Comparing acceptance- and control-based coping instructions on the cold-pressor pain experiences of healthy men and women

Edmund Keogh a,*, Frank W. Bond b, Ruth Hanmer b, Jackie Tilston b

a Department of Psychology, University of Bath, Bath BA2 7AY, United Kingdom
b Department of Psychology, Goldsmiths College, University of London, New Cross, London SE14 6NW, United Kingdom

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Abstract

The current study reflects recent developments in psychotherapy by examining the effect of acceptance-based coping instructions, when compared to the opposite, more control/distraction-based instructions, on cold-pressor pain. Since previous research indicates gender differences in how people cope with pain, we also sought to determine whether differences would be found between healthy men and women. As predicted, results indicated that women reported lower pain threshold and tolerance level than did men. Furthermore, the acceptance-based instruction resulted in lower sensory pain reports when compared to the opposite instructions. Finally, for affective pain, acceptance instructions only benefited women. These results suggest that acceptance-based coping may be particular useful in moderating the way in which individuals, especially women, cope with pain.

Keywords: Pain; Acceptance; Control; Gender; Cold pressor; Coping

1. Introduction

Pain is a multidimensional construct that has both sensory and emotional qualities (Price, 1999). It is widely believed that the intensity of pain experiences can at times have little to do with tissue damage, but is instead dependent on how the patient deals with their pain (Boothby et al., 1999). For example, the emotional responses that patients have to their pain are not only thought to influence current pain experiences, but also have longer term impacts on disability, time taken to return to work and health care utilisation (McCracken and Gross, 1998; Vlaeyen and Linton, 2000). Therefore, greater understanding of the psychological factors that impact on pain is believed to be of critical importance for the development of effective pain management interventions.

The focus of many pain management programmes has now broadened to include psychological techniques. In particular, the use of behavioural and cognitive-behavioural methods to address maladaptive thoughts, feeling and behaviours associated with pain has received considerable attention over the past decade (Keefe and Lefebvre, 1999; Turk and Okifuji, 1999). Rather than being a novel fad, however, it seems as if such psychological interventions have great potential in effective pain management. In their meta-analysis of randomised-controlled trials that included cognitive-behavioural and/or behavioural interventions for chronic pain, Morley et al. (1999) concluded that when compared to waiting list controls, cognitive-behavioural interventions (which were mostly control...
based) produced significant improvements in pain experiences, cognitive coping and appraisal, and reduced behavioural expression of pain. More recently, a systematic review of randomised-controlled psychological interventions for children and adolescents in pain suggests that cognitive behavioural therapy reduces the severity and frequency of chronic headache (Eccleston et al., 2002, 2003).

These reviews provide strong evidence that psychological interventions, especially those with a cognitive-behavioural therapy (CBT) focus, are effective in the management of pain. However, within this psychotherapeutic approach, there is a newer ‘wave’ of interventions that are emphasising a novel approach to interacting with psychological events (e.g., thoughts, feelings and physiological sensations) (see Hayes et al., 1994). Specifically, more traditional CBTs have developed and taught strategies for changing and altering unwanted psychological events (e.g., Beck et al., 1979, 1985), whereas, these newer CBTs advocate the non-judgemental, or non-evaluative noticing, experiencing, or acceptance of these events (e.g., Linehan, 1993; Hayes et al., 1999b). Acceptance and Commitment Therapy (ACT; Hayes et al., 1999b) is one such acceptance-based intervention, and it maintains that it is more beneficial for people to be willing to experience unwanted psychological events (e.g., pain), instead of trying to control, or change them. When people are willing to experience unwanted events, the form of the events does not change, but their impact, or function, is not as debilitating (Zettle and Rains, 1989; Hayes et al., 1999b). For example, if they are willing to accept the painful sensations and accompanying thoughts, people with pain are likely to still feel it, but may no longer experience the pain as so overwhelming or all consuming. As a result, such people may be better able to act in a way that is congruent with their values and goals (e.g., doing what will help one’s life, overall) (Hayes et al., 1999b).

Thus, acceptance-based treatments encourage patients to experience unwanted psychological events, so that they can better act in a way that is consistent with their goals (e.g., decreasing the negative impact of pain on one’s life) (see Bond and Hayes, 2002).

Very few published studies have examined acceptance in the context of pain (e.g., McCracken, 1998; McCracken et al., 1999, 2004; Risdon et al., 2003). Those that have, though, have found this CBT-based concept to be useful in understanding reactions to pain. For example, McCracken (1998) found that amongst chronic pain patients, higher levels of acceptance were not only associated with less pain-related anxiety, depression and disability, but they were also a better predictor of adjustment than was pain intensity. In terms of experimental analogue studies, Hayes et al. (1999a) compared the relative effects of acceptance-based and control-based intervention on pain that was induced by a cold-pressor task. The aim of the acceptance instructions was to help participants alter the form, frequency, and/or intensity of the cold-pressor task so that it was not as painful or uncomfortable. Results indicated that the acceptance intervention, which emphasised experiencing whatever sensations participants felt, increased pain tolerance levels, but not subjective measures of pain sensation or unpleasantness. The control-based instructions also seemed to increase pain tolerance levels, but not to the same degree as the acceptance instructions.

Although psychological management of pain has focused on providing patients with effective coping strategies, very little attention has been given to the possibility that gender differences may exist in their potential success. This is surprising given that males and females differ in their perception and experience of pain (Berkley; Berkley and Holdcroft, 1999; Fillingim, 2000). Females tend to report more pain, in a greater number of bodily areas, and with greater duration and intensity than do males, and recent work suggests important gender differences in analgesic effectiveness (Ciccone and Holdcroft, 1999; Fillingim, 2002; Filligim et al., 2003).

Of particular relevance to the current discussion is that males and females tend to use different coping strategies when dealing with stressful events, such as pain (Unruh, 1996; Unruh et al., 1999; Tamres et al., 2002). For example, Unruh et al. (1999) report that women describe using a greater number of strategies than do men. Experimental evidence reflects this suggestion that gender moderates the effects of coping instruction on pain. Keogh et al. (2000) demonstrated that when males were given instructions to focus on experimentally induced pain, they reported less pain than when asked to avoid such sensations. Females did not seem to show such benefits, however. In a follow-up study, Keogh and Herdenfeldt (2002) again found that males benefited from attending to the sensory component of pain. Additionally, when asked to focus on the emotional component of pain (e.g., fear), this instruction had a negative impact on women’s pain experiences. It is possible, therefore, that gender may interact with coping strategy (e.g., acceptance and control) to affect the experience of pain. We are not aware, however, of any research that has tested how these different, theoretically-based, coping strategies interact with gender to impact people’s experiences to pain.

As a result, the primary objective of the current study was to investigate potential differential effects of acceptance-based and control-based coping instructions on the pain experience of healthy men and women. To this end, we developed instructions that were based upon ACT (i.e., acceptance-based), and instructions that were the theoretical opposite of ACT (i.e., control-based). We then examined their relative effects on cold-pressor pain
responses. This experimental, analogue pain paradigm, by maximising internal validity, permitted us to rigorously investigate these potential interaction effects, whilst also allowing us to compare our findings to those of previous coping instruction studies that used a similar protocol (e.g., Hayes et al., 1999a; Keogh et al., 2000). Based upon the theory and research presented above, we predicted that:

1. Acceptance instructions would result in relatively less severe negative pain reports when compared to control-based instructions.
2. Women would report greater pain experience than men.
3. Gender would moderate the effects that our coping instructions have on pain (i.e., pain tolerance, pain threshold and self-reporting of pain).

2. Method

2.1. Design

A mixed-groups design was employed. The between-groups variable was gender (male vs. female), and the within-groups variable was coping instruction (acceptance vs. control). The dependent variables consisted of pain-experience measures, including pain tolerance, pain threshold and self-report measures of pain (see below).

2.2. Participants

Sixty-two students were recruited from Goldsmiths College, University of London. There were 31 females and 31 males between 18 and 39 years of age (mean = 22.24 years, S.D. = 4.42). Participants were initially screened to ensure that they did not currently suffer from pain, had no history of cardiovascular disease or diabetes, and were not currently on any medication. No participant reported any of the above.

2.3. Cold-pressor task

The cold-pressor task was selected as our method of experimentally inducing pain since it is known to have good reliability and validity (Edens and Gil, 1995; Graven-Nielsen et al., 2001). A baseline temperature was administered by having participants place their non-dominant arm in a warm water bath (37 °C) for 2 min. They then transferred their hand into an ice-water bath maintained at a temperature of 1 °C. Unknown to participants, an upper time limit of 2 min was used at which point they were asked to remove their hand from the cold tank (if they had not already done so). The pain induction methods complied with the International Association for the Study of Pain ethical guidelines (IASP, 1995) and also received local ethical committee approval.

During the cold-pressor task, participants were asked to indicate the point of just noticeable pain (i.e., pain threshold) as well as the point at which they could no longer tolerate the pain and withdraw from the noxious stimulus (i.e., pain tolerance). Participants then completed the Short Form McGill Pain Questionnaire (SF-MPQ; Melzack, 1987), which is a self-report measure of pain. The SF-MPQ descriptor scale contains 11 sensory pain descriptors (e.g., throbbing and shooting) and four affective pain descriptors (e.g., sickening and fearful). Each descriptor is given a score between 0 (none) and 3 (severe). The SF-MPQ has a high degree of consistency with the full version of the MPQ, and the two-factor structure has recently been confirmed (Melzack, 1987; Wright et al., 2001).

2.4. Coping instructions

Since most participants were first year undergraduates, it was assumed that the majority were naive as to chronic pain and the psychological factors that may contribute to it. Two sets of coping instructions were generated by FWB and EK, one of which was consistent with acceptance strategies (e.g., Hayes et al., 1999b) and based upon the protocol used by Hayes et al. (1999a). The other advocated control-based strategies and, thus, was the theoretical opposite of the acceptance instructions. The acceptance instructions told participants to be aware of their thoughts and feelings, but not to change, avoid, or otherwise control them; in contrast, the control instructions told participants to regulate, or control, their thoughts and feelings surrounding the pain. As an additional check the two sets of instruction were checked by Hayes (personal communication) for consistency with ACT principals. The acceptance and control instructions were as follows:

2.4.1. Acceptance instructions

2.4.1.1. Background. When we are in pain there are a number of different ways in which we can think about it. One way of thinking about our pain is to accept that we are in pain. Here is an example of an ‘acceptance’ way of thinking about pain.

I try and accept that I am in pain. I do this by disconnecting my thoughts from my feelings. For example, I try and notice my thoughts and feelings, but not allow them to control my behaviour. I accept my feelings and don’t let them run my life. I can also stop trying to control the pain since this may be unproductive.
For example, if I imagine that my pain isn’t there, then I find that I end up thinking about my pain even more. Therefore, I try not to ignore my pain. Finally, I try and think that the pain doesn’t automatically mean that I can’t do the things I used to be able to do. What I need to do is live with my pain.

2.4.2. Acceptance instructions for the pain task. Thoughts and feelings do not cause you to do things. Therefore, if you have thoughts such as ‘I can’t stand this pain’, you do not have to let them control your actions. So, you are able to feel pain and still keep your hand in the cold water.

2.4.2. Control instructions

2.4.2.1. Background. When we are in pain there are a number of different ways in which we can think about it. One way of thinking about our pain is to control the pain we experience. Here is an example of how someone might ‘control’ the way they think about pain.

When I am in pain I try to control it using a variety of different strategies. I may try and distract myself from the pain by thinking about something else. For example, I might think of something positive that has happened to me. I also try and ignore my pain sensations and negative pain thoughts that occur. I know that I have negative thoughts and feelings when I am in pain, and so I try and stop this way of thinking.

If I change the way I think about my pain, I will feel less negative. In essence I try and control my thoughts and feelings, in order to reduce the negative impact the pain is having on my life.

2.4.2.2. Control instructions for the pain task. You can control your thoughts and feelings. Therefore, if you close your eyes and think of something fun or pleasurable, you do not have to feel as much pain. So, if you try to think of good things, you can keep your hand in the cold water.

2.5. Additional questionnaire measures

Participants also completed the following measures:

Acceptance and Action Questionnaire (AAQ; Hayes et al., in press). This 16-item scale assess people’s willingness to accept their undesirable thoughts and feelings, whilst acting in a way that is congruent with their values and goals. A seven-point Likert scale labeled “Never true” (scored 1) to “Always true” (scored 7) is used for responses. Higher scores indicate greater psychological acceptance. Although the AAQ is a relatively new measure, research thus far indicates that it has good psychometric properties. For example, Bond and Bunce (2003) found that the AAQ, consistent with acceptance theory (e.g., Hayes et al., 1999b), has two first-order factors: “willingness to experience internal events” and “ability to take action, even in the face of unwanted internal events”. Also, its predictive validity has been established in several studies (e.g., Bond and Bunce, 2000, 2003; Roemer and Salters, in press; Tull and Roemer, 2003).

The short-form Depression Anxiety Stress Scale (SF-DASS; Lovibond and Lovibond, 1995) was included to examine whether or not groups differed in terms of anxiety or depression, since both are known to influence pain reports. SF-DASS is a 21-item self-report scale that measures depression (SF-DASS-D), anxiety (SF-DASS-A) and stress (SF-DASS-S) experienced over the past week. Research indicates that it has excellent reliability and validity (Lovibond and Lovibond, 1995).

The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) is a 40-item measure of social response bias and consists of two scales: self-deceptive enhancement (SDE; the tendency to give self-reports that are honest but positively biased) and impression management (IM; deliberate self-presentation to an audience). The BIDR is also reported to have good reliability and validity (Paulhus, 1991).

Independent t-tests were performed between males and females on age, and scores on the AAQ, DASS and BIDR (for means see Table 1). No significant differences were found, suggesting that any group differences in pain are less likely to be due to differences in acceptance, emotional state, and social desirability.

2.6. Procedure

On recruitment, and following informed written consent, participants were counterbalanced to start the study in either the acceptance or cognitive control condition first. Such counterbalancing was conducted sepa-

<table>
<thead>
<tr>
<th>Table 1</th>
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<tr>
<td>Means and standard deviations for self-reported mood and social desirability between males and females</td>
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<table>
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<tr>
<th></th>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td>SF-DASS-S</td>
<td>11.93 (7.94)</td>
<td>12.00 (7.73)</td>
</tr>
<tr>
<td>SF-DASS-A</td>
<td>4.65 (5.43)</td>
<td>6.00 (6.24)</td>
</tr>
<tr>
<td>SF-DASS-D</td>
<td>6.39 (6.14)</td>
<td>7.94 (9.03)</td>
</tr>
<tr>
<td>AAQ</td>
<td>110.90 (8.35)</td>
<td>111.21 (11.15)</td>
</tr>
<tr>
<td>SDE</td>
<td>4.41 (3.44)</td>
<td>4.52 (2.38)</td>
</tr>
<tr>
<td>IM</td>
<td>4.13 (3.12)</td>
<td>4.50 (2.54)</td>
</tr>
<tr>
<td>Age</td>
<td>21.87 (5.75)</td>
<td>21.61 (2.42)</td>
</tr>
</tbody>
</table>

*Note. SF-DASS, Depression Anxiety Stress Scale; S, stress; A, anxiety; D, Depression; AAQ, Acceptance and Action Questionnaire; SDE, Self-Deceptive Enhancement and IM, impression management.*
rately for men and women, to ensure an equal number of participants per group. After receiving the respective coping instructions (as well as general instructions regarding the cold-pressor task), participants completed the first cold-pressor task, immediately followed by the SF-MPQ. During a 15-min recovery period, the additional questionnaire measures were completed. Participants then completed a second cold pressor pain task with the alternative coping instructions (depending on which condition they had previously been in) followed by a second SF-MPQ. Participants were fully debriefed on conclusion of the task. During debriefing a coping instruction manipulation check was administered, which comprise of a simple yes/no statement relating to participants’ ability to follow the coping instructions. This manipulation check revealed that instructions had been followed.

3. Results

Mean pain scores for the two coping instruction conditions are shown separately for males and females in Table 2. For the pain measures, a series of mixed-groups analysis of variance (ANOVA) were performed with gender (males vs. female) serving as the between-groups factor and coping instruction (acceptance vs. control) as the within-groups factor. For all analysis order of instruction (acceptance condition first or second) was entered as a between-groups factor, but was not found to produce any significant effects. It was therefore left out of the analyses reported below.

For pain threshold, a significant main effect was found for gender 

\( F(1,60) = 5.83, p < .05; \eta^2 = .09 \). Females reported lower pain thresholds (mean = 26.38 s) than did males (mean = 41.87 s). No significant main effect of gender was found. A significant interaction was found between these two variables 

\( F(1,60) = 1.07, p = .05 \) or interaction 

\( F(1,60) = 1.01, p > .05 \) effects involving coping instruction was found.

For pain tolerance a similar pattern of results was found. A significant main effect was found for gender 

\( F(1,60) = 9.90, p < .005; \eta^2 = .14 \), which revealed that females exhibited lower pain tolerance levels (mean = 71.21 s) when compared to males (mean = 99.43 s). No significant main effect was found. A significant interaction was found between these two variables 

\( F(1,60) = .38, p > .05 \) or interaction 

\( F(1,60) = .00, p > .05 \) effects involving coping instruction was found. One problem with the cold-pressor task is that some individuals reach the upper point without reporting pain tolerance, creating a binomial distribution. Thus we repeated the tolerance analysis, removing individuals who reached the pain tolerance cut-off point in both conditions. A main effect of gender was still found 

\( F(1,37) = 10.25, p < .01 \). No effect involving coping was found, however.

For sensory pain, a main effect of was found for coping instruction 

\( F(1,60) = 4.99, p < .05; \eta^2 = .08 \). When given the acceptance instructions sensory pain reports were lower (mean = 10.01) than when the control instructions were administered (mean = 11.21). No significant main effect was found. A significant main effect of was found 

\( F(1,60) = 1.17, p > .05 \) or interaction 

\( F(1,60) = 0.20, p > .05 \) effects involving gender were found.

Finally, for affective pain scores no significant main effect of gender was found. A significant main effect of was found 

\( F(1,60) = 0.82, p > .05 \) or coping instruction 

\( F(1,60) = 1.80, p > .05 \) was found. However, a significant interaction was found between these two variables 

\( F(1,60) = 6.43, p < .05; \eta^2 = .10 \); see Fig. 1. Simple effects analysis revealed that amongst females, higher affective pain responses were reported with the control instructions, than with the acceptance instructions 

\( F(1,60) = 7.51, p < .01; \eta^2 = .11 \). Within males there was no significant difference between the two coping conditions 

\( F(1,60) = .71, p > .05 \). Finally, within the both the control condition 

\( F(1,60) = 1.62, p > .05 \) and the acceptance condition 

\( F(1,60) = 1.16, p > .05 \) there was no significant effect of gender.

Table 2

Means and standard deviations (in parenthesis) for pain measures by gender (males vs. females) and coping instructions (acceptance vs. control)

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td></td>
<td>Acceptance</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>Acceptance</td>
<td>Control</td>
</tr>
<tr>
<td>Threshold</td>
<td>25.30 (22.74)</td>
<td>27.45 (28.93)</td>
</tr>
<tr>
<td>Tolerance</td>
<td>72.10 (41.84)</td>
<td>70.32 (41.97)</td>
</tr>
<tr>
<td>SF-MPQ: Sensory</td>
<td>10.68 (4.66)</td>
<td>12.03 (6.01)</td>
</tr>
<tr>
<td>SF-MPQ: Affective</td>
<td>.90 (1.08)</td>
<td>1.74 (2.45)</td>
</tr>
</tbody>
</table>

Note. SF-MPQ, Short Form McGill Pain Questionnaire.

Fig. 1. Mean (±SEM) effect of acceptance- and control-based coping instructions on the affective pain experiences of men and women.
4. Discussion

The primary objective of the current study was to investigate the effects of acceptance-based coping instructions on the experience of acute experimentally induced pain. As predicted we found that acceptance reduced subjective sensory pain reports, when compared to theoretically opposite, control-based instructions. This beneficial impact of acceptance-based coping on pain is consistent with findings reported by Hayes et al. (1999a), who also compared the effects of control- and acceptance-based single-session interventions on cold-pressor pain. The specific, beneficial impacts of the acceptance-based protocols did differ, however, between studies. Specifically, the current one found evidence for reduced sensory pain experience, whereas Hayes et al. (1999a) failed to find any such differences. Furthermore, they found that acceptance increased pain tolerance levels, whereas we did not.

Methodological distinctions may form one possible explanation for these discrepancies. For example, differences exist in the methods used to determine pain tolerance, as well as in coping instruction protocols. Importantly, Hayes et al. (1999a) used interventions lasting about 90 minutes, whereas we used simple instructions that took only a few minutes to read. Despite these alternative assessment methods, and instruction-delivery procedures, it is impressive that both studies found that acceptance instructions reduced various negative pain experiences.

Alongside investigating the effects of acceptance and control instructions, an additional aim of the current study was to determine whether or not gender moderates any of the significant effects that were demonstrated. As expected, results indicated that females reported lower pain thresholds and pain tolerance levels than did males, which is consistent with previous research (Fillingim, 2000). Perhaps more interestingly, however, results showed a ‘Gender x Instructions’ interaction; whereby, females showed less emotional pain when using acceptance-based instructions, than when using control-based ones. No such differential effects were found for males, however. This suggests that, for females at least, acceptance may be particularly useful for reducing the emotionally distressing component of cold-pressor pain.

The fact that coping instructions benefited females is in contrast to our previous studies, where we found that males benefited from focusing on pain, whereas females tended to show increased negative emotional responses to it (Keogh et al., 2000; Keogh and Herdenfeldt, 2002). We should point out, though, that focusing on pain is not the same as accepting it. Certainly, the latter consists of focusing on pain sensations, but it also involves being willing to experience them without trying to control them, or letting them determine one’s actions (e.g., removing one’s hand from the pain stimulus). It is this willingness part of acceptance that may produce the beneficial impacts on emotional pain in women, and sensory pain across gender, which we saw in this study.

If the current pattern of effects is found in acceptance-based treatments of chronic pain then this would be very welcome, as females report more pain, more negative emotional responses to pain, as well as more general negative distress (Leibenluft, 1999; Fillingim, 2000). There is certainly a need to address women’s acute and chronic pain, as there is a need for a randomised controlled trial (RCT) to test the ability of ACT to reduce clinical pain in both men and women.

What is missing from the current discussion at present is why would an acceptance-based approach be particularly beneficial for women when dealing with acute experimental pain? Although a number of potential biological mechanisms have been proposed to explaining gender differences in pain (see, Berkley and Holdcroft, 1999), it is likely that more psychosocial explanations may shed some light on this issue. It has been suggested that men and women have different socialisation experiences in the context of learning how to cope with pain. For example, there is now evidence to suggest that gender role expectations (which are believed to be socially acquired) influence pain responses in men and women (Robinson et al., 2001; Wise et al., 2002). Additionally, it is believed that women are more likely to learn to deal with pain in a more emotion focused way (Tamres et al., 2002). Since ACT aims to refocus attention onto longer-term goals, such as reduced disability in the case of chronic groups (McCracken et al., 2004), it is possible that the loss of emphasis on emotional factors may mean that women benefit more from such an approach. Such explanations are of course entirely speculative and go beyond the experimental data presented here, but nevertheless offer an interesting avenue for future research.

Although the current results are interesting, they should be interpreted with caution until more research has been conducted to confirm the reliability of such effects. One particular concern is associated with the main findings on the affective component of the SF-MPQ. Given that average ratings were relatively low, it is possible that this measure lacks sensitivity within this type of experimental setting, and maybe also clinical groups. Saying that, however, a confirmatory factor analysis by Wright et al. (2001) of this scale indicated that a two-factor solution provides a good fit to the data in a chronic pain sample. Alternative measures of affective pain (e.g., an affective visual analogue scale) may need to be considered in future research.

An additional reliably issue relates to the point that the coping instructions developed here are limited, in that they would not be considered appropriate for the
clinic. It should of course be realised that the primary objective of the current study was to investigate acute pain responses, since this allows much greater experimental control. Acute pain induction means that participants have ultimate control over the amount of pain they experience, and so it would be interesting to determine whether the effect of such brief acceptance instructions would have a similar effect on chronic groups, whom typically have much lower perceptions of control over their pain.

A third concern is that the acceptance instructions were only found to have a benefit on the self-report questionnaire measures of pain, and not on measures of pain threshold and tolerance. Such effects could be interpreted to indicate that, somewhat inconsistent with theory, that acceptance is less likely to have a behavioural effect. However, it should be noted that since ACT is believed to work when there is a strong goal, it is very possible that the short nature of the current study prevented the formulation of a specific goal. This may not have been the case for the more intensive protocol described by Hayes et al. (1999a).

A final consideration is related to the use of short coping instructions to teach ACT concepts. Even though participants seemed to be able to use the ACT and control instructions effectively, clinical experiences of teaching ACT principles suggest that it is not an easy task. Given that the current study only employed a simple yes/no compliance check following the task, it is therefore possible that participants did not actually understand or utilise ACT’s strategy of acceptance. One way of addressing this issue would be to make use of a more extensive manipulation check to determine compliance and understanding. For example, the introduction of a semi-structured interview following the task would enable one to determine whether the acceptance instructions were understood and followed.

In conclusion, we wish to highlight our finding regarding the differential effects of acceptance-based coping instructions on pain reports of males and females. We believe that it indicates the importance, for both researchers and therapists, to consider gender when thinking about how one can cope with pain. Indeed, in the wider psychological literature, it is well known that gender differences in coping are important (Tamres et al., 2002), however, research has only recently begun to explore the generalisation of this phenomenon to the study and treatment of pain. The findings from this experiment further suggest such generalisation and, thus, the likely need to reduce pain in slightly different ways for males and females. Further research is clearly also needed to systematically determine whether the effects found here are reliable, as well as to determine whether acceptance instructions plays a role in moderating pain perception in chronic groups.

References


