Editorial Comment

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Been there, done that – what now? New avenues for dealing with chronic pain

<https://doi.org/10.1515/sjpain-2020-0052>

From time to time it behooves us to stop, think, and reflect before moving on. Now is such a moment. Remember that chronic pain (CP) today often means a life of suffering where authorities may confuse “common” with “trivial” [1]. It is not. In fact, people suffering CP have the largest morbidity as measured in years lived with disability [2]. Moreover, a recent survey shows that while sufferers report high levels of pain intensity and distress as well as considerable difficulties with function, they face an obscure and long path to treatment dominated by multiple referrals and examinations only to be returned to primary care [3]. According to the survey, it is far more likely that patients will be referred to a surgeon than to a pain specialist, psychologist, or a pain rehabilitation unit. It is timely then, to read the article “*Pain Psychology in the 21st Century: Lessons Learned and Moving Forward*” [4] which provides such an excellent summary of decades of research into the psychology of pain. Written by a core of well-acclaimed researchers and clinicians, the article provides rare insight. Nevertheless, isn’t it all too well-known that psychological factors play a role in CP? And, although psychological approaches to treatment were promising in the 1970s, today’s reviews show notoriously small effects. Haven’t we been there and done that already? Where can we go from here? With this article [4] as a springboard, allow me to expand upon their guidance to show why it is important to have developed this knowledge base in order to help meet the challenge of chronic pain in a time of dwindling resources.

1 Been there and done that – new knowledge in the psychology of pain

While we may wonder whether progress is being made, this review [4] is daunting because it successfully summarizes the vast gains made in our knowledge base. We now have knowledge about the complex array of factors that interact to drive the development of chronic pain. The new diagnosis of *primary chronic pain* reflects this knowledge so the condition is now defined by its associated distress and dysfunction and not by a single disease entity. Further, it is clear that psychological processes are prominent. Avoidance, for example, is a particularly interesting example since it is observable and mirrors emotional distress and cognitions like catastrophizing. The Fear-Avoidance model, like all models is not truly correct, but it continues to stimulate important research. Indeed, an array of psychological factors, including those in the Fear-Avoidance model, are unmistakably related to the development of chronic pain. In fact, a major advancement has been a focus on the psychological processes that drive CP. But our knowledge does not stop here.

The review underscores factors on a variety of levels, in various contexts, as well as the interactions between them. Here context is foremost. A message from a supervisor (“you have back pain again?”) interacts with individual psychological factors (catastrophizing: “I’ll never be able to work again”) to drive the process of chronification a step further. A true system approach that stresses processes and context and greatly advances the biopsychosocial model. This helps us to understand how societal regulations (sick-leave rules) interact with workplace policy (how pain problems are dealt with) that in turn interact with health care access and psychological variables on the individual level. Indeed, psychological factors may regulate how these various aspects are understood, interpreted and reacted upon. Therefore, we can better understand how what a supervisor at work or a doctor in primary health care say to a patient can alter the course of development. While at first glance these interactions may seem to be similar to

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the “effect of a butterfly’s flapping wings in Brazil on the weather in Scandinavia”, our new knowledge allows us to understand that communication is not remote. Instead, it interacts with the individual’s psychological factors in demonstratable ways and can drive chronification.

However, given all this new knowledge, chronic pain is still a formidable problem. Despite advances, current pain rehabilitation treatments while effective do not work for all and few fully recover [5]. A reasonable question is whether the psychological approach has reached its limit – haven’t we already “done that”?

Certainly, all of this knowledge would be quite academic if it were not for evolving clever applications. Advances in the psychology of pain have been quickly translated into clinical use followed by rigorous testing. As pointed out in the review [4], this has resulted in new approaches to treatment. These in turn have varied from basic aspects e.g. communication skills to new twists to existing programs (e.g. how activity training is done; interoceptive exposure) to new treatment procedures (e.g. exposure *in-vivo* and hybrid treatment). This is heart rendering because it shows the researchers’ dedication to improving results for patients. Although future reviews will show if the effect sizes improve, we already see an increase in treatment options for patients (e.g. ACT, Hybrid) and beams of hope in specific techniques (e.g. exposure, communication). Moreover, the basic cognitive-behavioral approach is quite successful in some settings suggesting that patient selection, proper assessment, and appropriate implementation may be key factors. Indeed, these are factors that we can learn from in order to translate advancements to other clinics. Not least, the accumulating knowledge base has even been applied to the difficult but valuable endeavor of preventing chronic pain.

However, the prevention of pain is tricky for several reasons. *First*, eliminating pain is a dubious goal since pain is a normal and valuable function. It is the persistence of pain and its associated problems like distress and dysfunction that are the focus for prevention – perhaps not as stunning as eliminating pain, but all the more worthwhile. *Second*, it crosses several actors at various levels in the system creating questions of who should initiate, pay for and maintain preventive interventions. To date many authorities and insurance companies, for example, have faltered at the starting line citing either economic doubts or pushing responsibility to someone else. *Third*, developing interventions challenges the identification of critical risk factors, providing potent techniques to address them, and coordinating all of the players.

Nevertheless, tireless work has shown that early, secondary measures can prevent dysfunction and moderate distress [4]. One breakthrough for example, has been the

ability to identify those who will likely develop long term problems. Here screening questionnaires, based on psychological risk factors, are a simple but effective method for identification [6, 7]. Developing preventive interventions has taken time and yet some methods have been available for about two decades. Providing a cognitive-behavioral early intervention focusing on prevention has shown good effects [8, 9]. Working with supervisors to enhance how they deal with workers who suffer back pain has shown that a short, standard intervention reduces dysfunction and improves satisfaction [10]. This was a basis for developing a worker and workplace intervention focusing on communication and problem-solving skills that improves health and reduces dysfunction [11]. An approach based on coordinating the key players and in providing CBT based intervention early on showed good improvements for distress and function as well as large economic savings [12]. Thus, solid advances have been made despite the difficulties and the problem now seems to be the lack of implementation rather than the lack of know-how.

2 What now? The way forward

The review at hand is profusely refreshing because it provides abundant impetus for reflection: where should we go from here? While our knowledge of the psychology of pain has increased so too has its application. Still, we have a long road in front of us before we can rest and feel satisfied. We are not at the finish line, but perhaps have taken that decisive first stride past the start line. What becomes obvious to me is this: to move forward and deal with the problem of chronic pain, our approach is in need of an overall based on the emerging data. The new approach will involve a concerted effort, on multiple levels, to concentrate our limited resources to prevent, treat, and manage with the goal to minimize suffering and enhance each patient’s opportunities to pursue personally relevant activities.

We can take a concentrated stride forward by focusing on four things. *First*, our society, including the various authorities e.g. Boards of Health, need to tackle the problem by addressing its’ dire effects on distress and function as underscored by the new diagnosis. Oddly, while mental health is in the forefront in many countries, the emotional suffering CP involves is nevertheless not recognized. While CP is common, it does not mean it is inconsequential. *Second*, the prevention, early treatment, and management of CP needs to be prioritized. Despite the size of the problem there are relatively few declarations of goals or resources allocated to these endeavors. This brings us to the *third* area of focus, i.e. involvement and cooperation on multiple levels. Interventions aimed at

Table 1: A summary of the research on the psychology of pain with examples of levels, factors operating and some key interventions.

Level	Examples of factors	Examples of key interventions
Societal e.g. government, insurance authorities	Policies and resources Rules for sickleave Prioritizing pain reimbursement systems	Prioritize prevention Resources for early treatment Resources for rehabilitation
Workplace	Policies to support return/staying at work Practices for dealing with injured workers Practices for dealing with psychosocial risk factors	Return-to-work/keep-at-work policy, Supervisor contact and effective communication, Problem-solving to reduce risk factors
Health care	Access Evidence-based interventions Translation of psych knowledge into practice Resources for preventive, early, and rehabilitative interventions Resources, priority for prevention, communication, choice of interventions	Early screening Early (preventive) interventions Psychologically informed treatments Effective communication
Important others e.g. family, friends	Social support Quality of relationship	Enhance relationships Effective communication Problem-solving
Individual	Psychological factors: Avoidance Distress Catastrophizing Depression Acceptance	Early CBT interventions to address specific risk factors Communication training Problem-solving training Exposure <i>in-vivo</i> therapy CBT informed rehabilitative packages

individual sufferers can do much, but we need to tap the possibilities that social practices, workplace policies and prioritized societal goals could impact on the problem. Finally, we need to apply psychological knowledge to all of the levels and the cooperation between them. Communication, social environments and behavior change are after all the stuff of psychological exploration that could be utilized to improve our response to CP.

A difficult part is getting started. We cannot and should not wait until someone else takes the initiative. We have crossed the start line and have the momentum to push forward with concrete steps. Consider Table 1 which summarizes and provides examples of important factors at some of the key identified levels. While other conceptualizations have included these, the research suggest that specific interventions at any level can have impact. Continuing to research and implement interventions on the individual level, for example, is therefore of the utmost value. However, the table also implies that greater scope would result in greater impact of the intervention. For example, we know that interventions that include both the individual sufferer AND the workplace have the largest effects [13]. We also know that combining interventions that address multiple symptoms e.g. the combination of a pain problem and either insomnia or depression provide better effects

than single modal ones [14, 15]. Hence, there is an apparent need for research into how we best integrate interventions. This might entail a transdiagnostic approach to fuse treatments that address the underlying mechanism of both problems. An important hypothesis is that combining congruent interventions at multiple levels will provide the largest effects. Let me illustrate this with interventions aimed to reduce dysfunction. At the moment it is evident that a treatment that results in improved, fit-for-work, function will not likely result in an actual return to work if neither workplace nor societal policy and practice support this. Reversely, the hypothesis underscores that public policies that give precedence to return to work, workplaces that implement supervisor programs to support it, and families and friends who provide constructive encourage will provide a comparatively powerful intervention. Therefore, an important move forward is for players on every level to be dedicated in addressing the problem of CP.

3 Conclusions

We have come a long way since my first publication in the field in 1978 [16] and research into the psychology of

pain has answered many perplexing questions. And yes, in merely saying that psychological factors are important, we have “been there”. And yes, in offering a generic psychologically informed treatment for those suffering, we have “done that”. All with considerable, but not satisfactory success. But the research to date goes far beyond those simple assertions. Today we have crucial knowledge concerning the mechanisms by which chronic pain develops and new forms of treatment are under development that offer much hope. Moreover, advances in the prevention of CP may offer a formidable opportunity to stave off its associated emotional suffering, dysfunction, as well as the huge economic and social costs. Providing care early on (e.g. primary care) that is in tune with our psychological knowledge base would also set the stage for secondary prevention. Moreover, applying current advancements could invigorate pain rehabilitation programs such as by providing new techniques for exposure and emotional support. A new approach that prioritizes the prevention, treatment and management of CP could utilize the delineated knowledge produced so far to provide interventions that cross the various levels involved as well as the boundaries of our current systems. While dedicated research will be a cornerstone that allows advances, prioritization and cooperation at all levels remains a central, but untested hypothesis.

Acknowledgment: I would like to thank the authors of the article being commented upon [4], all the members of CHAMP, and the distinguished guests at the conference for such an invigorating conference. It was such an indescribable honor to attend. My earnest thanks to all who worked so hard to make it happen. My thanks also to former and current colleagues for providing me with the privilege of being involved in three important foundations for advancement and change: research, clinical work, and education. For all those responsible my deepest heartfelt thanks. To my family, especially my wife and children, huge admiration for your support and understanding which made my career possible.

Conflict of interest: None declared.

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