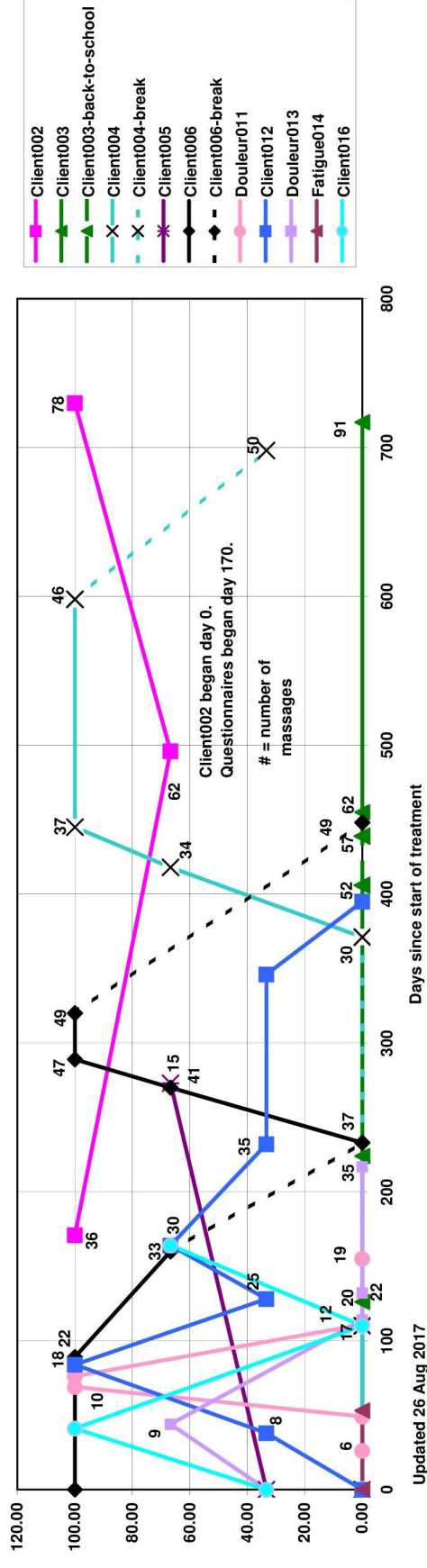
SF36 - VT - Vitality - Energy / fatigue - (Normalized - 0=worst - 100=best)



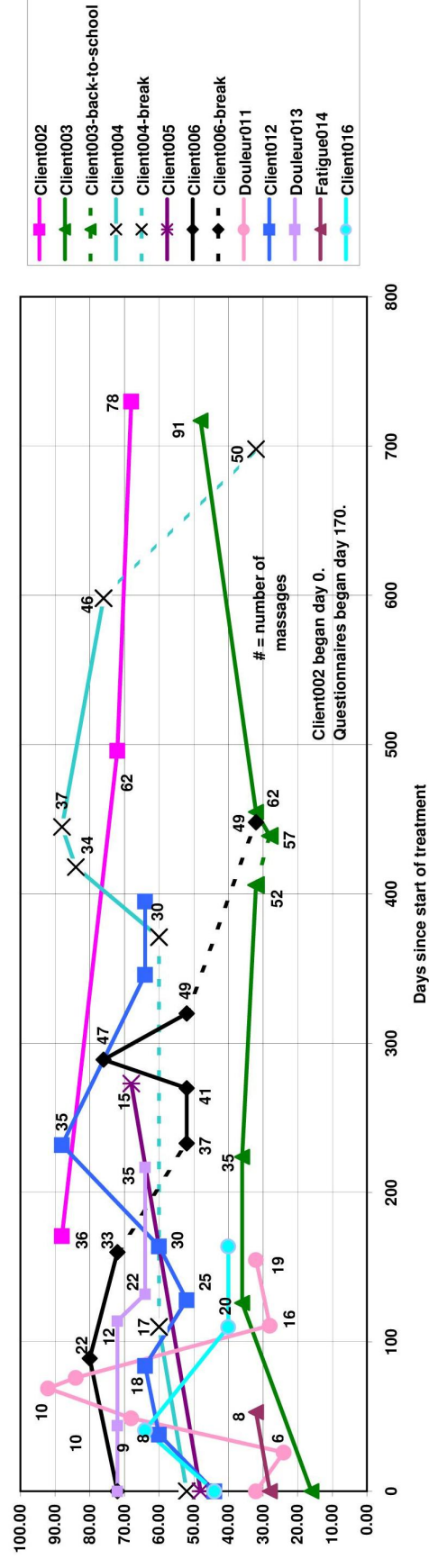
SF36 - SF - Social Functioning - (Normalized - 0=worst - 100=best)



SF36 - RE - Role Functioning / emotional - (Normalized - 0=worst - 100=best)



SF36 - MH - Emotional well-being - (Normalized - 0=worst - 100=best)



Client002 began day 0.
Questionnaires begun day 170

= number of messages

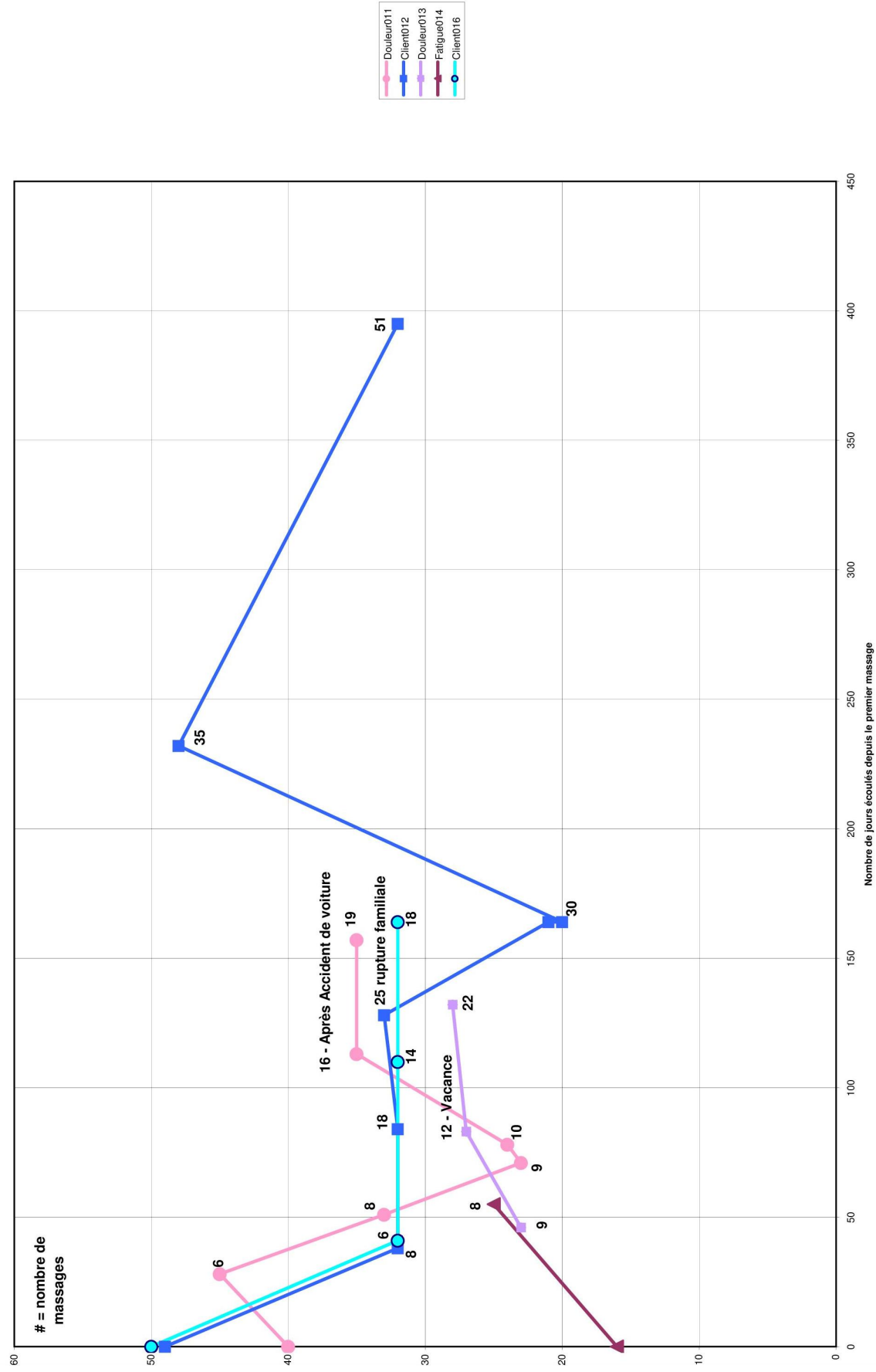
Days since start of treatment

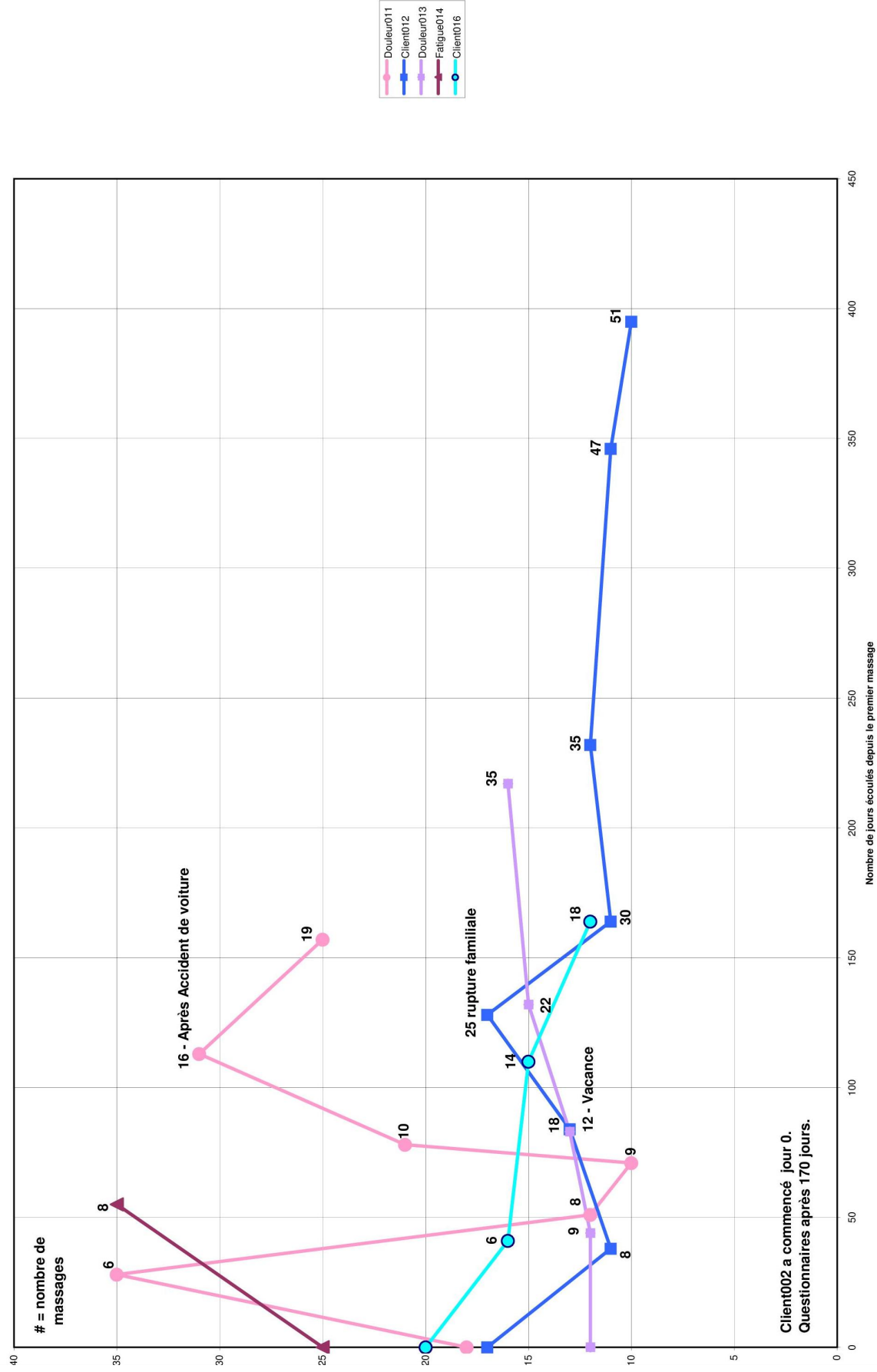
Updated 26 Aug 2017

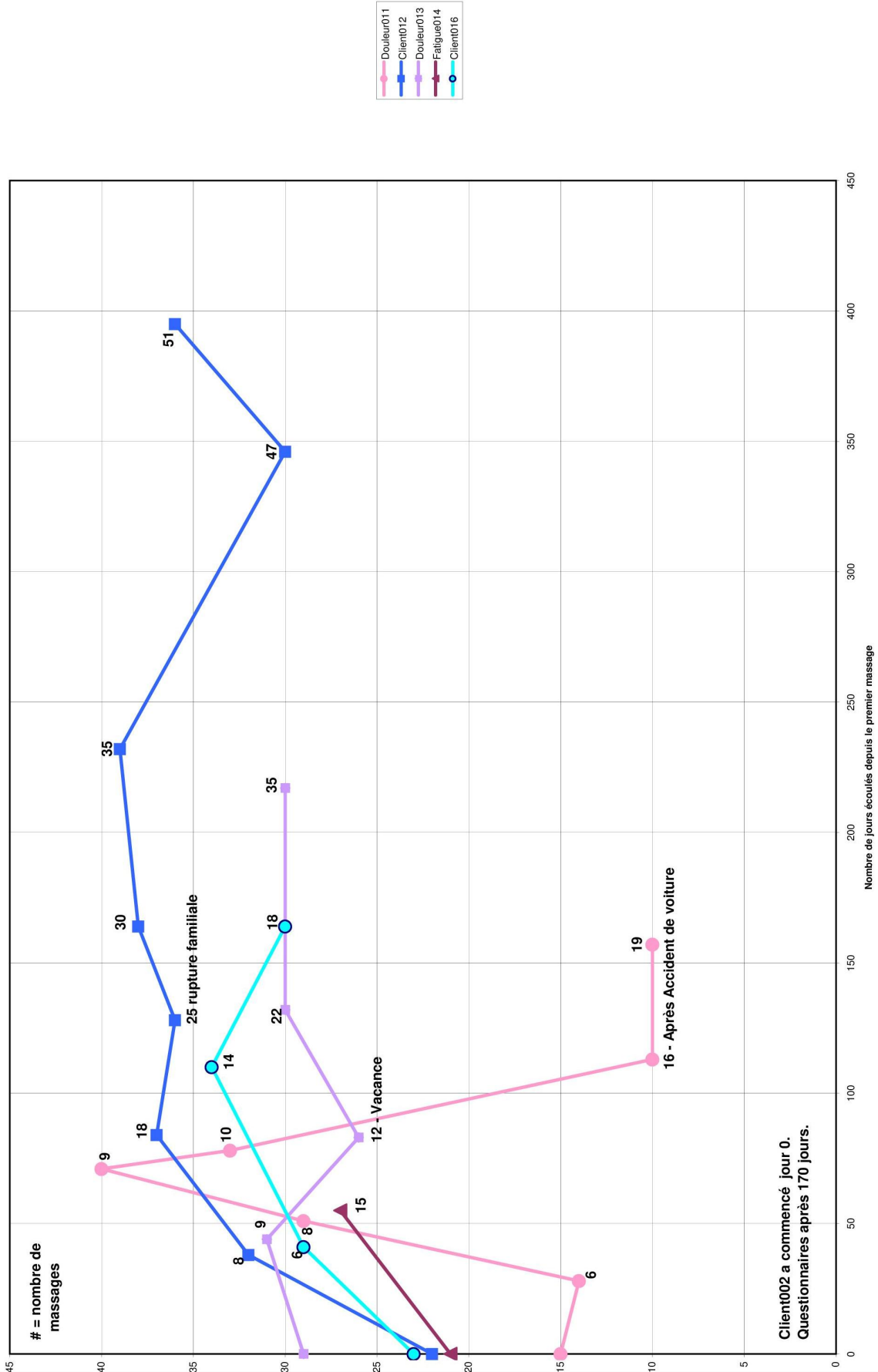
Legend:

- Client002
- Client003
- Client003-back-to-school
- Client004
- Client004-break
- Client005
- Client006
- Client006-break
- Client011
- Client012
- Client013
- Client014
- Client016

Updated 26 Aug 2017







Appendix A

Fibromyalgia / Chronic Pain Syndrome – Causes and Perpetuating Factors – my opinion
W. Morrey

- 1) Muscular damage – initial – see article “Massage for Women's Pain”⁵
 - 2) Bad Habits of Thought
 - 3) Bad Habits of Action
 - 4) Bad Diet
 - 5) Bad Sleep
 - 6) Stressful situations and people
 - 7) Manageable work
 - 8) Overwhelming, irrational fears
 - 9) Fear of pain
- 2) Bad Habits of Thought:
- a) Belief in “No Pain, No Gain” (or “it is necessary to suffer”) is not helpful.
 - b) Trying to fix problems for other people. Taking too much on ourselves.
 - c) We all need to take responsibility for our own health and not rely too much on doctors – they do not live in our bodies.
 - d) Stress is a choice. There are always stressful situations – we can choose to be stressed or we can just do what we can do (and learn what we cannot do).
 - e) Fear of being touched in a therapeutic way.
 - f) Rigidity / inflexibility
 - g) Inability to calm their thoughts
- 3) Bad Habits of Action
- a) Some exercise regularly is better than none – park at the far end of the parking lot – get off the bus a stop early and walk.
 - b) Too much and / or too infrequent exercise contributes to muscular damage.
 - c) Minimize medications.
- 4) Bad Diet
- a) Eliminate ALL artificial sugars and fats.
 - b) Keep sugar and salt use low.
 - c) Avoid processed foods – READ THE LABELS – too many chemicals? Don’t eat it!!
 - d) Eat lots of fresh, colorful produce.
 - e) Avoid excessive meat / fish consumption, but consume protein in balance. Avoid cheaply-produced meats – too many hormones / antibiotics / other chemicals in the feed.
 - f) Eat smaller portions of higher-quality foods – actually costs less and is more satisfying in the long run.
 - g) Maintain a diversified and balanced nutrition.
- 5) Bad Sleep
- a) Try recommendations for insomnia - <https://www.painscience.com/articles/insomnia.php>
- 6) Stressful situations and people
- a) Work to reduce these situations
 - b) Learn how to put an emotional distance when you do have to put up with them.
- 7) Manageable work
- a) All of my clients who are not retired want to get back to work. Problems arise if they must go back to work before they are ready or if they must go back to a too-stressful job.
 - b) Administrative support should be designed to HELP clients return to work as it becomes possible for them to do so, without excessive paperwork and effective support to help them complete any necessary paperwork.
- 8) Overwhelming, irrational fears.
- 9) Fear of pain → overuse of opioids.

⁵ <http://www.painless-deep-tissue-massage.com/articles/003a.html>

Appendix B

Massage for Women's Pain

Walt Morrey, originally published in "Focus on the Coast", Wilmington, NC, 2006

There are a number of conditions that can affect a woman's health. For instance, Fibromyalgia and Chronic Pain Syndrome are much more common in women than in men. These conditions can start a chain reaction leading to additional health issues. I believe, however, that with patience, perseverance, and gentleness, their progressive nature can be reversed.

Here is an example of one composite experience --- You start off dealing with stress continuously; whether you have very high expectations of yourself, problems in your family life, or other long-term stress-causing situations. You hold your muscles tight all the time – they never can fully rest. Your constant stress has set you up for injury. Something happens – you move wrong doing normal things, have an accident, or cause other damage to your body. A muscle is injured, but you keep going, not taking time to soothe or treat the injury. Other muscles take up the slack and you keep going, soon forgetting the injury, and causing your body to become out of balance. Your other muscles are under more tension to compensate. More injuries. You start to hurt – just a little at first, then the pain becomes constant. You see a doctor for pain. Medication helps. Then it's not enough. You get more injuries. You get more and stronger pain medication. The pain medication starts interfering with the clarity of your thinking. You hurt. You take more medication. You keep getting more pain. Life isn't yours any more. You live in a fog. You get depressed. Antidepressants. You live in a bottle. You can no longer do your job. You become dependent on others to care for you, but you don't care because you hurt so much; and you can't face life without your medications – you're addicted.

Although this paints a pretty awful picture, it happens far too often. The pain is REAL, the depression is REAL and REASONABLE, and it is a downward spiral that will continue unless you start to make some changes.

Reversing the direction is clearly not going to be easy or quick; it took too long to get here and there are too many pieces to work on.

To begin, you need to set goals: 1) rid yourself of the addiction to pain killers 2) deal with your depression 3) work to eliminate stress triggers 4) eliminate the pain.

This process will not be accomplished overnight, and you cannot attempt these goals all at once. You will likely need the medications to deal with the pain and depression NOW. Dealing with the stress will not be beneficial at this point because your thinking is foggy. To get closer to dealing with stress and the condition as a whole, patients might consider the benefits of massage.

The right kind of massage can help reduce the pain, but the wrong kind can make it MUCH worse. How can you determine what is the right kind of massage for you? In this case, the massage will eventually have to get very deep to clear the old injured areas in your muscles. Although deep, this massage has to be extremely gentle to be beneficial as well as tolerable. Many old injured areas have turned into "Trigger Points", and these can cause pain to appear far from the injured area, frequently in joints or bony areas. Massaging where the pain appears can often do nothing and your therapist must be able to find and gently clear the Trigger Points. While ultimately beneficial, this is a slow process and requires patience. At no point should massage be painful – this would demonstrate that additional injury is being caused – inform your therapist as soon as this happens for them to correct.

Doing normal deep tissue massage is contraindicated when clients are on heavy dosages of pain medication, since the client is unable to give accurate feedback to the therapist and the therapist can easily over-treat, causing injury and more Trigger Points to appear. Initial visits must be extremely gentle, though progress will still occur. At this stage, the goal is to gradually reduce pain medication and have frequent massages (up to 2 per week). Massage is not enough, so find a physician who will help with this type of plan. Do NOT go "Cold Turkey" on your medications – the pain and withdrawal will likely cause a major set-back.

Next, as your thinking clears, find a good therapist to help modify your behaviors and/or thought patterns that created your stress. Continue with massage and the reduction of pain killers, as appropriate for your pain level. Since some will need to deal with withdrawal now, switch to less-addictive pain medication, all with your physician's assistance. This is your first step toward healing.