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Situational Acceptance, Hope, and Mindfulness and Chronic Osteoarthritis: A Scoping Review and Conceptual Commentary

Research Article

Ray Marks*

Department of Research, Osteoarthritis Research Center, Box 5B, Thornhill, ONT L3T 5H3, Canada.

Abstract

Efforts to mitigate or prevent painful disabling osteoarthritis have been pursued for more than a century. This current overview briefly summarizes the potential value of selected cognitive approaches to modifying osteoarthritis pain. Published data housed predominantly in PUBMED, PUBMED CENTRAL, and GOOGLE SCHOLAR sites and pertaining to selected aspects of the literature of current interest and that focused on the concepts of acceptance, hope, and mindfulness, were eligible for review without any time based restriction. As a whole, cumulative results reported as of May 10, 2024, show a modest to strong rationale exists in a small number of cases for considering the abovementioned mind-body therapies and that may be employed independently in the home by an older adult to reduce pain and enable daily functions. Accordingly this line of research is being designed and/or proposed, to mitigate osteoarthritis pain among older adults living in the community alone or in conjunction with exercise and even if surgery, especially in the face of fear and depression.

Keywords: Acceptance and Commitment Therapy; Chronic Osteoarthritis Pain; Hope; Mindfulness.

Introduction

Osteoarthritis, a widespread highly disabling joint disease affecting many older adults is frequently accompanied by unrelenting often times debilitating episodes of intractable pain, 'low grade' inflammation, declining functional and self-care-related abilities, plus life quality. Sleep problems, anxiety, depression, heightened pain sensitivity, an exaggerated emotionally charged focus on pain, fears of movement, poor treatment adherence, and low self-efficacy and obesity are widely noted disease correlates as well [1-3]. Although deemed incurable with few universally efficacious treatment options [3], and often linked to increases in sensitivity of the central as well the peripheral nervous system [4], novel methods of ameliorating excess osteoarthritis pain and pain reactions, are highly indicated to offset age-associated disease burdens, and an ever increasing disease impact, prevalence, and cost [5]. At present, the options here are limited but tend to consistently recommend non-surgical non medicinal self-regulatory, self-management practices and strategies aimed at helping the supplicant to remain as active and productive as possible largely through exercise. Unfortunately, these recommendations are often not followed consistently possibly due to the presence of persistent pain, potentially erroneous disease and pain beliefs. Others that focus on a perceived personal incapacity to control pain, fears of movement and inaction may increase pain as well as the rate and extent of disease progression. The specific belief nothing 'can be done' to retard its progress may similarly foster a possible downward cycle of dismal and/or depressed mood states that may impact the prognosis of the condition negatively and markedly. In addition to negative general disease beliefs, pervasive feelings of helplessness and hopelessness among other factors may emerge especially in the face of persistent brain based nervous system derived sources of neuropathic pain [6]. Unfortunately, these factors alone can indeed have a bearing on osteoarthritis outcomes, even if selected thoughts are actually untrue, and are not limited to the influence of client/provider generated negative array of disease beliefs and outcome expectancies. An intrinsically low sense of personal self-efficacy for overcoming challenges, plus overwhelming feelings of doom, doubts or uncertainty about recommendations and their efficacy, misinformation, and pervasive feelings of unabated distress, anxiety, fear, and depression that may not be commonly addressed by standard therapies [3, 7, 8] can undoubt-

***Corresponding Author**:
Ray Marks,
Department of Research, Osteoarthritis Research Center, Box 5B, Thornhill, ONT L3T 5H3, Canada.
Tel: +1-647-968-2725
E-mail: Dr. RayMarks@osteoarthritisresearchcenter.com/rm226@columbia.edu;

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edly interfere significantly with what can be done to mitigate this disease in the older adult population [9].

Given the immense social costs and personal burden of osteoarthritis [4] and that little progress has been made in more than a century to advance basic day to day osteoarthritis management and a life of promise, this chronic disabling disease, which is increasing in incidence and prevalence globally clearly warrants attention. This is not only humane, but clearly essential because in an aging population its immense human cost is paralleled by untold and enormous fiscal consequences and public health resource demands. In particular the lack of attention to mental health disease correlates must account in part for excess reliance on oftentimes risk producing drugs and surgeries with only modest overall effects. Moreover, a failure to act potentially ensures enormous problems due to the potential for rapid physical disease manifestations to emerge, plus the ensuing emergence of multiple negative emotions that may heighten pain sensitivity to noxious as well as non-noxious stimuli, and collectively foster declines in function even in the face of surgery. In this regard, some attention to carefully construed modes of cognitive oriented therapies and others, including a form of therapy termed Acceptance and Commitment Therapy [ACT] has been emerging for some time [4, 10-14].

In particular, in addition to standard practice efforts to ameliorate the presence of chronic osteoarthritis pain, denoted by persistent distress that exceeds a three to six month period of unabated relief, integrative approaches that embody a mindfully oriented psychological stance may help engender a sense of peace, self-confidence, self-control and self-esteem and ultimately the ability to limit stress and/or reactions to stress that influence disease coping ability and the severity and impact of the condition [3]. Indeed, even when delivered vicariously, directives that help to advance and develop a more mindful proactive stance to managing their health condition[s] plus more motivation to harness their inherent abilities to cope with challenges, rather than having a doubtful set of beliefs, may yet reduce the degree to which surgery is desired or is deemed the sole final treatment option [15].

Designed to be helpful to people suffering from challenging health conditions that are not reversible and that may be highly disabling, both ACT and hope or the mindful belief in a path that may yet prove beneficial to both patients and clinicians seeking to ameliorate chronic pain attributable to osteoarthritis, and that may be compounded by comorbid depression and/or obesity [3] may prove of considerable value. Acceptance therapy in this sense may specifically benefit the application of health affirming self directed interventions and others [15], as well engendering more success in efforts to cope with their life limiting osteoarthritis disease situation. Participants who pursue ACT may also begin to view their condition as one they can control rather than one that is beyond their control.

The fact that research supports some degree of adaptability is yet possible in the face of a chronic disabling health condition, such as osteoarthritis, and that cognitive approaches such as ACT can help forge favorable practices and reduce stress may also engender a modest degree of hope, rather than despair. In turn, those with higher levels of hope may be expected to achieve more long term success in general, than those who feel hopeless [16]. Moreover, pervasive signs of pain catastrophizing may diminish thus opening the door to multiple advantageous health benefits [17].

In sum, the mindful application of ACT appears to have the potential to help osteoarthritis sufferers to self-manage their disease situation, while accepting what cannot be changed [18]. If so, it may be valuable to include in the management approach for selected cases of osteoarthritis that are not responding well to standard care approaches. Apparent benefits include reductions in pain intensity, self-control/regulatory fatigue, low self-efficacy, suffering, and reactive emotional distresses, plus improved long term functional benefits, disease prognoses [18-20] and general health [2, 10, 21, 22].

Aim

Based on evidence that chronic pain patients may not only suffer physically but may suffer from chronic self-regulatory fatigue: difficulties in controlling their thoughts, emotions, and behaviors in the face of pain [20] this narrative overview sought to establish if efforts directed towards pain acceptance, cognitive restructuring and mindfully interpreting their situation has the potential to reduce those osteoarthritis pain and anxieties associated with the presence of disabling osteoarthritis of one or more joints in the older adult population, even if no mention is made of this in recent updates of viable osteoarthritis treatment options [e.g., [23, 24]].

Hypothesis

Based on the principles of ACT, it was hypothesized that research would indicate older clients with chronic osteoarthritis pain are likely to be helped quite markedly through ACT to develop a proactive stance to managing their pain, thus enabling a more hopeful outlook, and the ability to gain more self-confidence to manage pain and remain active than those who are untreated [9, 10].

Implications

Chronic health conditions such as osteoarthritis that are becoming more prevalent than ever, has enormous ramifications for successful aging and life quality due to its multipronged physical, mental, emotional, social and economic impacts. In the absence of any cure, advances in understanding how to manage osteoarthritis have begun to emerge, and point to a possible substantive benefit in identifying and intervening upon one or more remediable psychological disease correlates through active patient engagement, rather than through passive mechanisms alone.

Methods

To examine the value of the aforementioned premise as well as pursuing this topic in the future, a wide ranging scan of the relevant literature located in PUBMED, PUBMED CENTRAL, and GOOGLE SCHOLAR was undertaken. All articles of relevance regardless of design were eligible if they focused on fostering self-regulation or modification through ACT, hope, or mindfulness on averting or reducing chronic osteoarthritis pain. Only an overview is provided in this limited topic realm. Most sought were articles published in the time periods 2020-2024 and those reflecting what can be done in the community versus assisted living or long term care settings, although the same ideas might well

apply. All forms of osteoarthritis research were deemed eligible, and were examined regardless of disease manifestations or subgroupings. Readers who want to expand their insights may find the current references and the analyses by Ma et al. [11] and Pester et al. [17] enlightening.

Key Findings

A wealth of literature shows that health beliefs whether true or false can determine outcome expectations and the willingness to actively improve one's health that is supported by science. In this regard, current research supports a strong role for examining and treating mental health correlates of older adults in general, as well as those with osteoarthritis, wherein a role for cognitive behavioral strategies and their application to advancing self-regulation and self-directed behaviors may obviate the need for both multiple office visits, home visits, and in time narcotics to quell pain. The application of the principles of acceptance and willingness to modify thoughts and behaviors may also supplement the benefits of those standard armaments of intervention such as exercise, and surgery recommended for countering osteoarthritis pain. Applied methodically and consistently they may also reduce the frequency and intesity of pain catastrophizing due to the focused attention or negative interpretation of the salience of their painful condition.

As such, it is becoming apparent that even if osteoarthritis is inevitable, belief factors rather than structural factors, and disordered pain processing [25], can potentially impact the rate of osteoarthritis disease progression, as well as having multiple adverse implications for health in general [26], especially in the older population [22]. Indeed, because osteoarthritis pathology clearly induces a complex variety of adverse pain mechanisms and responses that not only alter cognitions, but self-regulatory behaviors, a failure to address these interactive correlates may ultimately impact physical abilities and health status often quite markedly and regressively.

In addition to those pain related cognitions that can magnify pain such as pain rumination, and a possible chronic pain associated deficit in 'attentional disengagement' from pain [25], the most profound emotional responses to having a diagnosis of disabling osteoarthritis are anxiety and depression, distress, excess physical and mental fatigue, unhelpful thoughts, fears of movement, and a loss of a sense of confidence and control [27]. In this respect, cognitive approaches targeted towards addressing any emergent and persistent cycles of negative thoughts, beliefs, and emotions shows quite marked degrees of promise. In particular, currently discussed and advocated for in general is ACT, a novel mindful form of psychologically oriented intervention designed to help selected clients to manage or negotiate life as well as emotions towards situations of unrelenting pain and dysfunction more successfully or optimally, rather than less ably in the face of negative expectation and beliefs and health/other aversive life conditions [28]. An approach that encourages the acceptance of a challenging situation that cannot be remediated readily, along with a commitment on the part of the client towards changing any excessive negative pain focus or erroneous belief to a more proactive science based set of thoughts and actions, importantly it appears the practice of ACT can potentially engender hope rather than despair [10, 29], even among adults in their later years of life [30].

One feature of ACT that may account for its efficacy in apparently having the potential towards increasing a client's ability to cope with challenging situations, such as unrelenting pain, rather than avoiding this situation is its six step or core proven cognitive behavioral processes. In particular, its processes are designed to foster openness, awareness, and engagement through a wide range of methods, including exposure-based and experiential methods, metaphors, and values clarification [31]. In turn, fostering or enacting a state of mindfulness that involves increasing one's ability to being aware, focused, and open to change can possibly permit one to actively generate more positive actions and beliefs as regards controllable disease factors, and thereby efforts known to minimize preventable painful stimuli. A belief and perceptual state activated and achieved in different ways, for example through meditation, adopting a step-by-step approach that allows these adverse feelings that exist to be minimized or substituted for without any struggle, while focusing on actions that can foster health appears to hold much promise for affording a higher chance of the performer to overcome challenges and advance their life's goals and personal values [32] as well as a more resilient state of being [33]. Overtime, too, they may thus find this approach if practiced consistently, effective in enabling them to deal with one or more unanticipated challenging or upsetting situations in a hopeful, non reactionary thoughtful and confident manner.

Vowles et al. [34] who conducted a comprehensive examination of the model underpinning ACT for chronic pain found moderate correlations among the ACT processes themselves, as well as significant relations with pain intensity, emotional distress, and disability. Mun et al. [16] noted high pain acceptance significantly attenuated the presence of persistent pain to disrupt work goals among adults suffering from chronic pain that could prove helpful in the older adult population.

The use of mindfully oriented thoughts such as those afforded by the practice of ACT may also help to minimize reactive autonomic nervous system functions that modulate mood, a correlate of pain, and one observed to be favorably affected post mind-body exercise therapy practices and fostering a state of improved cognitive flexibility among those with a history of chronic pain [35].

As per Petkus et al. [9] individuals exhibiting psychological inflexibility may in fact exert more energy and resources than desirable on experiential or other forms of harmful avoidance, while potentially neglecting and losing contact with their core life values. By contrast those exposed to the ACT mode of thinking and doing may be prone to being effective in addressing and desiring to address maladaptive or excessively distressful cognitions as regards their osteoarthritis pain experience. Harnessing their remaining attributes this form of intervention may also help secure a more desirable life quality than not – plus an enhanced sense of vitality, emotional resiliency, well-being and fulfillment. This is borne out by an array of studies that show ACT can be highly effective for treating highly challenging health conditions such as obsessive compulsive disorders, depression, anxiety disorders, substance abuse, post-traumatic stress syndrome, and chronic pain [9]. Moreover, it has proved helpful in the management of diabetes, and drug-dependence [6], and insomnia and sleep challenges [17], common health situations that may co exist with chronic osteoarthritis disability.

Research has also implied that if an ACT practitioner adopts a more proactive assertive stance towards their osteoarthritis disability, including accepting what cannot be changed, but accepting responsibility for what can be changed they can offset considerable and measurable degrees of heightened psychological distress. This perspective that embraces a realistic acceptance of what presides and a vision on a future of commitment to controlling their health inputs mindfully, may yet favor the attainment of their personally valued goals as is strongly supported by evidence based insights and observations in other painful chronic conditions. Moreover, even if osteoarthritis is not commonly fatal, ACT practices may help the affected older adult to manage their pain without having to rely on addictive or debilitating unsafe forms of medications, while achieving a better life quality and less pain [14, 36] as well stress associated pain impacts [37-39].

Gallagher et al. [40] explain how hope and optimism although independent constructs can have a profound influence on future expectations and wellbeing outcomes, as do Katsimigos et al. [41] and could be impactful on advancing ACT based affirmative actions and mindsets that can yet influence osteoarthritis biology, genetics, psychological and physical functioning [42] and the magnitude and intensity of any pain experience as well as its management. In this regard, hope research has demonstrated a possible link to perceived control and motivation toward achieving one's goals [16] and may thus be salient in the realm of promoting osteoarthritis patient confidence and the ability to thrive in the face of this challenging painful chronic health condition. As well as general acceptance [10, 43], various mindfulness approaches including benefit finding may prove highly beneficial [44], and more life affirming than not with less pain catastrophizing especially if combined with exercise [45].

It may also help to increase exercise tolerance and enable the individual's to both meet their basic needs, as well as deal with unanticipated stressors and disease fluctuations more readily than not. Carried out persistently, cognitive approaches based on ACT may also greatly facilitate emotional adjustments and cognitive flexibility, rather than rigidity, to a meaningful degree [35, 46].

In sum, mindfulness-based interventions designed to reduce the influence of negative thoughts and beliefs and to pursue strategies that are more health affirming than not may help to markedly reduce the burden of osteoarthritis suffering experienced by many older adults [47]. In addition, the motivation to exercise may be enhanced and is vital even if joint replacement surgery is undertaken [10, 17]. Other anticipated benefits include but are not limited to significantly reduced levels of depression, pain-related anxiety, physical and psychosocial disability, medical visits, and pain intensity in comparison to baseline.

Indeed, even if osteoarthritis is considered an irreversible progressive biomechanical age related disease, emotionally supportive tailored ACT oriented directives, and a non judgmental emphasis on what cannot be changed appears to hold considerable promise. Adopting a belief in one's own potential and placing an emphasis on what can be done to both prevent disease worsening and protect one's health may prove markedly and objectively more health affirming on multiple levels than not. A graduated ability to control their health, may incrementally reinforce favorable self-beliefs as well as confidence to exercise that can have a strong bearing on the rate and magnitude of osteoarthritis joint damage [48], while allaying excess joint impacts and destructive inflammatory signs and symptoms and exaggerated responses to noxious stimuli often underpinning unremitting osteoarthritis pain [49-52].

Discussion

What can be done to help older adults diagnosed with osteoarthritis to remain hopeful and active? This present overview focuses on this widespread progressive chronic disease disabler of many older adults, and one that consistently places severe limitations on their life's goals and quality, despite decades of research. Most commonly considered an inevitable age related disabling localized degenerative biomechanical problem of one or more joints, more contemporary understandings of the disease show it is a multi faceted and not necessarily inevitable, or disabling.

Rather, increasing research and practice based evidence reveals osteoarthritis can have profound emotional and cognitive impacts, especially those driven by pain, and those that are personally generated, however, even if these warrant attention, these factors are frequently overlooked in the clinical realm [49]. This is despite mounting evidence that osteoarthritis pain, the most important complaint of this patient group, can potentially be mitigated to a meaningful degree by behavioral or psychologically oriented intervention approaches and should not be ignored. Moreover, ample parallel evidence provides a valid rationale for employing these approaches to allay disease regression and foster more beneficial physical and emotional oriented disease outcomes than would otherwise be attained [52].

Indeed, differing from traditional recommendations to address osteoarthritis pain through medication, surgery, and/or exercise and weight control, one or more forms of ACT that focuses on highlighting an attitude of acceptance rather than denial or despair in the face of an undesirable health situation that cannot be readily altered can yet favor the generation of future actionable and beneficial behaviors and thoughts, even in highly challenging realms, and even if disputed [53].

The value of encouraging active reflection as regards the affected person's own intrinsic values and abilities appears to be an especially promising health affirming strategy that is being studied as well as recommended in this regard. This is because this mode of intervention appears especially advantageous in attenuating high intensity aversive and unremitting chronic pain experiences and challenges that implicate central as well as peripheral nervous system pathways [54]. Moreover, by attempting to defuse any exaggerated pain reactions rather than trying to ignore these or altering their presence, the principle of mindfulness and self-responsibility embedded in ACT can purportedly be directed to foster a better overall health outlook and sense of control, while helping to conserve mental energy that might otherwise be expended on rumination and a focus on failure rather than any potential favorable achievement. This may be particularly useful for mediating changes for the better even among those who are older and feeling distressed and anxious due to the day to day impact of having an incurable health condition, even if it is plausible to accept that not all older adults will want or be in a position to undertake self-initiated self-paced styles of intervening upon their wellbeing [62, 63].

The use of ACT oriented strategies in future osteoarthritis contexts is however based on the idea that if cognitively healthy adults can control some of their own behaviors and reactions without first having to change their feelings or thoughts or eliminating these thoughts, adults with osteoarthritis that is generally not life threatening, and who adopt these ACT based strategies may observe overall progress and improvements in their wellbeing rather than any significant regression. That is, choosing to process their thoughts in a more rather than limited health affirming manner, and taking steps to behave in ways more aligned with their values and science informed health protection efforts they can expect this will provide an effective pain mitigation tool [54].

Providers, while not essential to this process, can help to advance this idea in our view by not only focusing on the diverse physical disease correlates of the disease, but by also encouraging thoughtful communications that reinforce the health value of pursuing favorable or more neutral health thoughts and affirmative behaviors and that draw on the client's residual abilities and resources if they feel depressed or over anxious. In addition they can guide and encourage the client to pursue practices and behaviors that can advance their personal goals despite the presence of any prevailing negative disease features. For example, they may do this by helping the client to consider substituting more favorable thoughts for negative thoughts, or by helping them to find ways of carrying out empowering behaviors that are known to help adults and others in an adaptive progressive manner as indicated. They can also help their clients to perceive and acquire more resilient ways of dealing with pain and distress, offer a menu of options in this regard, as well as more efforts to foster confidence in their ability to meet and overcome challenges, often undermined in the face of unrelenting pain and possible myths about high age as an adaptive limitation.

As a result, even those older adults suffering from persistent osteoarthritis and chronic pain may be able to develop a more robust repertoire of functional abilities, plus less stress, and stress induced inflammation and pain, while improving their sleep quality, as discussed earlier [54]. In turn, the older adult may yet feel empowered rather than demoralized as well as sufficiently hopeful as time progresses as well as confident they can maintain or increase their physical activity participation levels and effectively self-manage their health condition and its requirements [46]. They may not only while experience a heightened ability and desire to partake in socially valued life affirming activities as a result [54], but may also encounter a definitive and positive reduction in the day to day chronic pain cycle – even if delivered remotely in robotic text message format [55]. Other benefits may include the reduction of compensatory functional problems, movement fears and falls risk, obesity, depression, and associated mortality due to narcotic dependence [50, 56]. As well, anxiety [50], especially prevalent if the provider neglects to include an emotional and mental health oriented evaluation in the context of their client's baseline and follow up osteoarthritis physical profiles and challenges may be affected positively.

Relatively easy to understand, practical and cost effective, ACT can be delivered in the form of ultra-brief therapies, group therapy, or as a medium or long term therapy program, depending on the problem. Its usage can be expected to have the power to target multiple psychological mechanisms that can impact overall wellbeing concurrently. Used independently or interactively by a client, or guided by therapist, health coach, or health professional [57] it is not a formulaic approach per se, however, but one that can be tailored to suit the needs of the individual. As Barban et al. [58] have noted, the application of ACT and with this an element of hope may have a key role to play in helping achieve long term successes in reducing anxiety and pain among older cases with osteoarthritis as discussed by Hughes et al. [50] and Ma et al. [11]. These include improvements in their ability to counter catastrophic oriented beliefs, alongside pervasive and limited perceptions of having control over the pain experience and any ensuing emotional distress.

Helping clients overwhelmed by painful osteoarthritis to self-manage and regulate their health by focusing their attention on the present moment with openness, curiosity, and acceptance, rather than infusing their minds with excess fears and despondency, can be expected to mitigate multiple psychological stresses that exacerbate pain and depression, while enhancing cognitive flexibility as well as general well-being and coping ability [44, 59, 60], and their physical function and life quality [38, 39, 61-66].

Consequently, while more research is indicated, there is little doubt that mindfully enacted psychological approaches for treating osteoarthritis based chronic pain, such as ACT, may prove highly beneficial to an older adult with this condition. In particular, those who exhibit avoidance behaviors due to fear and/or potentially exaggerated pain experiences, but wish to reside in the community may be especially benefited. They may yet achieve a rich meaningful and independent ability to function physically with less pain and if desired, to live in their own homes all the days of their life if possible, especially if they have received and continue to benefit from carefully designed face to face therapy, rather than via online sources alone [64].

To validate this promising above mentioned ideas, future research that extends baseline and outcome measures to include measures of program and recommendation adherence, weight status, daily functional abilities, sleep issues, depression, anxiety, and fear across varying degrees of disability, time spans, and age groupings should be carefully sought and documented accordingly.

Key Conclusions

While this present report is but a broad limited descriptive review, and is one accepting of the validity of multiple methods of examining this emergent topic, despite possible design shortcomings plus publication bias, sufficient evidence appears to support several tentative conclusions that pertain to older adults with osteoarthritis who want to live in the community and that align with our current tentative hypotheses as follows:

*Active attempts to accept situations such as certain untreatable aspects of painful disabling osteoarthritis, and the will to carry out actions that are health affirming rather than demoralizing may help the older adult to meet or overcome one or more health challenges more readily than not.

*Clinicians who work in a dedicated manner with older clients to accept, rather than ignore their overall health negating situation, and also help them to reframe or moderate their beliefs in this regard if negative or erroneous rather than ignoring their thoughts

are likely to succeed in multiple ways. They can especially help if they take time to determine key pain sources and their possible responsiveness to direct intervention so these will not be overlooked.

*Care providers can potentially be of further help by employing effective communications that are understandable and outline a menu of therapies that can specifically help older individuals to yet develop skills to deal with one or more painful thoughts and feelings, as well as fostering general osteoarthritis education that aligns with their both needs as well as their disease limitations.

*Rather than generic recommendations alone, they can work with the client to identify targets for positive goal setting that can be duly directed and enacted upon in a step by step manner, regardless of age. At the same time, erroneous health and pain beliefs, as well as disease misconceptions should be sought, corrected as indicated, and the risks of the client failing to act consistently and in a proactive manner detailed and stressed. As well,, unjustified fears should be duly allayed.

Based on what we do know, for the individual to change their thoughts concerning osteoarthritis and its painful presence, the health benefits of assuming a proactive self-regulatory approach to their situation must be tangible and valued and its attainment must outweigh the costs of failing to act-thus insightful guidance rather than electronic based interventions are strongly warranted for this particular osteoarthritis subgroup. In particular, clients, who may also have multi morbidities must feel confident and thus motivated and committed to and ready for change and are willing to do what it takes to attain their personal goals.

However, even if this is not standard practice, and applying ACT may warrant stepping out of the boundaries of standard professional care regimens to some degree careful collaborative assessments followed by initial and continuous trustworthy supportive management approaches that include an ACT option appear strongly warranted

Offering educational and other resources to clients so they can assume some degree of personalized behavioral self control, as well as assistance in formulating and pursuing realistic as well as personal goals is predicted to afford the client a more solid sense of self worth, self-efficacy to overcome or adapt to challenges, some belief that behaviors and thoughts can impact well-being and in mediating or moderating health outcomes in the context of chronic osteoarthritis among the older adult population.

Potential hypothesized benefits that may accrue in this respect are direct reductions in pain, increases in pain tolerance, better ability to control weight, greater likelihood of initiating physical activity practices, better sleep patterns, less anxiety and depression, more adaptive behaviors, and higher life quality with less narcotic dependency.

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