Confronting the Unknown: Pain Catastrophizing, Emotion Regulation, Psychopathy, and Associations With Uncertainty

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Abstract

Intolerance of uncertainty concerns how one views and reacts to uncertainty, where one who’s highly intolerant would find it very discomforting when confronted with uncertain situations. The purpose of this study was to examine the associations between intolerance of uncertainty, pain catastrophizing, emotion regulation and psychopathic traits. These variables were to be examined in the context of a Beads Task and a Cold Pressor Test (CPT). We hypothesized that there would be a positive significant association between intolerance of uncertainty, pain catastrophizing, emotion regulation, psychopathic traits. We also hypothesized that there would be a difference depending on the difficulty of the Beads Task. To do so, data was collected from 60 university students (32 females and 28 males). The results showed that there was a significant, positive association between intolerance of uncertainty, pain catastrophizing, emotion regulation and the Beads Task measurements. Some of these results were similar to previous studies.

Keywords: intolerance of uncertainty, beads task, cold pressor test, emotion regulation, pain catastrophizing, psychopathic traits

Psychology III, Fall 2017. Supervisor: Martien Schrooten
Att konfrontera det okända: Smärktastrofiering, känsloreglering, psykopati och deras association med osäkerhet

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Sammanfattning


Nyckelord: Intolerans mot osäkerhet, Beads Task, kallvattentest, känsloreglering, smärktastrofiering, psykopatiska personlighetsdrag

Handledare: Martien Schrooten
Psykologi III
HT 2017
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Everyone has at some point throughout their lifetime come face-to-face with a task or situation filled with elements of uncertainty. For example, when visiting the dentist. You don’t know beforehand if the procedure is going to be unpleasant or even painful. It is situations like those, that each individual deal with differently by using diverse ways and strategies. One’s ability to deal with this uncertainty might either reduce or induce stress and/or other emotions, such as anxiety or anger. These uncertain tasks and situations are quite common in everyday life. But, what if you also struggled with the ability to deal with the sensation of pain, regulate emotions or lacked the ability to experience emotion to a certain degree? Would these experiences, lack of abilities or sensations affect the experience of stress or the certainty in your decision making when uncertainty is present and where the consequence is characterized by something which could potentially be physically unpleasant or even painful?

**Intolerance of Uncertainty**

One purpose of the present study is to test the reactions to uncertainty in a pain context, where we aim to extend on previous research and further examine pain catastrophizing and its relation to intolerance of uncertainty. In addition, the present study will also test uncertainty in relation to both difficulties to regulate emotion and psychopathic traits. Testing some of these associations in an experimental setting is breaking new ground within the research field, where findings may lead to additional information regarding how people with different deficits, traits or difficulties deals with unpredictable- and uncertain tasks or other uncertain situations in their life. One’s perception, interpretation and response to uncertain situations reflect on how intolerant one is of uncertainty. These all occur on a cognitive, behavioral- and an emotional level (Dugas, Schwartz, & Francis, 2004).
Individuals who are intolerant of uncertainty become upset, stressed and see uncertainty as something negative which should be avoided, and they also struggle to function in uncertain situations (Buhr & Dugas, 2002).

Intolerance of uncertainty is highly associated with excessive worrying when confronted with uncertainties (Dugas et al., 2004), overestimating the probability and consequences of negative outcomes (Bredemeier & Berenbaum, 2008). Intolerance of uncertainty has also been associated with a wide array of different types of fears, such as fear of pain, fear of being negatively evaluated by others and fear of illness and injury (Carleton, Sharpe, & Asmundson, 2007; Helsen, Goubert, & Vlaeyen, 2013). This inability to cope with uncertainty has been found in many anxiety and mood disorders, such as generalized anxiety disorder, social anxiety disorder, depression and obsessive-compulsive disorder (Boelen & Reijntjes, 2009; Carleton, Collimore, & Asmundson, 2010; Dugas, Gosselin, & Ladouceur, 2001; Jacoby, Abramowitz, Buck, & Fabricant, 2014; Miranda, Fontes, & Marroquín, 2008).

Intolerance of uncertainty has typically been studied using self-reported measurements. It is only recently that behavioral measures have been proposed in research of intolerance of uncertainty, one of which is a probabilistic decision task called the Beads Task. The Beads Task involves having to decide which colour of beads that are the majority in a jar of 100 beads. Typically, only two colours of beads are used in these tests (e.g. red and blue beads) where the participants will be able to draw beads one by one and based on the beads they draw make their decision. The way this is relevant to intolerance of uncertainty is by adjusting the ratio of the two colours to see how people act differently depending on how ambiguous the correct answer is. One of the studies (Jacoby et al., 2014) that have used the Beads Task found that the degree of uncertainty in a situation lead people to request more information and take more time to ponder before deciding. Despite this, the uncertainty level only affected the distress experience among people with an anxiety disorder and not those
without one. In a more recent study, Jacoby, Abramowitz, Reuman, and Blakey (2016) added a Cold Pressor Test (CPT), which involves having to place a hand in frigid water for either as long as possible or a specific amount of time. This study was done to heighten the ecological validity of the measures, which resulted in higher distress and more engagement in the task from the participants. What is not answered in these previous studies are whether the distress originates from the uncertainty of the task itself or from the possibility of having to perform the CPT. The present study will therefore try to disentangle this question, which will be accomplished by adding various levels of uncertainty in the Beads Task, as well as having the possible uncomfortable outcome of the CPT. To develop a better understanding of responses to uncertainty, and more specifically uncertainty about anticipated pain, we examined the associations between intolerant responses to uncertainty and several personality traits.

**Pain Catastrophizing and Intolerance of Uncertainty**

Similar to previous studies (Funk & Zander, 2017; Jacoby et al., 2016), the present study also focuses on responses to uncertainty about pain we are therefore interested in pain-related catastrophizing. Pain catastrophizing concerns how a person experience and react to pain (Sullivan, Bishop, & Pivik, 1995).

The relation between pain catastrophizing and intolerance of uncertainty has not received much attention in research. It has only been studied in a recent thesis (Funk & Zander, 2017), where they found it to be related to traits of intolerance of uncertainty and stress. Pain catastrophizing is characterized by worry, excessive focus on the negative aspects of the pain, magnifying the experience of it and feelings of helplessness (Sullivan et al., 1995). This sort of worrying behavior is in many ways similar to those of intolerance of uncertainty. Like intolerance of uncertainty, pain catastrophizing is associated with fear of pain and frequent experience of negative emotions (Helsen, Goubert, & Vlaeyen, 2013).

Previous research (Sullivan, Rodgers, & Kirsch, 2001) has also found that catastrophizing is
not only linked to heightened experience of pain but also to an increased expectation of pain and emotional distress. Given the numerous similarities in symptoms and related constructs, there are clear indications of that intolerance of uncertainty and pain catastrophizing are closely related and there is currently a lack of studies done on it.

**Difficulties in Emotion Regulation and Intolerance of Uncertainty**

In addition to pain catastrophizing, the present study will also examine emotion regulation difficulties. Donahue, McClure, Moon, and Lejuez (2014) states that the process of emotion regulation is related to how one either in an automatic- or controlled way, manipulates their presence and/or manipulates the subjective experience, physiological activity or behavior.

Studies (e.g., Dugas et al., 2004) have shown that worrying, which is a sub-trait in emotion regulation, leads to higher intolerance of uncertainty. People showing tendencies of excessive worrying also show deficits in emotion regulation, specifically, not being able to accept negative emotions, lacking impulse control when distressed, lacking strategies to handle their emotions, not being able to be productive when distressed and not understanding their own emotions (Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006). Previous research has also found that some cognitive emotion regulation strategies are linked with experiencing anxiety, stress and worry, while others are not (Zlomke & Hahn, 2010). The strategies having these effects were: rumination, self-blame, catastrophizing and blaming others. These coping strategies could be seen as maladaptive due to the way it focuses on one owns emotions more so than the actual problem itself (Garnefski, Kraaij, & Spinhoven, 2002). In addition, deficits in emotion regulation is suggested to be a key factor in a wide range of anxiety disorders as: social anxiety, generalized anxiety and obsessive-compulsive disorder (Helbig-Lang, Rusch, & Lincoln, 2015; Roemer et al., 2009; Yap et al., 2017). These
are indicators of that a broader difficulty in emotion regulation is important to one's ability to cope with uncertainty.

There are also some deficiencies in the field regarding emotion regulation. One is that the concept is quite wide, and previous studies (e.g., Dugas et al., 2001; Dugas et al., 2004) have only tested worrying with intolerance of uncertainty. A literature review indicates a lack in regard to practical experimental studies that tests emotion regulation with intolerance of uncertainty.

**Psychopathy and Intolerance of Uncertainty**

Psychopathy, or specifically, psychopathic traits, includes traits such as remorselessness, callousness, deceitfulness, egocentricity, lack of interpersonal bonds, superficial charm, externalization of blame, irresponsibility and a lack of fear and anxiety combined in a constellation (Cleckley, 1941, as cited in Donahue et al., 2014). These traits are usually divided into different dimensions of psychopathy. For instance, the three-factor model of psychopathy (Cooke & Michie, 2001) suggests that psychopathy consist of 1) arrogant and deceitful interpersonal style, 2) deficient affective experience and 3) impulsive and irresponsible behavioral style.

Psychopathy has been recognized as a heterogeneous group, where individuals vary in which trait-group is predominant (Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). They can be split into primary and secondary psychopaths (Yildirim & Derksen, 2015). Primary psychopaths are defined by more affective deficits, while secondary psychopaths are characterized by higher levels of impulsivity and irresponsibility. In the present study, psychopathic traits will be based on these models.

An overview of the existing literature field shows that the field is lacking regarding this research, where only one study (Sabouri et al., 2016) has looked at the relation between psychopathy and intolerance of uncertainty. This study found that people with psychopathic
traits tend to be slightly intolerant of uncertainty. On the other hand, research (e.g., Hofmann et al., 2009) has shown that people with psychopathic traits have reduced experience of anxiety in social situations. Recent research (Durand & Plata, 2017) has found that certain traits of psychopathy are also more likely suffer from anxiety and stress, specifically the self-centred and impulsive traits. A recent meta-analysis on psychopathy (Derefinko, 2015) came to a similar conclusion. It showed that the different dimensions of psychopathy cancel each other out on anxiety levels, but when looked at on a sub-facet level the interpersonal and deficient affective traits show no relation to anxiety, while those high in the impulsive-irresponsible traits are more prone to experience anxiety and distress. It is not clear whether psychopathic traits would make a person either more, or less tolerant of uncertainty in life.

There are numerous issues in the current knowledge concerning psychopath’s ability to handle uncertainty. A general issue with examining psychopathy is of course that there are few people with enough traits to label them as ‘psychopaths’. The only study (Sabouri et al., 2016) that has investigated psychopathic traits and intolerance of uncertainty relied only on self-reported data. This study used an Iranian sample, due to the possibility of cultural differences it had to be tested in multiple different settings. Lastly, the field is lacking in terms of experimental studies on whether psychopathic traits influences intolerance of uncertainty.

The present study

The present study addressed these issues by investigating the suggested relation between intolerance of uncertainty and different dimensions of psychopathy in a sample of Swedish students. In addition, we have chosen to look at a wider selection of emotion regulation deficits and whether it is associated with intolerance of uncertainty. We have also aimed to replicate the results found between pain catastrophizing and intolerance of uncertainty. The present study examined self-reported intolerance of uncertainty, emotion
regulation difficulties, psychopathic traits and pain catastrophizing as well as behavioral aspects of intolerance of uncertainty in an experimental decision task. The experiment was designed according to previous research, by using the Beads Task and placing it in a pain context by adding a CPT (Funk & Zander, 2017; Jacoby et al., 2016).

The last aim of this study was to expand on the current knowledge of the Beads Task, when used to measure intolerance of uncertainty, by exploring how different uncertainty levels of the task in combination with the stress-inducing presence of the CPT would affect their task-related behavior, stress and uncertainty. The following research questions are asked: a) Is intolerance of uncertainty related to psychopathic traits, emotion regulation difficulties and pain catastrophizing, and b) Is there a difference in experienced distress and intolerance of uncertainty related behaviors between high and low uncertainty Beads Task?

Our first hypothesis is that the two different Beads Tasks difficulty versions differ in intolerance of uncertainty related behaviors. Participants will draw more beads and use more time until they decide on the more difficult version. They will also be less certain about their decision and be more stressed.

Secondly, we hypothesize that intolerance of uncertainty is going to be positively associated with pain catastrophizing, emotion regulation and psychopathic traits. Specifically, those who report higher levels of intolerance of uncertainty will also report higher in pain catastrophizing, emotion regulation difficulties and levels of psychopathic traits.

**Method**

**Participants**

A total of fifty-six (30 female, 26 male) university students at a mid-sized Swedish University participated in this study. They were between 19 and 45 years old ($M = 25.57$, $SD = 5.62$). Forty-two (75 %) studied law, psychology or social work, seven (12.5 %) studied
medical science, three (5.36 %) studied humanities, education or social science, two (3.57 %) studied business, two (3.57 %) studied science or technology. Seven (11.67 %) participants reported past psychological problems. Two participants were outliers in age and since they did not affect the results in any meaningful way they were retained in the sample. Four participants were taking anxiety or antidepressant medication and were therefore excluded from the sample. There was, however, no internal data loss.

Other exclusion criteria were colour blindness and previous experience with the CPT. Furthermore, to make participants believe that they possibly would have to do the CPT, customary exclusion criteria for the CPT was used: Acute or chronic pain, high blood-pressure, cardiovascular diseases, Raynaud’s phenomenon, open wound or fracture on their non-dominant hand. The recruitment of participants was mainly done through visiting lectures for various courses and programs. In addition, we also put up flyers all around the campus and informed about the study in a Facebook group for students at the chosen University. Participants were asked to potentially bring a friend who also would be interested in participating. All in all, the participants in this study were reached through a convenience-as well as a snowball sampling method. Participation was voluntary, based on informed consent, and in exchange for a small compensation (coffee, tea or fruit drink as well as simple pastries).

Measures

Intolerance of Uncertainty. The short version of the Intolerance of Uncertainty Scale-12 (IUS-12) (Carleton et al., 2007) consists of 12 items compared to the original version (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994). It aimed to assess how people react to uncertainty. Items were answered on a response scale from 1 (not at all a characteristic of me) to 5 (entirely characteristic of me). The total score on IUS-12 ranged from 12 to 60 where higher score indicated higher level of intolerance of uncertainty.
Examples of the statements in the scale were “It frustrates me not having all the information I need”, “One should always look ahead to avoid surprises” and “Uncertainty keeps me from living a full life”. Previous research has shown that IUS-12 and the full-length version both show good and comparable reliability and validity (Carleton et al., 2007). The Swedish shorter scale was obtained by identifying the items that matched between IUS-12 by Carleton et al. (2007) and the Swedish translated full-version IUS-27, originally created by Freeston et al. (1994). The Swedish IUS-12 had a Cronbach’s alpha of .79 in the present sample.

**Pain Catastrophizing.** The *Pain Catastrophizing Scale* (PCS) (Sullivan et al., 1995) consisted of 13 items which aimed to assess how people react to pain. It used a response scale of 0 (*not at all*) to 4 (*all the time*). Total score ranged from 0 to 52 were high scores reflect high level of pain catastrophizing. Examples of statements in the scale were “When I’m in pain, I can't seem to keep it out of my mind”, “When I’m in pain, I worry all the time about whether the pain will end”. The scale has showed to be a valid and reliable measure of pain catastrophizing (Osman et al., 1997). A Swedish translation of the Pain Catastrophizing Scale (Funk & Zander, 2017) was used. In the present sample, the scale had a Cronbach’s alpha of .90.

**Pain Anticipation Ratings.** The participants were asked about expectations of the CPT. These questions were, “how afraid of the cold pressor test are you?”, “how painful are you expecting the cold pressor test to be?” and “how certain are you in these expectations?” (Schrooten, Peters, & Linton, 2016). They were answered on a response scale of 0 (*not afraid/painful/certain at all*) to 10 (*very afraid/painful/certain*)

**Emotion Regulation Difficulties.** The *Difficulties in Emotion Regulation Scale-16* (DERS-16) (Bjureberg et al., 2016) consisted of 16 items which aimed to assess five dimensions of difficulties in emotion regulation. These dimensions were: non-acceptance of negative emotions, inability to engage in goal-directed behaviors when distressed, difficulties
controlling impulsive behaviors when distressed, limited access to emotion regulation strategies perceived as effective, and lack of emotional clarity. It is rated on a response scale of 1 (almost never) to 5 (almost always). The total score ranged from 16 to 80 where higher score indicated more difficulties in regulating emotions. Examples of statements were “When I am upset, I have difficulty focusing on other things”, “When I am upset, I feel out of control” and “I have difficulty making sense out of my feelings.” Previous research has shown that DERS-16 has good reliability and convergent and discriminant validity which are comparable to the original version which had 36 items (Bjureberg et al., 2016; Gratz & Roemer, 2004). A Swedish translation of the DERS (Friberg, 2006) was used and in the present sample, the Cronbach’s alpha of the scale was .89.

**Psychopathic Traits.** The *Youth Psychopathic Traits Inventory-Short* (YPI-S) (Van Baardewijk et al., 2010) was created to measure the core personality traits of psychopathy and consisted of three subscales; 1) the grandiose-manipulative subscale, 2) the callous-unemotional subscale and 3) the impulsive-irresponsible subscale. The scale had 18 items, with each subscale consisting of six items. It was scored on a response scale from 1 (does not apply at all) to 4 (applies very well) and total score ranged from 18 to 72. Examples of statements from the grandiose-manipulative subscale were “I have the ability to con people by using my charm and smile” and “I am good at getting people to believe me when I make something up”. Examples from the callous-unemotional subscale were “I think that crying is a sign of weakness, even if no one sees you” and “To be nervous and worried is a sign of weakness”. Lastly, examples from the impulsive-irresponsible subscale were “I consider myself as a pretty impulsive person” and “It often happens that I talk first and think later”. Although the YPI-S is mainly used on adolescents, recent research show that YPI-S have good convergent validity on young adults (Colins & Andershed, 2016). The Swedish version
of the scale (Andershed, Kerr, Stattin, & Levander, 2002) was used in this study and the Cronbach’s alpha of the scale in the present sample was .74.

**Decision Task.** Beads Task (Jacoby et al., 2014; Jacoby et al., 2016) was used to measure intolerance of uncertainty-related behavior. The task was performed on a computer, using a PowerPoint presentation. The participant was shown two jars filled with 100 beads with a mix of two different colours and different ratios (e.g., 85:15 purple to green and 85:15 green to purple). Participants were not aware of the exact ratio, only that one jar contain more of one colour and the other jar more of the other colour. Thereafter, one of the jars was picked randomly, and the participant was able to draw beads from the jar, one by one. The task was to decide which of the two jars that the beads had been drawn from. The participant was instructed to draw beads until he/she is confident in deciding, however, they could only draw 50 beads before they had to decide.

Participants performed the task twice, one version with low uncertainty (85:15 ratio; Jacoby et al., 2014) and another version with high uncertainty (50:50 ratio; Jacoby et al., 2016). The order of the two versions was counterbalanced between participants. The sequence of beads used in the two task variations was the same for all participants, and as follows:

<table>
<thead>
<tr>
<th>High uncertainty (red &amp; blue) (50:50 ratio) (50 max draws)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBRRBBRBBR BRBRBBRRBR RBRBBRBRBBR RRBRRBBRBBR RBRRRBBBRR</td>
</tr>
<tr>
<td>Low uncertainty (green &amp; purple) (85:15 ratio) (50 max draws)</td>
</tr>
<tr>
<td>GGGPGGPGGG GPGPGGGPGGG GPGPGGPGGGG GGGPGGGGPG GPPGGPGGGGG</td>
</tr>
</tbody>
</table>

The low uncertainty version was originally limited to 30 draws. To keep the rules consistent over both versions we added the same sequence of the first 20 beads as the last 20 beads to make it 50 possible draws in total. Due to the possibility of any memory biases, the previously drawn beads were shown at the bottom of the throughout the test.
During the task, the experimenter recorded, 1) draws to decision, 2) time to reach a decision, 3) which jar the participant chose. After each decision, the participant answered the following three questions, “how certain are you about your decision?”, “how distressed do you feel right now?”, “how important is it for you to get the right answer and avoid having to put your hand in the cold water?”. These questions were answered on a scale ranging from 0 (not at all) to 10 (very much).

**Strategy Ratings.** The participants were also asked about how they approached the Beads Task. The statements were, “I counted the beads at the bottom of the screen before I decided to either draw another bead or make my decision”, “I chose to see more beads to be more sure of my decision”, “I made a quick decision to avoid the stress and uncertainty that I experienced during the task”, “I made a quick decision so I only had to hold my hand in the cold water for as short amount of time possible”, “it was more important for me to answer correctly (and avoid the cold water) than making a quick decision (and shortening the time for the CPT)”. They were answered on a response scale of 0 (not characteristic at all) to 10 (very characteristic).

**Procedure**

The participants were tested individually in a behavioral laboratory at the chosen University, where there was one test leader for each participant and the collection of data was done by the test leaders. The duration for each session was about 25 minutes. At the beginning of the session, the participants received written information about the test and their rights as research participants, this was done in a waiting area outside the laboratory. During this they filled out a survey with demographic questions, signed a consent form and had the opportunity to ask the test leader questions. Before going into the test room, they were shown the CPT setup, which consisted of an open, acrylic glass box that holds water. On top of the
box sat an ED heating immersion circulator and standing next to it was an FT200 immersion cooler which cools the water.

When in the test room, they were asked to fill two surveys regarding intolerance of uncertainty and pain catastrophizing, for this the experimenter left the room to let them answer the questions in privacy. When the participants had finished filling out the surveys, the experimenter re-entered the room and informed them that they now would proceed to the Beads Task. The participants received instructions of the Beads Task on a laptop and did a trial run of the test to ensure that they understood the task. The experimenter was present for this portion of the test and answered any questions the participant may have had regarding the instructions. The participants were then informed that they would be performing two versions of the Beads Task and that he/she would only do the CPT if they answered incorrectly in any of the two tasks. The participants were also told that the time for the CPT depended on how many beads that are drawn (20s plus 2s for each bead drawn). However, the CPT was only used as a tangible, but uncertain negative outcome and no participant had to do it. After this, the participants received the anticipation ratings survey which was then followed by the first Beads Task. Before letting the participants know that they had answered correctly, they had to answer the three post-decision questions. They then performed the second Beads Task followed by the post-decision task before being informed that they did not have to do the CPT. During the Beads Tasks, the experimenter was present in the room to take notes of the test results (beads drawn, time to decision, and their decision), this time with more distance to the participant compared to during the trial run. After the second Beads Task was completed, the participant received the surveys regarding task strategies, psychopathic traits and emotion regulation difficulties. Finally, the participants received compensation and were dismissed. After all the data had been collected, the participants were offered to be informed of the actual purpose of the study through an email.
Following the ethical guidelines of Vetenskapsrådet (2011) each and every participant received written information where they were broadly informed about the study variables, the experimental task and their rights as a participant. These rights included that the results would be presented at a group level, all data would be held confidential and only be accessible to the researchers. Additionally, the participants were informed that they could, at any given time, opt out of the study. Every participant gave active consent by signing a consent form after receiving the written information about the study.

**Statistical Analyses**

All the analyses were done in IBM SPSS Statistics 23. To answer our specific research questions, we used Spearman’s rank-order correlation coefficient and Wilcoxon signed-rank test. A Kolmogorov-Smirnov and Shapiro–Wilk test and plot data showed that our data was not normally distributed, due to this we used Wilcoxon signed-rank test over the paired-samples $t$-test to compare the low uncertainty version and the high uncertainty version of the Beads Task. The scatter plots confirmed that there were outliers in the collected data. According to Field (2013), Spearman’s rho can be used to reduce the effects of outliers, because it is less sensitive to outliers due to the data being ranked, rather than using the Pearson correlation coefficient. Multiple comparisons were adjusted for, by using the Bonferroni correction. Two participants gave multiple responses on some questions, these were interpreted as the more extreme values that they gave (e.g. answer: 1-2 was interpreted as 1).

**Results**

What follows is descriptive statistics for the Beads Task variables, anticipation ratings and the self-reported intolerance of uncertainty, psychopathic traits, emotion regulation difficulties and pain catastrophizing are presented in Table 1. In the high uncertainty version
(50:50), 36 participants (64.3%) chose the jar with mostly red beads and 20 participants (35.7%) chose the jar with mostly blue. In the low uncertainty version (85:15), 54 participants (96.4%) chose the jar with mostly green beads and 2 participants (3.6%) chose the jar with mostly purple (See Table 1).

Table 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean (M)</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IUS-12</td>
<td>26.88</td>
<td>6.30</td>
<td>16–45</td>
<td>0.99</td>
<td>0.62</td>
</tr>
<tr>
<td>PCS</td>
<td>14.54</td>
<td>8.68</td>
<td>0–43</td>
<td>0.94</td>
<td>0.97</td>
</tr>
<tr>
<td>YPI-S</td>
<td>33.00</td>
<td>6.34</td>
<td>21–49</td>
<td>0.35</td>
<td>0.05</td>
</tr>
<tr>
<td>DERS-16</td>
<td>32.29</td>
<td>10.23</td>
<td>16–63</td>
<td>0.80</td>
<td>0.37</td>
</tr>
</tbody>
</table>

**CPT Anticipation ratings**

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean (M)</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear</td>
<td>1.48</td>
<td>2.07</td>
<td>0–8</td>
<td>1.70</td>
<td>2.53</td>
</tr>
<tr>
<td>Pain Expectations</td>
<td>3.54</td>
<td>1.99</td>
<td>0–8</td>
<td>0.07</td>
<td>-0.72</td>
</tr>
<tr>
<td>Certainty</td>
<td>5.34</td>
<td>3.00</td>
<td>0–10</td>
<td>-0.12</td>
<td>-1.19</td>
</tr>
</tbody>
</table>

**Beads Task**

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean (M)</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTD HU</td>
<td>18.27</td>
<td>15.32</td>
<td>1–50</td>
<td>0.82</td>
<td>-0.39</td>
</tr>
<tr>
<td>DTD LU</td>
<td>10.43</td>
<td>8.99</td>
<td>1–39</td>
<td>1.56</td>
<td>2.28</td>
</tr>
<tr>
<td>Time (Seconds) HU</td>
<td>83.18</td>
<td>77.98</td>
<td>5.6–358</td>
<td>1.61</td>
<td>2.51</td>
</tr>
<tr>
<td>Time (Seconds) LU</td>
<td>34.02</td>
<td>22.93</td>
<td>1–90</td>
<td>1.03</td>
<td>0.16</td>
</tr>
<tr>
<td>Stress HU</td>
<td>3.07</td>
<td>2.45</td>
<td>0–9</td>
<td>0.55</td>
<td>-0.66</td>
</tr>
<tr>
<td>Stress LU</td>
<td>2.48</td>
<td>1.98</td>
<td>0–9</td>
<td>0.83</td>
<td>0.84</td>
</tr>
<tr>
<td>Importance of correct answer HU</td>
<td>3.79</td>
<td>2.90</td>
<td>0–10</td>
<td>0.55</td>
<td>-0.50</td>
</tr>
<tr>
<td>Importance of correct answer LU</td>
<td>3.54</td>
<td>2.86</td>
<td>0–10</td>
<td>0.66</td>
<td>-0.15</td>
</tr>
<tr>
<td>Certainty in their answer HU</td>
<td>4.30</td>
<td>2.81</td>
<td>0–10</td>
<td>0.17</td>
<td>-0.63</td>
</tr>
<tr>
<td>Certainty in their answer LU</td>
<td>5.98</td>
<td>2.57</td>
<td>0–10</td>
<td>-0.23</td>
<td>-0.48</td>
</tr>
</tbody>
</table>

**Note.** IUS-12 = Intolerance of uncertainty scale-12; PCS = Pain catastrophizing scale; YPI-S = Youth psychopathic traits inventory-short; DERS-16 = Difficulties in emotion regulation scale-16; CPT = Cold Pressor Test; M = Mean; SD = Standard deviation; DTD = Draws to decision; HU = High Uncertainty (Blue/Red); LU = Low Uncertainty (Purple/Green)

**Is there a difference in experienced distress and intolerance of uncertainty related behaviors between high and low uncertainty Beads Task?**

The results from a Wilcoxon signed-rank test showed significant differences between the high uncertainty and low uncertainty version of the Beads Task. In the high uncertain
version, as compared to the low uncertain version, the participants drew more beads \( (Z = -5.36, p < .001) \), spent more time before reaching a decision \( (Z = -5.29, p < .001) \), were less certain in their decision \( (Z = -4.59, p < .001) \), and were more stressed \( (Z = -2.91, p = .004) \). These differences were still significant after the Bonferroni correction (.05/5). Importance of answering correctly was not significantly different between the two versions \( (Z = -1.67, p = .095) \). See Table 1 for performance on the two versions of the Beads Task.

**Is there an association between intolerance of uncertainty and anticipation for the Cold Pressor test?**

The results show that there was a significant positive correlation between fear of the CPT and stress during both Beads Task versions (see Table 2). These associations remained significant after the Bonferroni correction (.05/30). In addition, fear of the CPT was significantly and positively correlated with importance of answering correctly for both versions of the Beads Task. Neither of the correlations was significant after the Bonferroni correction (.05/30). Furthermore, fear of the CPT was also significantly and negatively correlated with certainty in their decision in the high uncertainty version but not in the low uncertainty version. This correlation was not significant after the Bonferroni correction (.05/30). No significant correlation was found between fear of the CPT and IUS, number of beads drawn, time to decision.

There was a significant positive correlation between pain expectations and stress during the high uncertainty version, but not during the low uncertainty version. The association was no longer significant after the Bonferroni correction (.05/30). There was no significant correlation between pain expectation of the CPT and IUS, number of beads drawn, time to decision, certainty in their decision, or importance of answering correctly.
A significant negative correlation was found between certainty in their expectations of the CPT and number of beads drawn during both Beads Task versions. However, after the Bonferroni correction these were no longer significant (.05/30).

There was also a significant positive correlation between certainty in expectations and certainty in decision during the high uncertainty version, but not during the low uncertainty version. This correlation was not significant after the Bonferroni correction (.05/30). There was no significant correlation between certainty in CPT expectations and IUS, time to decision, stress, or importance of answering correctly.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Fear</th>
<th>Pain</th>
<th>Certainty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anticipation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beads Task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTD</td>
<td>HU</td>
<td>.01</td>
<td>-.28*</td>
</tr>
<tr>
<td></td>
<td>LU</td>
<td>.09</td>
<td>-.34*</td>
</tr>
<tr>
<td>Time</td>
<td>HU</td>
<td>-.01</td>
<td>.41*</td>
</tr>
<tr>
<td></td>
<td>LU</td>
<td>.01</td>
<td>-.13</td>
</tr>
<tr>
<td>Stress</td>
<td>HU</td>
<td>.57**</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>LU</td>
<td>.53**</td>
<td>.07</td>
</tr>
<tr>
<td>Importance of correct answer</td>
<td>HU</td>
<td>.30*</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>LU</td>
<td>.36*</td>
<td>-.01</td>
</tr>
<tr>
<td>Certainty in their answer</td>
<td>HU</td>
<td>-.32*</td>
<td>.27*</td>
</tr>
<tr>
<td></td>
<td>LU</td>
<td>-.20</td>
<td>.21</td>
</tr>
<tr>
<td>IUS-12</td>
<td></td>
<td>.20</td>
<td>-.26</td>
</tr>
</tbody>
</table>

Note. IUS-12 = Intolerance of uncertainty scale-12; Rho = Spearman’s Correlation Coefficient; DTD = Draws to decision; HU = High Uncertainty (Blue/Red); LU = Low Uncertainty (Purple/Green)

* p < .05

** p < .001 (Bonferroni Corrected)
Is there an association between intolerance of uncertainty and pain catastrophizing?

As shown in Table 3, there was a significant positive correlation between PCS and IUS. In addition, pain catastrophizing also had a significant, positive correlation with stress during the low uncertainty version, but not during the high uncertainty version.

After the Bonferroni correction (.05/6) the correlation between pain catastrophizing and stress was no longer significant. There was no significant correlation between pain catastrophizing and number of beads drawn, time to decision.

Table 3
Spearman’s rho between Intolerance of Uncertainty Scale, Pain Catastrophizing Scale, Difficulties in Emotion Regulation Scale, Youth Psychopathic Inventory and Beads Task performance

<table>
<thead>
<tr>
<th></th>
<th>IUS-12</th>
<th>PCS</th>
<th>DERS-16</th>
<th>YPI-S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beads Task</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTD HU</td>
<td>.05</td>
<td>.17</td>
<td>.21</td>
<td>.05</td>
</tr>
<tr>
<td>DTD LU</td>
<td>.21</td>
<td>.21</td>
<td>.30*</td>
<td>-.05</td>
</tr>
<tr>
<td>Time HU</td>
<td>-.02</td>
<td>.05</td>
<td>.08</td>
<td>-.05</td>
</tr>
<tr>
<td>Time LU</td>
<td>.18</td>
<td>.13</td>
<td>.25</td>
<td>-.08</td>
</tr>
<tr>
<td>Stress HU</td>
<td>.35**</td>
<td>.25</td>
<td>.46**</td>
<td>.20</td>
</tr>
<tr>
<td>Stress LU</td>
<td>.29*</td>
<td>.28*</td>
<td>.35**</td>
<td>.24</td>
</tr>
<tr>
<td>IUS-12</td>
<td>-</td>
<td>.63**</td>
<td>.53**</td>
<td>-.02</td>
</tr>
</tbody>
</table>

Note. IUS-12 = Intolerance of Uncertainty Scale-12; PCS = Pain Catastrophizing Scale; DERS-16 = Difficulties in Emotion Regulation Scale-16; YPI-S = Youth Psychopathic Inventory-Short version; M = Mean; SD = Standard deviation; DTD = Draws to decision; HU = High Uncertainty (Blue/Red); LU = Low Uncertainty (Purple/Green)

* p < .05
** p < .008 (Bonferroni corrected)
Is there an association between intolerance of uncertainty and emotion regulation difficulties?

As shown in Table 3, there was a significant positive correlation between DERS and IUS. In addition, emotion regulation difficulties were also significantly correlated with stress from both the high- and low uncertain version of the Beads Task. These correlations were still significant after the Bonferroni correction (.05/6).

Furthermore, there was a significant correlation between emotion regulation difficulties and number of beads drawn for the low uncertainty version, but not for the high uncertainty version. The correlation between number of beads drawn and emotion regulation difficulties was not significant after the Bonferroni correction (0.05/6). There was no significant correlation found between emotion regulation difficulties and time to decision.

Is there an association between intolerance of uncertainty and psychopathic traits?

The results shown in Table 3 suggest that there was no significant correlation between YPI and IUS, number of beads drawn, stress, or time to decision. Although not significant, there were indications of an association between YPI and stress during the Beads Task.

Discussion

The purpose of this study was to extend on previous research regarding intolerance of uncertainty in a pain context in the four important ways. First, by including a behavioral measure of intolerance of uncertainty with two levels of difficulty (that is, very uncertain vs less uncertain version of the Beads Task) in addition to the intolerance of uncertainty self-report scale. With this, we examined how the uncertainty of the tasks affects the behavioral tendencies and emotional experiences. Second, by exploring the relationships with pain
catastrophizing. Third, with difficulties in regulating emotion, and fourth, with psychopathic traits.

The results can be summarized as follows. First, as expected participants requested more information (reflected by the number of beads they drew), time it took to decide, amount of stress experience, and how certain they were in their decision during the high uncertainty version compared to during the low uncertainty version of the Beads Task. In addition, people who reported higher levels of intolerance of uncertainty tended to experience higher levels of stress during the test during both versions of the Beads Task. Second, participants who were more prone to have catastrophizing thoughts about pain tended also to be more intolerant of uncertainty. People with a higher level of pain catastrophizing also experience more stressed during the low uncertainty version of the Beads Task and not in the high uncertain version. Third, as expected, people with emotion regulation difficulties were more likely to have higher self-reported intolerance of uncertainty, experience more stress during the Beads Task and tended to request more information during the low uncertainty version of the Beads Task. Fourth, no association were found between intolerance of uncertainty (self-report or behavioral measure) and overall psychopathic traits.

The findings in the present study add to the current knowledge of the Beads Task. Previous research (Jacoby et al., 2014) have shown that that varying levels of uncertainty do not elicit more, or less stress in undergraduate students when there is no explicit consequence of the task. In addition, they have also found that by adding the CPT as a tangible outcome for failure to a highly uncertain version of the Beads Task (50:50) will heighten the stress experience during the test (Funk & Zander, 2017; Jacoby et al., 2016). Our findings show that the behaviors from the Beads Task and the perceived stress from the task are affected by the level of uncertainty in the task (high vs. low) and not only from the posing threat of the CPT. It is important to note that the perceived stress was still high during the less uncertain version
in this study when compared to Jacoby et al. This difference could be because of (1) the threat of the CPT induces more stress, or (2) because Jacoby et al. showed the ratio of beads in their tests, something which we chose to keep hidden from the participants or it was a less uncertain task than ours and therefore less stressful. There is a possibility that there is an interaction effect of the CPT and Beads Task difficulty where the degree of uncertainty only makes a difference when there is a tangible consequence of failure.

The findings in this study also add to the literature by showing that a wider range of emotion regulatory deficits are related to intolerance of uncertainty. One of the main aspects of intolerance of uncertainty is the negative expectation towards uncertain situations and worrying behaviors (Buhr & Dugas, 2002), where worrying can be seen as an ineffective method to regulate emotions. Our findings suggest that people prone to worrying also tend to display difficulties in other aspects of emotion regulation, such as perception in their lack of coping strategies, engaging in avoidant behavior or having a poor understanding of their own emotions and they tend to experience more negative emotions such as stress. There are suggestions that the choice of coping strategy and the appraisal of the situation is a key factor in the relation between intolerance of uncertainty and anxiety (Taha, Matheson, Cronin, & Anisman, 2014). Specifically, emotion focused coping strategies are more common among people that cannot tolerate uncertainty. This type of coping can be seen as maladaptive and is more likely to elicit negative emotional responses (Garnefski et al., 2002), which is supported by our findings. Theoretically, an improvement in emotion regulation skills could offer the coping skills necessary to better handle these negative emotions, engage in more goal-directed behaviors and lessen the dysfunctional behaviors that comes from uncertainty.

Our findings concerning pain catastrophizing did not quite reflect what previous research has found. What we were able to replicate was the relation between trait intolerance of uncertainty and pain catastrophizing, which goes in line with what previous research (Funk
& Zander, 2017) found. But the relationship with experienced stress during the task was only found in the low uncertainty version and was not significant after the Bonferroni correction. A possible explanation of this is that participants underestimated the how painful or uncomfortable the CPT would have been, so it is more perceived as a minor inconvenience rather than a pain threat. Another explanation could be that the self-reported pain catastrophizing is focused on the perception and coping of pain and not necessarily the expectancy aspects of pain catastrophizing. Since we found that the people that were more afraid of the CPT and expected it to be more painful, also reported being much more stressed during the Beads Task.

Regarding the Beads Task expectation ratings, intolerance of uncertainty was not significantly related to neither fear or pain expectations of the Beads Task. Which goes against previous research (Carleton et al., 2007; Helsen et al., 2013), which have found trait fear of pain to be related to intolerance of uncertainty. Once again, it raises the question to whether the CPT is perceived as a pain threat or not.

In terms of psychopathic traits, our findings went against what Sabouri et al. (2016) found. A possible explanation to why we did not find any relations is because psychopathy is scarce in the general population and our sample was limited in size. To properly examine this relation would either require a larger sample or a larger focus on finding people with high levels of at least one dimension of psychopathy. Due to time restrictions, we did not have the possibility to seek out these specific people nor have a significantly larger sample. We originally hypothesised that the different dimensions of psychopathy would be related to intolerance of uncertainty in different directions. But due to some issues with Cronbach’s alpha of the subscales in our data, we decided to only test the total score of the *Youth Psychopathic Traits Inventory*. There are possible issues with using this scale for such a wide
age range (19 to 45) that was used in this study, since it previously only has been tested in
samples of adolescents to adults in their early to mid-twenties (Colins & Andershed, 2016).

Similar, to what previous research (Jacoby et al., 2016) has found, self-reported
intolerance of uncertainty was only related to experienced stress and not to number of beads
drawn and time before deciding. These latter variables are seemingly more likely tied to
strategic choices rather than a representation of an individual's degree of intolerance of
uncertainty. While the perceived stress from the task is linked to one’s ability to cope with
uncertainty, the current version of Beads Task seems to be more useful in measuring
emotional responses to intolerance of uncertainty, such as worrying and anxiety, more so than
behavioral tendencies related to uncertainty. On the other hand, there have been suggestions
that only moderate difficulties of the Beads Task reflects intolerance of uncertainty related
behaviors, such as in number of beads drawn (Ladouceur et al., 1997, as cited in Jacoby et al.,
2014). While more extreme versions of the task, like the ones used in this study are perceived
as very/not uncertain regardless of their tolerance of uncertainty.

There are some limitations in this study that needs to be taken into consideration. The
sampling techniques used in this study were mainly by convenience and through snowball
sampling method. The gender distribution was both equal and representative for university
students and therefore, restricted in the generalizability to other samples. The sample does
however, allow for comparison within the university and to previous similar studies. For
future reference, to avoid a biased sample, another method would be recommended, such as a
larger sample preferably collected through probability sampling.

Furthermore, none of the participants had any previous experience of the CPT, nor did
they have to perform the test beforehand, which is different approach from what Jacoby et al
(2016) had. They let the participants perform the CPT both before the Beads Task and after.
What we chose to do in our study was to not have them perform the CPT at all, this we did to
replicate the procedure of a previous bachelor thesis by Funk and Zander (2017), where we found that our anticipation ratings were similar to the previous study. However, the pain expectation ratings were lower than the actual reported pain in Jacoby et al (2016). Therefore, participants with no previous experience of the CPT may have underestimated the cold water. We let the participants who wanted, test the water after the experiment was done and most of them claimed that it was colder than they originally thought. One way to circumvent this issue would perhaps be to let the participants put their hand in the water for a brief period of time before the experiment, not perform the actual test.

There are also several strengths in this study. We have used measures that have already been tested in previous research and are reliable and valid (Bjureberg et al., 2016; Carleton et al., 2007; Colins & Andershed, 2016; Gratz & Roemer, 2004; Osman et al., 1997). We are looking at both self-reported measures and actual behavior in a decision task, something that few studies regarding intolerance of uncertainty have done.

Another strength is that the Beads Task procedure have been mimicked as closely as possible from recent research (Jacoby et al., 2016), considering the methodological differences compared to the most recent study using this task in which they had their participants perform the CPT before doing the Beads Task. In this study, we used two very different versions of the Beads Task and to minimize the possible order effects of this, the test was randomly counterbalanced for half of the participants. Finally, there were also strengths in the present study in terms of the scales where the mean values of IUS- YPI-S-, PCS scores and the anticipation ratings for the CPT were comparable and similar to previous research (Colins & Andershed, 2016; Funk & Zander, 2017; Jacoby et al., 2016).

A suggestion for future research would be to use another decision task called a “Box Task”. Recent research has found it to be similar to the Beads Task on a conceptual level but has found them to differ in the amount of information collected before reaching a decision,
meaning that participants asked for less information during the Beads Task than the Box Task (Balzan, Ephraums, Delfabbro, & Anderou, 2017). They also claim that the Beads Task involves a “Jumping-to-conclusions” (JTC) bias, which means that the participants reach a decision on limited information. It would therefore be beneficial to test both Beads Task and Box Task in relation to intolerance of uncertainty, perhaps in the context of a CPT.

Future research could also aim to examine which dimensions of emotion regulation that are most relevant in uncertainty related emotional responses, such as stress, worry or anxiety. It could also be of interest to do longitudinal studies on intolerance of uncertainty and how it develops, since emotion regulation skills, among other aspects of individuality is something that begins being shaped in infancy to early childhood (Weiner, Lerner, Eastbrooks, & Weiner, 2012).

In conclusion, there is seemingly no advantage or disadvantage of psychopathic traits when dealing with uncertainty in a situation. On the other hand, catastrophizing thoughts and lower emotion regulation skills are relevant factors. These people tend to experience more stress when met with an uncertain situation, in which there is a tangible negative outcome, as well as seeing themselves as having issues with uncertain situations and how to handle them. This suggest that catastrophizing thoughts regarding pain and a general difficulty in regulating one’s emotions play a role in the negative reactions to uncertainties that are faced in life.
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Stockholm: Vetenskapsrådet.


Bakgrundsfrågor

Ålder: ________

Kön:

Kvinna □  Man □  Annat □

Är du Student vid Örebro Universitet?

Ja □  Nej □

Kurs/Program: ________________________________

Har du tidigare varit i kontakt med ett kallvattentest?

Ja □  Nej □

Markera rutan om du kan identifiera dig med något av följande:

□ Akut eller kronisk smärta

□ Högt blodtryck eller hjärt- och kärlsjukdom

□ Raynaud’s fenomen (minskad blodtillförsel till vissa delar av kroppen vid kall temperatur eller emotionell stress)

□ Fraktur eller öppna sår på din icke-dominanta hand

□ Du har haft tidigare psykiska problem

□ Du tar medicin för ångest eller depression
INFORMERAT SAMTYCKE

*En studie om beslutsfattande*

Deltagare.
Jag är informerad om studien och dess innehåll. Jag har haft möjligheten att ställa frågor och jag har övervägt mitt deltagande i studien. Jag har blivit informerad om mina rättigheter att närsomhelst avbryta studien utan vidare konsekvens.

Jag ger härmed mitt samtycke till att delta i studien.

Namn:

Signatur: Datum:

________________________________________________________

Signeras av experimentledare. Jag intygar att deltagare har fått både skriven och muntlig information om studien och experiment.

Namn:

Verksamhet:

Signatur Datum

________________________________________________________

<table>
<thead>
<tr>
<th>Påstående</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oförutsedda händelser stör meg mycket.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Jag blir frustrerad när jag inte har all information jag behöver</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Osäkerhet hindrar mig från att leva ett fulvärdigt liv.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Man bör alltid blicka framåt för att undvika överraskningar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. En liten oförutsedd händelse kan förstöra allt, även efter god planering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. När jag är osäker kan jag inte fungera så bra.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Jag vill alltid veta vad som väntar mig i framtiden.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Minsta tvivel kan stoppa mig från att agera.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Vi är intresserade av de tankar och känslor du har när du upplever smärta, ont eller besvär. Använd skalan nedan för att skatta i vilken utsträckning dessa tankar och känslor gäller för dig.

1  2         3             4       5
Inte alls    I liten utsträckning  I måttlig utsträckning  I stor utsträckning   Hela tiden

När jag har ont...

_____ 1. Oroar jag mig jämt för att smärtan inte skall gå över.
_____ 2. Känner jag att jag inte orkar fortsätta.
_____ 3. Är det förfärligt och jag tror att det aldrig kommer att bli bättre
_____ 4. Är det fruktansvärt och jag känner att det överväldisar mig.
_____ 5. Känner jag att jag inte står ut med det längre.
_____ 7. Tänker jag på andra smärtsamma erfarenheter.
_____ 8. Väntar jag otåligt på att smärtan ska försvinna.
_____ 10. Tänker jag hela tiden på hur ont det gör.
_____ 11. Tänker jag hela tiden på hur mycket jag vill att smärtan ska gå över.
_____ 12. Finns det ingenting som jag kan göra för att lindra smärtan.
_____ 13. Undrar jag om något allvarligt har hänt mig.
DERS-16

Följande påståenden beskriver hur människor kan uppleva sina känslor. Använd skalan för att beskriva hur ofta dessa påståenden passar in på dig.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nästan aldrig</td>
<td>Ibland</td>
<td>Ca hälften av tiden</td>
<td>Oftast</td>
<td>Nästan alltid</td>
</tr>
</tbody>
</table>

1. Jag har svårt att förstå mig på mina känslor.
2. Jag är förvirrad över hur jag känner mig.
3. När jag är upprörd, har jag svårt att få något arbete gjort.
4. När jag är upprörd, tappar jag känslan av kontroll.
5. När jag är upprörd, tror jag inte att det kommer gå över.
6. När jag är upprörd, tror jag att det slutar med att jag blir deprimerad.
7. När jag är upprörd, har jag svårt att fokusera på andra saker.
8. När jag är upprörd, känner jag mig utom kontroll.
9. När jag är upprörd, skäms jag över mig själv för att jag känner så.
10. När jag är upprörd, känns det som att jag är svag.
11. När jag är upprörd, har jag svårt att kontrollera mitt beteende.
12. När jag är upprörd, tror jag inte att det finns något jag kan göra för att jag ska må bättre.
13. När jag är upprörd, blir jag irriterad på mig själv för att jag känner så.
14. När jag är upprörd, börjar jag känna mig väldigt illa till mods.
15. När jag är upprörd, har jag svårt att tänka på något annat.
YPI-S

Denna del innehåller ett antal påståenden som handlar om vad Du tycker och tänker om olika saker. Läs igenom varje påstående och ta ställning till hur bra Du tycker att det stämmer in på Dig. Du kan välja mellan fyra svar på varje påstående.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stämmer inte alls</td>
<td>Stämmer ganska dåligt</td>
<td>Stämmer ganska bra</td>
<td>Stämmer precis</td>
</tr>
</tbody>
</table>

_____ 1. Jag har nog skolkat mer än de flesta från skola eller jobb.
_____ 2. Jag ser mig själv som en ganska impulsiv person.
_____ 3. Att gråta, även när ingen ser på, tycker jag är ett tecken på svaghet.
_____ 4. Jag har förmågan att lura andra genom att använda min charm och mitt leende.
_____ 5. Jag är bra på att få människor att tro mig när jag hittar på någonting.
_____ 7. Det händer ofta att jag talar först och tänker sedan.
_____ 8. Jag har talanger som ligger långt över vad andra människor har.
_____ 10. Att vara nervös och orolig är ett tecken på svaghet.
_____ 15. Jag förstår inte hur människor kan bli så rörda att de gråter av att se sorliga saker på TV eller film.
_____ 17. Att känna skuld och ånger över saker man gjort som sårat andra människor är ett tecken på svaghet.
18. Jag låter inte mina känslor påverka mig lika mycket som andra människor verkar påverkas av sina.