

Social Anxiety and Avoidance in Chronic Pain: Can Pain Avoidance Behaviours Lead to Social Anxiety?

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Introduction

- The association between anxiety and chronic pain (CP) has been well documented (Asmundson, & Katz, 2009).
- Most research to date has focused on the relationship between CP and pain-related anxiety (Asmundson, Vlaeyen, & Crombez, 2004); however, researchers have also explored the relationship between CP and non-pain related anxiety.
- Social anxiety, while not specific to pain, appears to be related to CP (Asmundson, Norton, & Jacobson, 1996a; Asmundson, Jacobson, Allardings & Norton, 1996b).
- Current fear-avoidance models of chronic pain propose that CP leads to social withdrawal/avoidance due to the inability to participate fully in social and/or daily activities (Asmundson, Norton, & Norton, 1999; Vlaeyen & Linton, 2000).
- Individuals with CP may also withdraw socially due to stigma surrounding their pain experience leading to fear of negative evaluation and avoidance behaviours.
- There is mounting evidence to suggest a relationship between CP and social anxiety; nevertheless, the details and causality of the relationship remains unexplored.
- The purpose of the present study was to further investigate the relationship between CP, social anxiety, and other related factors.

Method

Participants

- Participants included a community sample ($n=404$) recruited as part of an ongoing investigation into pain. Participants were categorized as follows:
 - Chronic Pain (CP; $n=141$; 75% women)
 - Clinically significant Social Anxiety without CP (SA; $n=68$; 74% women)
 - Neither CP nor SA controls (CTRL; $n=195$; 66% women)
- The CP group was older ($M=33.4$, $SD=11.5$) than both the SA group ($M=26.6$, $SD=9.7$) and the CTRL ($M=28.2$, $SD=10.3$), $F(2, 401) = 13.3$, $p<.05$, $\eta^2=0.06$.
- Only 75% of participants completed all measures, but there were no significant differences between completers and non-completers on any demographic or self-report measures.

Measures

- Centre for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977)
- Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988)
- Social Avoidance and Distress Scale (SADS; Watson & Friend, 1969)
- Social Interaction Phobia Scale (SIPS; Carleton et al., 2009)

Analyses

- A one-way analysis of variance (ANOVA) was conducted to assess differences between the three groups on the CES-D, PANAS, and the SADS. Tukey-Kramer post-hoc analyses were performed to determine specific between-group differences.

Results

- There were no statistically significant differences between men and women on any of the dependent variables (all $p>.05$).
- Pearson correlations were performed to assess relationships between age and all dependent variables due to significant age differences between groups.
 - All of the correlations were less than $r=.20$ and thus were not considered sufficient to warrant controlling for.
- ANOVA comparisons of the three groups on the CES-D revealed significant differences between two of the groups, $F(2, 401) = 37.43$, $p<.05$, $\eta^2=0.16$. The SA group ($M=28.1$, $SD=11.6$) and the CP group ($M=24.2$, $SD=13.1$) reported greater depression than the CTRL group ($M=15.4$, $SD=11.4$).
- ANOVA comparisons of the groups on negative affect revealed significant differences between all three groups, $F(2, 297) = 24.3$, $p<.05$, $\eta^2=0.14$. The SA group ($M=29$, $SD=8.8$) reported the most negative affect, followed by the CP group ($M=25.4$, $SD=9.0$), and then the CTRL group ($M=20.3$, $SD=7.6$).
- ANOVA comparison of the groups on social avoidance revealed significant differences between all three groups, $F(2, 401) = 47.1$, $p<.05$, $\eta^2=0.19$. The SA group ($M=35$, $SD=9.1$) reported the most social avoidance, followed by the CP group ($M=26.3$, $SD=13.6$), and then the CTRL group ($M=19.6$, $SD=10.6$).
- ANOVA comparisons of the groups on social distress revealed significant differences between all three groups, $F(2, 401) = 61.1$, $p<.05$, $\eta^2=0.23$. The SA group ($M=38.2$, $SD=9.1$) reported the most distress followed by the CP group ($M=27.6$, $SD=14.1$), and then the CTRL group ($M=20$, $SD=11.1$).

Discussion

- The results of the current study support precedent findings (Asmundson et al., 1996a,b) suggesting an important relationship between chronic pain and social anxiety.
 - Participants with chronic pain who did not meet criteria for a diagnosis of SAD still reported significantly more social distress and avoidance than participants who had neither chronic pain or symptoms consistent with SAD.
- The current results also suggest that while persons with CP and SA may experience the same levels of depression, the symptoms may manifest in different ways or result from different causal factors. For example, persons with SA may experience depression primarily as a result of social isolation. In contrast, persons with CP may experience depression because of varying contributions made by the ongoing pain experience and social isolation. In each case, the most effective focus for treatment would be different.
- Pain-related behaviours may increase with heightened fear of negative evaluation, which would lead to increased social distress, avoidance, and depression.
- The current results are limited because the data were not obtained from a diagnosed clinical sample; moreover, the temporal order of symptom onset was impossible to assess.
- Future research should aim to compare persons with CP who do and do not have a history of SA on measures of current social distress and avoidance; similarly, longitudinal assessments are necessary to explore the casual interdependencies of SAD and CP.

Table 1: Tukey-Kramer post hoc comparisons on statistically significant variables

Dependent Variable	(I) Group	(J) Group	Mean Diff (I-J)	Std. Error
CES-D Total	CP	CTRL	8.80*	1.33
		SA	-3.87	1.78
Negative Affect	CP	CTRL	5.14*	1.07
		SA	-3.51*	1.42
Social Distress	CP	CTRL	7.56*	1.32
		SA	-10.65*	1.76
Social Avoidance	CP	CTRL	6.66*	1.27
		SA	-8.67*	1.70

*= $p<.05$

Figure 1. Group comparisons on CES-D

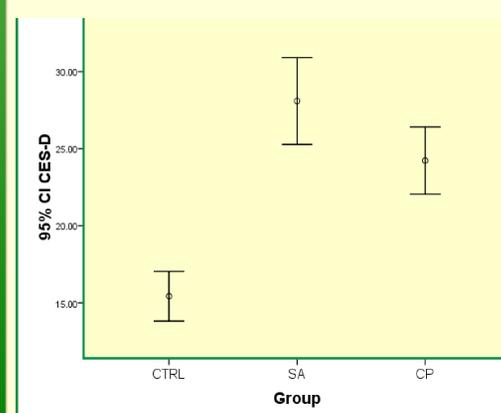


Figure 2. Group comparisons on Negative Affect subscale of PANAS

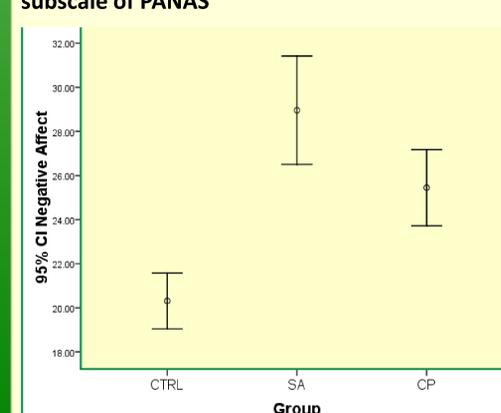


Figure 3. Group comparisons on Social Avoidance subscale of the SADS

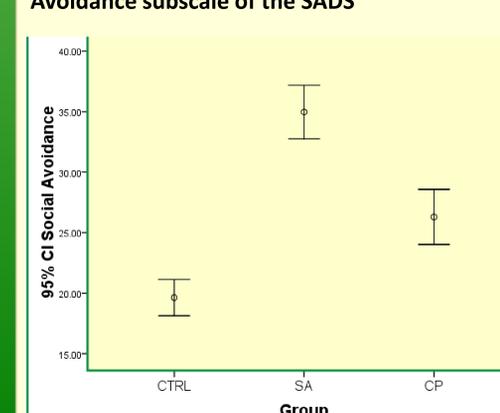


Figure 4. Group comparisons on Social Distress subscale of the SADS

