

ORIGINAL ARTICLE

Pain management coaching: The missing link in the care of individuals living with chronic pain

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This article describes the preliminary findings on the efficacy of a Comprehensive Telephonic Pain Self-Management Coaching Program (CTPSCP) in improving pain-related outcomes for adults being treated for chronic pain. Analyses of pain-related data collected by administering the Pain Outcomes Questionnaire-For Civilians (POQ-C) to participants in a CTPSCP at intake, at the 6-month mid-point ($n = 51$), and at the 12-month completion of the program ($n = 33$). A paired-sample t test was conducted to evaluate whether there was a reduction in scores on the POQ-C. The results indicated that there was a significant reduction in the POQ-C scores from intake to 6- and 12-months follow-up. The total scores on the POQ-C dropped from the 50%–74% range of pain to the 10%–24% range. Separate score decreases in the six subscales were statistically significant as well. These findings support the implementation of a CTPSCP as an effective adjunctive intervention, potentiating the standard medical treatments. Future studies should focus on direct comparisons between telephonic coaching and face-to-face coaching, and between pain management coaching and cognitive-behavioral therapy. What makes a good CTPSCP candidate and “optimal treatment dose” need to be elucidated. Finally, comparative cost-effectiveness and reimbursement models from insurance carriers should be explored as well.

1 | INTRODUCTION

Due to the compounded medical and psychosocial complexities of chronic pain, it arguably represents one of the most difficult chronic medical conditions to treat (Barkin & Fawcett, 2000; Newton-John & McDonald, 2012). Generally

speaking, for other chronic conditions, especially for those with symptoms that involve minimally unpleasant sensations, once the signs and symptoms are under control, individuals may manage to keep "out of their conscious awareness" the fact that they have the disease. However, in general, chronic pain is, as the name implies, in a certain way ever-present both in body and mind.

At the risk of oversimplifying the complexity of the challenges in treating chronic pain, a few provider-specific and patient-specific situational examples may suffice. On the medical providers' side and from the functional restoration perspective: How do medical providers convince patients with low back pain that being physically active is one of the best strategies for their pain, and for their health in the long run when, at least initially, being physically active may many times exacerbate their pain? How do medical providers persuade patients that physical exercise, which requires time and effort, is better than long-term use of opiate medications, which on the surface may appear so effective and easy to use? Also, how do medical providers convince patients that functioning better is best for them, when this may be perceived to work against their ability to obtain disability benefits or financial compensation? Finally, how can medical providers commit to helping their patients to be more independent in managing their pain, when this may naturally reduce the amount and frequency of the billable medical interventions they perform?

Conversely, even if medical providers wanted to educate patients to become more self-reliant, when and how can they engage meaningfully in this endeavor, which is massively challenging, time-consuming and, so far, minimally reimbursed at best? Achieving this goal would require them to invest time and effort in delivering informative and instructive interventions during the time of their medical visits with the patients. This, of course, is not compatible both clinically and financially with the current generally fast-paced, interventionally focused and pharmacologically centered standard medical treatment for chronic pain.

For patients, besides the medical complexities of their chronic pain, many other challenges exist, particularly in less densely populated areas, including limited access to qualified medical providers, limited insurance coverage, logistical issues associated with attending multiple medical appointments and not having access to medical interpreters, for those with limited English, just to mention a few. Even in the case of having access to appropriate medical care, individuals living with pain often complain about receiving conflicting information from their different providers regarding the etiology of their pain, their diagnosis and the treatment recommendations originated by these. They indicate that all of this becomes very overwhelming for them and adds to their already heavy burden as patients. In the best of situations, even if their case is straightforward, medically speaking, and their treatment recommendations are also clearly explained to them, describing both the doctor's role and the patient's role, patients still struggle. Once they leave their doctor's office, who is going to help them to carry out their doctor's recommendations to take an active role in their pain management, to cope with stresses in a healthy manner and to make the necessary life adjustments? Who is going to assist them to successfully put all the pieces of their care together, prioritize them and tackle each one of them in a methodical and logical order? This is where pain management coaching (PMC) comes in.

Pain management coaching, a non-clinical subspecialty of the emerging and highly innovative allied health profession of Health and Wellness Coaching, is designed to help patients acquire the knowledge, attitudes, skills and key behaviors necessary to actively and effectively do their part in managing their chronic pain. It is important to clarify that PMC is not designed to diagnose or treat any medical condition. It is only meant to function as an adjunctive intervention, complementing and potentiating the standard medical treatments, by guiding the patients to learn and consistently implement the disease-specific pain self-management strategies prescribed to them or other evidence-based strategies identified as appropriate, in consultation with their medical providers. Medical clearance and signed consent for care are required to participate in PMC. Consent to release confidential information is requested too.

A brief review of the literature currently available revealed that the most researched treatments for chronic pain include provider-delivered interventional, pharmacological, rehabilitative, and psychological modalities. Fewer studies have focused on self-administered interventions designed for patients to take a more active role in their own treatment (Bennett et al., 2011). Also, even fewer studies have focused on the use of technology-mediated interventions geared toward educating, training and guiding patients remotely to identify and learn, within the context of the

biopsychosocial model and the functional restoration paradigm, the evidence-based chronic pain self-management strategies that uniquely work best for them; thus, personalizing their pain management (Heapy et al., 2015).

Take Courage Coaching™ (TCC) was designed in 2008 as a 1-year, bilingual (English/Spanish), Comprehensive Telephonic Pain Self-Management Coaching Program (CTPSCP) which integrates pain education, self-care skills training, goal-setting guidance, self-monitoring tools, social support and career guidance for individuals suffering from nonmalignant chronic pain. The actual PMC is provided by “Pain-to-Wellness Coaches” who are either individuals who experience chronic pain themselves, but who have learned to manage it and have completed TCC’s Coach Training Program; or healthcare professionals with experience in treating individuals with chronic pain, who have subsequently completed TCC’s Coach Training Program as well, but who choose to avoid “treating” program participants in their role as coaches. TCC has deliberately sought to recruit, train and retain bilingual/bicultural coaches, to staff both the English and the Spanish versions of the program. A brief overview of TCC’s CTPSCP follows.

1.1 | Program participation protocol

Typically, patients are first referred to TCC by their medical providers, attorneys or insurance carriers. Subsequently, the assigned coach conducts a telephonic interview to screen them for potential participation in the CTPSCP. Once it is mutually agreed between the coach and the patient that this may be an appropriate adjunctive service for their pain management and the patient signs a consent to care, the patient is accepted as a CTPSCP participant and invited to complete the *Pain Outcomes Questionnaire-For Civilians (POQ-C: Intake)* for assessment and recordation of the baseline scores on that instrument at intake. The participant then engages in weekly, 30-min individual telephonic PMC sessions, and 60-min telephonic group PMC sessions with a cohort, following a carefully designed 1-year curriculum for progressive knowledge and skills acquisition. This is accomplished within the context of a safe, warm and supportive social environment, which also provides accountability. As part of the educational curriculum, participants are given access to written, audio or video lessons (available both in English and in Spanish) of an informational or instructional nature. For example, an informational lesson would explain in simple language the differences between acute and chronic pain; conversely, an instructional lesson would provide a step-by-step tutorial on how to practice deep breathing. At mid-point (6 months), the participant is invited to complete the *POQ-C: Discharge*, as it is also done after 12 months in the program to evaluate progress, comparing with intake and mid-point scores.

The coach guides the program participants in the process of identifying the pain management strategies that would work best for them and to learn the skills necessary to implement these strategies consistently (all within the context of what their medical providers or the medical literature recommend as safe and appropriate for their specific diagnoses). To achieve this, the coach helps the program participants to set progress goals for each strategy, and to identify the structures, tools and supports necessary to attain these goals efficiently. After several iterations of this process, these newly acquired behaviors and skills get reinforced and solidified to the point of together becoming a coherent repertoire of strategies for the participant, rendering as the final outcome a personalized, comprehensive and integrative chronic pain self-management system that becomes part of their permanent lifestyle.

The broader impact of this is that CTPSCP participants progressively adjust in an adaptive manner to their “new normal” and make progress in their physical, mental, social, vocational, and recreational improvement on their own terms. The ultimate goal is to help them to be as healthy as possible, to manage their pain as optimally as they can, to increase and maximize their level of functioning, to improve their quality of life and to pursue their life mission to the fullest extent, so that they can return to work (gainfully or as volunteers) and continue being contributing members of society, in spite of their pain. What the coach does in all of this is to serve as a guide, to bring clarity to the process of identifying what is of real importance to the participants and, consistent with that, what their ultimate goals are; to collaboratively take the guesswork out of what steps to take next, and to spare participants from constantly feeling overwhelmed and paralyzed by the daunting nature of being forced to navigate life with chronic pain now. The coach guides, the participant acts.

1.2 | TCC Coach Training

Take Courage Coaching's CTPSCP Model includes carefully selecting and thoroughly training, mentoring, evaluating and certifying each coach to deliver professional PMC services that meet or exceed the standards set forth by the National Consortium for Credentialing Health and Wellness Coaches (NCCHWC). TCC's rigorous 28-week Coach Training Program was recently awarded approval by NCCHWC. As part of its theoretical underpinnings and practical applications, TCC's training integrates elements of the most current research on Motivational Interviewing, The Transtheoretical Model, Behavioral Neuroscience/Neuroplasticity, Self-Efficacy, Appreciative Inquiry, Mindfulness-Based Stress Reduction and non-clinical applications of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy principles.

2 | METHODS

The research question for this paper was: Does participating in TCC's CTPSCP produce any pain-related outcomes, using the POQ-C to measure these? The null hypothesis was: Participating in TCC's CTPSCP will not affect the total scores on the POQ-C. The alternative hypothesis was: Participating in TCC's CTPSCP will affect the total scores on the POQ-C.

2.1 | Subjects

There were only three major general criteria to be selected for participation: 1) to be an adult, 2) to have been diagnosed with a medical condition that includes chronic non-cancer pain, and 3) to agree to direct specific questions regarding medical diagnosis or treatment to an appropriately licensed medical provider. This was a retrospective study of patient files. Participants were referred by multiple medical providers and their average time from being first diagnosed with chronic pain to their initial screening for participation in TCC's CTPSCP was 6 years and 2 months. Because no comparison was going to be made between an experimental group and a control group, potential participants were not wait-listed. However, not all participants originally invited ($n = 68$), accepted to participate in TCC's CTPSCP ($n = 62$); therefore, the only measurements that were included and analyzed were those of participants completing 6-months of the program ($n = 51$), and then of those remaining to completion of the 12-month program ($n = 33$). There was a 9% attrition rate from invitation to admission ($n = 6$), 18% from admission to mid-point ($n = 11$), and 35% ($n = 18$) from mid-point to completion. Data were analyzed using IBM SPSS Statistics 22.0.

2.2 | Procedure

Data were collected using the POQ-C, which was developed by the Veterans Health Administration. It is a 42-item inventory, with 19 pain-related items that are rated on an 11-point (0–10) Likert-type scale. The other items elicit additional demographic, patient history, opioid use and treatment satisfaction information. Initial measurements were taken before participants began TCC's CTPSCP. The data were collected from different groups, starting at different times; therefore, the findings reflect data from several asynchronous cohorts (Table 1).

3 | RESULTS

A paired-sample t test was conducted to evaluate whether there was a reduction in scores on the POQ-C upon completing 6 months of TCC's CTPSCP. The results (see Table 2 and Figure 1) indicated that the mean POQ-C scores at 6 months was lower ($M = 67.14, SD = 26.21$) than the mean POQ-C scores at intake ($M = 97.45, SD = 25.35$), $t(50) = 8.2$, $p < .000$. In addition, all 6 POQ-C subscales at 6 months were lower than upon intake, and were revealed to be statistically significant, including: Pain ($p < .00$); Mobility ($p < .00$); Activities of Daily Living ($p < .00$); Vitality ($p < .00$);

TABLE 1 Participant demographic characteristics

Characteristic	Variable	<i>n</i>	%
Gender	Female	36	70.6
	Male	15	29.4
Age	<30	3	5.9
	30–39	6	11.8
	40–49	14	27.4
	50–59	21	41.1
	>60	7	13.8
Ethnicity	African American	2	3.9
	Asian	1	1.9
	Hispanic	1	1.9
	White	46	90.2
	Other	1	1.9
Education	<12	4	7.8
	12	15	29.4
	13–15	16	31.4
	16	6	11.8
	>16	10	19.6
Marital status	Never married	3	5.9
	Living with someone	3	5.9
	Married	30	58.8
	Separated or Divorced	12	23.5
	Widowed	1	1.9
	No answer	2	3.9

TABLE 2 Paired samples statistics

Pair	Mean	<i>N</i>	<i>SD</i>	<i>SEM</i>
Total score	97.45	51	25.351	3.550
Total score 6 months	67.14	51	26.211	3.670
Pair			<i>df</i>	Sig. (two-tailed)
Pain – Pain 6 months			50	.000
Mobility – Mobility 6 months			50	.000
ADLs – ADLs 6 months			50	.000
Vitality – Vitality 6 months			50	.000
Negative Affect – Negative Affect 6 months			50	.000
Fear – Fear 6 months			50	.000
Total score – Total score 6 months			50	.000

Negative Affect ($p < .00$); and Fear ($p < .00$). Using the rating scale from the outpatient *POQ-C*, these results can be interpreted as follows: After 6 months of participating in TCC's CTPSCP, the total scores on the *POQ-C* dropped from the 50%–74% range of pain, to the 10%–24% range. The overall pain was reduced on the *POQ-C* scale by 31%.

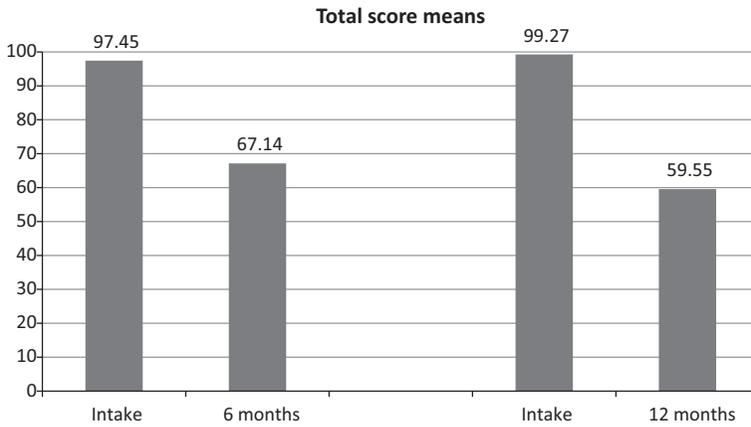


FIGURE 1 Reduction in POQ-C total score means

Another paired-sample *t* test was conducted to evaluate whether there was a reduction in scores on the POQ-C upon completing 12 months of TCC's CTPSCP. The results (see Table 3 and Figure 1) indicated that the mean POQ-C scores at 12 months were lower ($M = 59.55, SD = 28.22$) than the mean POQ-C scores at intake ($M = 99.27, SD = 26.89$), $t(32) = 9.2, p < .000$. In addition, all 6 POQ-C subscales at 12 months were lower than upon intake, and were statistically significant as well, including: Pain ($p < .00$); Mobility ($p < .00$); Activities of Daily Living ($p < .00$); Vitality ($p < .00$); Negative Affect ($p < .00$); and Fear ($p < .00$). Using the rating scale from the outpatient POQ-C, these results can be interpreted as follows: After 12 months of participating in TCC's CTPSCP, the total scores on the POQ-C dropped from the 50%–74% range of pain, to the 10%–24% range. The overall pain was reduced on the POQ-C scale by 40%.

Additional data collected through TCC's standard follow-up survey of graduates every 6 months, in general indicates that 56% of the CTPSCP graduates return to work within a year upon completion of the program. Also, 56% of program participants discontinue their use of all pain medications, and 24% lower their medications. Finally, 70% of program graduates have established healthy sleep patterns, exercise regularly and frequently, increase their productivity measurably, and report having improved their social connectedness.

Finally, an insurance carrier did a single-case type comparison for evaluating the cost-effectiveness of TCC's CTPSCP with the following example results of some participants: Participant #1's annual cost related to pain treatment only (not disability payments) in 2009 was \$35,990.76 versus \$0.00 in 2013, after the participant completed

TABLE 3 Paired samples statistics

Pair	Mean	N	SD	SEM
Total score	99.27	33	26.894	4.682
Total score 6 months	59.55	33	28.220	4.913
Pair			df	Sig. (two-tailed)
Pain – Pain 6 months			32	.000
Mobility – Mobility 6 months			32	.000
ADLs – ADLs 6 months			32	.000
Vitality – Vitality 6 months			32	.000
Negative Affect – Negative Affect 6 months			32	.000
Fear – Fear 6 months			32	.000
Total score – Total score 6 months			32	.000

TCC's CTPSCP; Participant #2's annual cost related to pain treatment only, in 2009 was \$16,225.80 versus \$1,618.00 in 2013, after completing the program.

4 | DISCUSSION

The results of this preliminary study clearly demonstrated that participating in TCC's CTPSCP significantly affected the total scores on the POQ-C. These findings support CTPSCP as an effective adjunctive intervention to traditional medical treatments, aimed at reducing pain, fear, negative affect, and health care visits, as well as increasing mobility and vitality. Please note that any gains in *temporary pain reduction* are not the same as *permanent pain resolution*. At this stage in the evolution of TCC's CTPSCP, it is only speculative to think that as participants increase their knowledge about chronic pain (i.e., they stop seeing pain as sinister and catastrophic) and improve their pain management skills (i.e., increase their self-efficacy), their subjective experience of pain is reduced, although the tissue damage remains the same and pain signaling is still active.

Although the total scores were significantly reduced both at 6 months and at 12 months, of note is that the latter score reduction was not as marked as could be naturally expected, given that participants remained in TCC's CTPSCP for 6 more months. This raises the issue of cost-effectiveness of the second half of the program. On the other hand, the fact that the total scores first, did not go up and second, were actually reduced even further, although not as markedly, could actually be interpreted as a positive sign. Further research should be done to compare the effect sustainability in time of a 6-month only and a 12-month CTPSCP to determine if a 12-month CTPSCP has more long-lasting effects than a 6-month only CTPSCP.

As previously indicated, this was a retrospective study of patient files in which participants did not necessarily represent sociodemographically the general population. Not being a randomized controlled study, certain other limitations should be noted as well. First, the study did not include a control group, or alternative intervention strategies. In addition, the only common denominator for all participants was that they all had chronic pain, but the demographic variables and the specific diagnoses were very heterogeneous; therefore, limited generalizations can only be made regarding pain-related outcomes, but not regarding specific diagnoses, or gender, ethnicity, language and age-group differences, to mention a few. Although TCC's CTPSCP was designed both in English and Spanish, only English-speaking participants were referred to the program during the time of the study. Which leads to the next limitation: having access to a relatively reduced number of participants, determined initially by the number of candidates referred to the program, then by those deemed appropriate for the program after the initial assessment, then by those authorized by their insurance carriers, then by those actually choosing to enroll in the program, and finally by those remaining in the program for 6 or 12 months. Unfortunately, no data were available to analyze the reasons for the attrition rate at each one of these steps, except for the last group. Of these program dropouts after 6 months, 84% discontinued their participation on their own, 8% were dismissed from the program and 8% were not authorized beyond the first 6 months of the program. Further research is warranted regarding factors that promote participant retention and factors that cause attrition. The information available did not help to understand the reasons for the difference between initial authorization requests made and the number of requests actually authorized. However, in general, insurance non-authorization is an unfortunate problem for all pain intervention programs (Gatchel, McGeary, McGeary, & Lippe, 2014).

Based on the above, future studies should explore the mechanisms of action of a CTPSCP and elucidate the ideal criteria to better select CTPSCP candidates, as well as factors in coach-participant matching, to increase participant retention and improve outcomes. Additional areas of study include examining the individual- and collective-effect of the different coaching program components and "intervention dose" (i.e., frequency and length of participation) on outcomes, as well as individual differences in response to participating in a CTPSCP. Studies focusing on individual differences should be done in geographic areas with a naturally diverse population already, for better representation of each group and consequent increased ability to generalize findings. Research should also focus on direct comparisons

between telephonic coaching and face-to-face coaching, as well as between TCC's CTPSCP and other types of pain management intervention. Another area of study is any CTPSCP outcome differences by type of insurance coverage (Workers' Compensation, private insurance, Medicare, etc.), as well as by geographic region, based on population density and access to medical providers.

In our view, the implications of the findings of this study are far reaching. We now have a preliminarily validated non-clinical comprehensive intervention that has the potential of being effective in assisting people who live with chronic pain to increase their function and their quality of life, as well as to improve their mood, their relationships and even their vocational opportunities. The value of a CTPSCP is even higher in areas where access to qualified medical providers is limited, both in terms of availability and proximity, given that it is delivered mainly telephonically. The fact that TCC's CTPSCP is delivered completely in English as well as in Spanish by bilingual/bicultural professional coaches is invaluable.

In terms of social impact, should a CTPSCP, through further research, become fully validated as an evidence-based and cost-effective non-clinical intervention in the care of individuals living with chronic pain, more efforts should be made to increase the awareness among patients, providers, payers and policy-makers regarding its availability, delivery methods and efficacy; public policies in support of making a CTPSCP part of the standard of care for chronic pain should be created; models of reimbursement from insurance carriers should be explored; the establishment of quality coach training programs should be encouraged and supported; and finally, credentialing standards and regulatory bodies for professional PMC should be instituted as well.

All in all, we are delighted to know that participating in a CTPSCP increases the hope of a better future for those living with chronic pain. We are also encouraged by the fact that there is increased awareness regarding the value of PMC. At the time of preparing this paper, states such as Montana and Utah are considering the inclusion of a CTPSCP as a recognized and approved component of the standard of care for injured workers that develop chronic pain, as part of the state regulations; therefore, mandating insurance carriers to provide reimbursement for it. This indeed is progress!

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