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The role of coping with symptoms in depression and disability: Comparison between Inflammatory Bowel Disease and Abdominal Pain

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Abstract

Background—Inflammatory Bowel Disease (IBD) and abdominal pain of functional origin (AP) are common gastrointestinal disorders in children that are associated with increased risk for depression and disability. Both symptom severity and coping with symptoms may contribute to these outcomes. We hypothesized that children with AP use different coping strategies compared to those with IBD for a number of reasons, including the fact that fewer treatment options are available to them. We also examined if coping was related to depression and functional disability beyond the contributions of symptom severity.

Methods—Secondary data analysis of two existing datasets including 200 children with AP (73% girls; mean age 11.2) and 189 children with IBD (49% girls; mean age 13.8).

Results—Compared to IBD patients, AP patients reported more use of coping strategies of self-isolation, behavioral disengagement, and catastrophizing as well as problem-solving and seeking social support. Multivariate analyses revealed that, in both samples, one or more coping strategies

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Conflicts of Interest:

The authors have no conflict of interest related to the current work.

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Author contributions:

Drs. van Tilburg, Claar, were responsible for conception of the work, data analysis, and interpretation of data, as well as drafting of the manuscript.

Drs. Romano, Langer, and Levy were involved in data collection, interpretation of the data and drafting of the manuscript.

Drs. Walker, Whitehead, Abdullah and Christie contributed to interpretation of the data and drafting of the manuscript.

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were associated with depression and functional disability, independent of symptom severity, and controlling for age and gender. In IBD, symptoms were not a significant predictor of depression, but coping was. Catastrophizing predicted depression and disability in both samples.

Conclusion—AP patients report more frequent use of several of the coping strategies we measured compared to IBD patients. Certain types of coping, particularly catastrophizing, were associated with greater depression and functional disability in both groups. Clinicians should be aware of maladaptive coping, which may be a risk factor for poor psychosocial and functional outcomes in both patient groups.

Keywords

Inflammatory Bowel Disease; Crohn's disease; Ulcerative Colitis; Functional Abdominal Pain; Irritable Bowel Syndrome; coping; catastrophizing; depression; disability

Introduction

Pediatric chronic gastrointestinal disorders are associated with significant medical and psychosocial sequelae. Two common gastrointestinal disorders encountered among children and adolescents in tertiary care are Inflammatory Bowel Disease (IBD) and abdominal pain of functional origin (AP). AP may include several disorders such as Irritable Bowel Syndrome, Functional Dyspepsia, Abdominal Migraine, and Functional Abdominal Pain¹. In this paper we will use the term abdominal pain of functional origin (AP) to include all of these disorders. AP is characterized by idiopathic pain without clear associated pathophysiology, unlike IBD, in which documented pathology is present. Despite differences in pathophysiology, both IBD and AP are chronic disorders characterized by waxing and waning of symptoms, and both carry an increased risk for negative psychosocial outcomes such as depression, disability and decreased quality of life²⁻⁴.

However, these negative outcomes are not universal. Only a subgroup of these children suffer from clinically significant depression, and many children are able to continue to attend school and other social activities^{5, 6}. Being able to differentiate children who are at risk for poor functional and psychosocial adjustment from those who are not is therefore of critical importance. While symptom severity is likely to be associated with outcomes, it does not appear to be the sole or most important factor. For example, in a sample of children with IBD, neither past nor current disease severity was associated with depression, anxiety, or social functioning⁵. Thus, factors other than disease severity likely play a role in psychosocial and functional outcomes of IBD and AP.

One such factor may be how the child copes with their gastrointestinal (GI) symptoms. Coping can be defined as purposeful efforts to manage stressful events or experiences⁷. The symptoms associated with a chronic GI disorder pose challenges that can affect quality of life and other psychosocial outcomes. Those challenges may increase with the severity of symptoms, requiring greater coping efforts to manage successfully. Consistent with this, in adults with Irritable Bowel Syndrome and IBD, coping efforts (with stressful events in general, not specific to GI symptoms) were higher in those with more severe symptoms⁸. However, the relative importance of symptom severity versus coping for outcomes in

children with IBD and AP is unclear. In a study among adults with IBD, pain was more important than coping with pain in predicting quality of life, while in patients with abdominal pain of functional origin, pain coping was more important than pain in predicting outcomes⁹. One study reported associations between social functioning and both disease severity and coping with general stressors (not disease specific) in adolescents with IBD¹⁰. Thus examining both coping and symptom severity in relation to outcomes is important in resolving this question.

Coping with GI symptoms may take many different forms such as support-seeking, problem-solving, escape and distraction¹¹. Some of these coping strategies may be helpful in dealing with GI symptoms while others are not. For example, catastrophizing - a tendency to magnify the seriousness of symptoms while feeling helpless to change symptoms - has been associated with worse outcomes in both children with AP and IBD¹²⁻¹⁴. It could be hypothesized that coping with symptoms may differ between patients with AP compared to IBD, because of the difference in pathophysiology and treatment. IBD patients know the cause of their symptoms and have multiple treatments available to reduce symptoms; using these treatment options may be considered a form of problem-solving coping. For AP patients, on the other hand, both the cause of the pain and effective treatments often remain elusive. Therefore, because the child with AP does not have a definitive explanation for the source of his/her pain and thus would logically perceive s/he has fewer options to reduce the symptoms directly, the child may be less likely to use problem-focused coping strategies and more likely to worry about symptoms becoming worse (catastrophizing). However, that possibility may be complicated by the fact that like AP, IBD can also be unpredictable, even when treatment guidelines are observed. Children with IBD may experience symptoms such as abdominal pain, diarrhea and bloating even during episodes of remission, and may similarly feel a loss of control over symptoms worsening unpredictably. Therefore, it remains to be determined if there are differences in the use of coping strategies in children with these distinct types of gastrointestinal disorders, which have different courses, treatments, and implications for health status. While there is some evidence that coping may be linked with psychosocial outcomes in children with AP, it is not clear if the same coping strategies predict depression and disability in pediatric IBD patients. Such investigations are important as they may help us understand adaptation and functioning in children dealing with chronic gastrointestinal symptoms irrespective of etiology. A better understanding of strategies used and their relationship to outcomes could be helpful in identifying children at risk for poor adjustment to chronic gastrointestinal problems and in identifying targets and strategies for clinical intervention.

Accordingly, the aim of the current study is to examine and compare the relation of GI symptom severity and child coping with GI symptoms to psychosocial outcomes in both IBD and AP patients. We hypothesize that: (1) Children with AP and IBD will differ in the type of coping strategies they frequently use to manage their symptoms; and (2) Similar maladaptive coping strategies will be associated with depression and disability in both IBD and AP after controlling for GI symptom severity.

Methods

Study Design

This is a secondary data analysis of two existing datasets. The data consist of cross-sectional baseline data collected for two multi-site trials of cognitive behavioral therapy for pediatric IBD and pediatric AP^{15, 16}. The trials for IBD and AP were similar in design and treatment content, and were conducted by the same research team. The studies were approved by the Institutional Review Boards of Seattle Children's Hospital, Mary Bridge Children's Hospital (Tacoma, WA) and Goryeb Children's Hospital (Morristown, NJ).

Participants

Participants were children aged 7-18 years old recruited from pediatric gastroenterology clinics with a diagnosis of IBD for at least 3 months, or a diagnosis of AP (3 episodes of abdominal pain severe enough to interfere with normal activities in the past 3 months). Exclusion criteria included the presence of another chronic disease explaining gastrointestinal symptoms, major surgery in the past year (unrelated to IBD), developmental disability impairing the ability to complete assessment or treatment, and non-English speaking ability. Lactose intolerance was also an exclusion criterion for AP children. The recruitment period was from 2005-2009 for the AP study and 2008-2012 for the IBD study. Further details on specific inclusion and exclusion criteria for each sample and methods of participant recruitment can be found in Levy et al¹⁵ and Langer et al¹⁶.

Child-reported measures

All children completed a battery of questionnaires by telephone with an interviewer who was blinded to the study aims and randomized treatment condition. Questionnaires were completed at baseline before the start of treatment. We focus here on the following assessments:

Coping—Coping was measured with the Pain Response Inventory (PRI)¹⁷ which assesses coping with stomachaches (AP) or stomach problems (IBD). The PRI consists of 11 coping subscales which can be divided in three higher order scales (active, passive and accommodative coping). Passive and active coping subscales, rather than accommodative coping, have been shown to be associated with disability and depression in AP patients¹⁸⁻²⁰. Therefore, only passive and active coping subscales were included in the current study. Passive coping scales included: Catastrophizing (5 items such as “Think to yourself that it will never stop”), Self-Isolation (5 items such as “Try to be alone”), and Behavioral Disengagement (5 items such as ‘Give up trying to feel better”). Active coping subscales include: Problem Solving (5 items such as “Try to think of a way that you could make it better”), Seeking Social Support (6 items such as “Talk to someone who will understand how you feel”), Rest (5 items such as “Try to rest”) and Massage/Guard (2 items such as “Rub your stomach to try to make it better”). All items were answered on a 0-4 scale ranging from “Never” to “Always”. All items for each subscale were summed and averaged to obtain a mean subscale score (0-4).

GI symptom severity—IBD symptoms were measured via the Inflammatory Bowel Disease Symptom Questionnaire (IBDS)²¹. The IBDS assesses 11 common symptoms of IBD including pain, diarrhea, eye disease, bleeding, fever, vomiting, pain/swelling of joints, skin disease, loss of bowel control, bloating/gas, and frequent trips to the bathroom, each rated on a 6 point scale from ‘no symptoms’ to ‘very severe’. All individual items were summed to obtain a total score (0-55). The IBDS has adequate internal consistency and is a good predictor of health status in adult IBD patients²¹, but has not been psychometrically evaluated in children. In our study we found satisfactory internal consistency (Cronbach alpha = 0.74) for this measure. We also found significant associations between the IBD symptom scale and the Pediatric Crohn's Disease Activity Index²² ($r=0.32$, $P<.001$) and Pediatric Ulcerative Colitis Activity Index²³ ($r=0.41$, $p<.001$) providing preliminary evidence of validity.

AP symptoms were measured with the gastrointestinal symptom severity subscale of the Children's Somatization Inventory. The Children's Somatization Inventory^{24, 25} is a reliable and valid measure of children's somatic symptoms. It contains 7 items assessing how much the child is bothered by gastrointestinal symptoms (nausea, constipation, diarrhea, abdominal pain, vomiting, bloating and food making you sick). Items are answered on a 0- to 4-point scale (“not at all” to “a whole lot”). All items were summed to obtain a total score (0-28).

Disability—Disability was assessed with the Functional Disability Inventory (FDI)^{26, 27}. The FDI is a well-validated questionnaire assessing children's self-reported difficulty in functioning in the past two weeks due to their physical health. The FDI consists of 15 items such as “In the last week would your child have any physical trouble or difficulty being at school all day” and responses range from *no trouble* (0) to *impossible* (4). Total scores were computed by summing the item scores (0-60). Higher values indicate greater disability.

Depression—Depressive symptoms were measured with the Children's Depression Inventory (CDI)^{28, 29} a well-validated questionnaire. The CDI consists of 27-item questionnaire rated on a 3-point scale (from 0 to 2); the one item about suicidal ideation was omitted. Total scores were computed by summing the items (0-52).

Data analysis

Independent t-tests and Chi Square tests were conducted to examine possible differences in age and gender between the IBD and AP samples. Given that age and gender differences were found (see Table 1), all subsequent analyses were conducted controlling for these variables. Differences in coping strategies between IBD and AP were examined using ANCOVA with age and gender as covariates. Other analyses were conducted separately for the AP and IBD samples. Linear regression analysis was used to examine if coping and GI severity (independent variables) were associated with higher levels of depression and disability (dependent variables) while controlling for age and gender (independent variables). Separate linear regressions were run for each dependent variable.

Results

Demographic characteristics

The sample consisted of 200 AP patients and 189 IBD patients. Demographic characteristics are depicted in Table 1. As mentioned previously, the AP and IBD samples differed significantly on child gender and child age. Compared to AP, the IBD sample was somewhat older and included a higher percentage of boys. Controlling for age and gender, AP patients reported higher levels of depression and disability compared to IBD patients (see Table 2).

Coping differences between IBD and AP

As hypothesized, children with AP and IBD differed in their use of coping strategies (see Table 2). Compared to IBD, AP patients scored higher on all forms of coping, both adaptive and maladaptive, except social support and massage/guard.

The relation between coping strategies and depression

Separate linear regression analyses were conducted for children with AP and IBD. In both models, GI symptom severity and child coping were entered as independent variables predicting depression, while controlling for age and gender. This model was significant in both the IBD ($F=16.5$, $p<0.001$, $R^2=0.48$) and AP samples ($F=13.4$, $p<0.001$, $R^2=0.43$). As can be seen in Table 3, in the IBD sample, child-reported catastrophizing, behavioral disengagement, and social isolation were positively associated with depression whereas seeking social support was negatively associated with depression. Symptom severity did not significantly relate to depression in the IBD group. In the AP sample, GI symptom severity and catastrophizing were significantly positively associated with depression while seeking social support was negatively associated with depression (see Table 4). Rest, problem solving and massage/guard were not associated with depression in either sample.

The relation between coping strategies and functional disability

As with depression, separate analyses were conducted for the AP and IBD samples. Symptom severity and child coping were entered in a linear regression predicting functional disability, while controlling for age and gender. The model was significant in both the IBD ($F=20.9$, $p<0.001$, $R^2=0.54$) and AP samples ($F=12.06$, $p<0.001$, $R^2=0.40$). Symptom severity and catastrophizing were positively associated with disability in the IBD sample (see Table 3), while in the AP sample symptom severity and rest were positively associated with disability while catastrophizing showed a trend towards significance (see Table 4).

Discussion

The aim of the current study was to examine coping with GI symptoms and its relationship to psychosocial outcomes in two gastrointestinal disorders: abdominal pain of functional origin (AP) and Inflammatory Bowel Disease (IBD). We hypothesized that: (1) Children with AP and IBD differ in the type of coping strategies they use to deal with their symptoms; and (2) Similar maladaptive coping will be associated with depression and disability in both IBD and AP after controlling for GI symptom severity. The first hypothesis was partially supported. Children in the AP sample reported significantly higher

use of catastrophizing, behavioral disengagement, and self-isolation as well as seeking social support and problem-solving to deal with their symptoms compared to those in the IBD sample. There was no significant difference in the use of rest or massage/guard, and there were no coping strategies that were used more frequently by the IBD group compared to the AP group. Thus, the AP children reported higher levels of adaptive and maladaptive coping but there was not a unique pattern of coping styles that differentiated the two groups.

Prior studies with adults have yielded conflicting findings on the use of coping in Irritable Bowel Syndrome patients (IBS - a disorder very closely related to AP in children) compared to those with IBD. In one study, higher levels of pain catastrophizing were reported in IBS patients compared to those with IBD⁹, but two other studies reported no differences in types of coping with general stressors or pain between patients with IBD and Irritable Bowel Syndrome^{8, 30}. Further research to investigate the nature of coping in patients with IBD versus those with IBS or AP is needed to resolve this question.

We found support for our second hypothesis. In the regression analyses predicting outcomes within each diagnostic group, maladaptive coping with GI symptoms was associated with both depression and disability after controlling for symptom severity in both groups. Coping predicted equal or more variance than disease symptom severity (33% vs 15% in the IBD group and 25% vs 25% in the AP group) for depressive symptoms. In fact, symptom severity was not significantly associated with symptoms of depression in the IBD sample. This finding emphasizes the importance of coping with symptoms in predicting psychosocial outcomes of gastrointestinal disorders. Although this finding could be due to the relatively low levels of depressive and GI symptoms reported in this IBD sample as a whole, when we restricted the analysis to IBD patients with scores suggestive of clinical depression (above 11; n=51), or those scoring in the top 25% in IBD symptom severity (n=48), the findings did not change, and symptom severity did not predict outcomes. Of course, this analysis of a subsample is not conclusive given the restricted range of the outcome variables and smaller sample size, but it supports the role that coping may play in depression and disability. Larger samples of IBD patients with a wider range of scores on severity of disability and depression are needed to confirm these preliminary findings.

Child catastrophizing consistently predicted depression as well as disability (with a trend for disability in the AP sample). In fact, catastrophizing was the only coping strategy related to disability in the IBD sample. Catastrophizing is marked by a tendency to magnify the negative or threatening aspects of the symptoms, and to appraise it as beyond one's ability to cope. Catastrophizing has been established as an important factor predicting psychosocial outcomes in AP^{14, 31} but is not well studied in pediatric IBD. Results of a recent study showed that both pain catastrophizing and abdominal pain severity predicted disability in pediatric IBD patients³². In an adult sample of IBD patients, Morrison and colleagues³³ observed that pain catastrophizing was an important predictor of disability. Similarly, pain catastrophizing has been reported to be associated with poor quality of life in adult IBD patients⁹. These findings, combined with the current observations, establish the importance of catastrophizing in IBD and warrant more research on this construct in children and adolescents with IBD.

Depressive symptoms were also associated with child self-isolation, less seeking of social support, and behavioral disengagement (the latter in the IBD sample only). A hallmark symptom of depression is behavioral withdrawal³⁴ marked by isolation and passivity. Therefore, it comes as no surprise that self-isolation and behavioral disengagement are associated with increased depression while actively seeking support is associated with decreased depression. These findings may indicate that children who struggle with a chronic gastrointestinal disorder, no matter the cause, isolate themselves from friends and activities, possibly due to the unpredictability and potentially embarrassing nature of their symptoms.

A strength of this study is the inclusion of a large sample of both IBD and AP patients; nonetheless, there are several limitations to the study that should be noted. First, the correlational design does not allow for a cause and effect examination. We do not know if coping with symptoms influences depression and disability or vice versa, or if the relationship is bidirectional, which may be likely. Longitudinal studies are needed to examine these effects in a prospective design. However, there is evidence that interventions to reduce catastrophizing are associated with pain reductions in AP^{15, 35}, suggesting that changes in some types of coping may affect AP outcomes. A second limitation is that the data were collected from the IBD and AP cohorts at different time periods (recruitment periods overlapped by one year) and in different studies. However, the data were collected by the same group of researchers recruiting from some of the same medical centers, in the context of similar treatment studies employing similar assessment methods. This increases the confidence that the two datasets can be compared, keeping in mind the caveats noted above. A third limitation is related to the fact that coping may change with duration of the disease. One study found that children with IBD did not differ from their healthy peers in coping with general stressful situations and psychosocial functioning a year after diagnosis⁵. This may suggest changes in these variables happen over time. However, it may also have been the case that this was a different sample of patients in comparison to other studies. Information on disease duration was not available in the AP dataset. Future studies are needed to investigate the role of disease duration in coping and psychosocial outcomes.

Another possible limitation is that the coping questionnaire was originally developed for coping with pain and we adjusted it the measure coping with more general GI symptoms in the IBD sample. Although abdominal pain is one of the most common symptoms in IBD (in our sample 78% of children reported at least some abdominal pain), we changed the measure to ask about 'stomach problems' rather than only pain. It may be possible that coping with stomach problems differs from coping with other symptoms of IBD (e.g., eye problems, fever etc.), which were not included in the coping measure. However, the use of a symptom-specific measure may be more informative compared to the use of a general coping measure. Most previous studies on coping in IBD have used general coping questionnaires, measuring the use of coping with any stressor in the child's life, or focused exclusively on coping with pain^{36, 37}. Lastly, although we found that symptom severity and child coping predicted a substantial 40-54% of the variance in depression and disability, indicating their importance in predicting these outcomes, the level of depression and disability in both samples was, on average, within normal limits, and results may not generalize to a more depressed or disabled sample. In addition, the level of GI symptom severity was generally low, particularly in the IBD sample, which may have reduced the

contribution of symptom severity to depression and disability. Further research is needed to identify other contributing factors associated with important psychosocial outcomes in these populations, including those with more active symptomatology.

In conclusion, how a child copes with his/her symptoms is an important independent contributor to depression and disability above and beyond GI symptom severity in children with IBD and AP. Child catastrophizing in particular was linked to negative outcomes. Therefore, it is important for clinicians to ask about children's coping and screen for distress, social withdrawal, excessive worry about symptoms or other indications of poor coping as these may indicate an increased risk for depression and disability, suggesting consideration of referral for psychological interventions.

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What is known about this subject?

- Maladaptive coping in children with abdominal pain of functional origin predicts psychosocial outcomes.
- Symptom severity in children Inflammatory Bowel Disease does not predict these outcomes, but less is known about coping in this population.
- No studies to date have directly compared these two populations.

What are the new findings and what is the impact on clinical practice?

- Patients with abdominal pain of functional origin used more coping overall compared to Inflammatory Bowel Disease patients.
- Coping explained psychosocial outcomes independent of symptom severity. Catastrophizing, behavioral disengagement, and social isolation were associated with worse outcomes and social support with better outcomes.
- Clinicians should be aware of maladaptive coping as it may worsen outcomes and help identify children who could benefit from psychosocial interventions to teach adaptive coping skills.

Table 1

Sample Demographics

	AP N=200 % or Mean (SD)	IBD N=189 % or Mean (SD)	P
Gender	72.5% girls	48.7% girls	< 0.001
Age	Mean=11.20 (SD=2.6)	Mean=13.76 (SD=2.7)	< 0.001
Race	95.6% Caucasian 4.7% Hispanic	88.4% Caucasian 4.3% Hispanic	0.30 0.53
Disorder/disease	24.5% Functional Dyspepsia * 30.5% Irritable Bowel Syndrome 18.5% Functional Abdominal Pain 3.5% Functional Abdominal Pain Syndrome 20% Abdominal Migraine	67.9% Crohn's Disease 32.1% Ulcerative Collitis	

* As determined by Rome III criteria (Parents completed the Questionnaire on Pediatric Gastrointestinal Symptoms-Rome III¹). Children can qualify for more than one Rome III criteria and 14.5% did not qualify for any Rome III disorder based on parental report of symptoms.

Table 2

Differences between AP and IBD samples in child coping, depression and functional disability (all tests adjusted for age and gender)

Scale	AP Mean(SD)	IBD Mean(SD)	p
Coping (0-4 score)			
<i>Self-isolation</i>	1.00(0.8)	0.92(0.9)	0.003
<i>Behavioral Disengagement</i>	0.84(0.7)	0.60(0.7)	<0.001
<i>Catastrophizing</i>	1.56(0.9)	0.98(0.8)	<0.001
<i>Problem Solving</i>	2.49(0.8)	2.15(0.8)	0.007
<i>Rest</i>	2.09(0.8)	2.02(0.8)	0.32
<i>Seeking Social Support</i>	2.24(0.8)	1.77(1.0)	0.01
<i>Guard</i>	1.61(1.4)	1.61(1.3)	0.82
Depression (0-36)	9.78(6.5)	8.22(7.3)	0.02
Disability (0-43)	11.32(9.0)	6.48(7.1)	<.001

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Table 3
Regression analyses predicting depression and functional disability in IBD sample

Independent variable	Dependent Variable									
	Depression					Functional Disability				
	B	SE	β	p	R ²	B	SE	β	p	R ²
Control variables					0.06					0.11
Constant	5.6	2.86				-3.14	2.62			
Age	-2.60	0.17	-0.09	0.14		0.02	0.16	0.01	0.90	
Gender	1.77	0.82	0.12	0.03		1.84	0.75	0.13	0.01	
Symptoms					0.15					0.42
IBD symptom severity	0.12	0.10	0.08	0.23		0.62	0.09	0.42	<0.001	
Coping					0.48					0.54
Catastrophizing	2.58	0.71	0.28	<0.001		2.14	0.65	0.24	0.001	
Behavior Disengage	2.00	0.82	0.20	0.02		1.07	0.75	0.11	0.15	
Social Isolation	2.20	0.58	0.28	<0.001		0.44	0.53	0.06	0.41	
Rest	-0.05	0.64	-0.01	0.93		0.81	0.58	0.08	0.17	
Problem Solving	0.21	0.57	0.02	0.72		0.10	0.53	0.01	0.85	
Social Support	-1.25	0.50	-0.18	0.01		-0.53	0.46	-0.08	0.25	
Massage/Guard	0.55	0.32	-0.10	0.09		-0.29	0.29	-0.05	0.32	

Table 4
Regression analyses predicting depression and functional disability in AP sample

Independent variable	Depression						Functional Disability					
	B	SE	β	p	R ²	R ²	B	SE	β	p	R ²	
Control variables												
Constant	4.93	2.57			0.01	0.01	1.70	3.65			0.04	
Age	-0.21	0.16	-0.08	0.19			-0.12	0.23	-0.03	0.59		
Gender	1.27	0.87	0.09	0.16			-1.68	1.24	-0.08	0.18		
Symptoms												
AP symptom severity	0.47	0.09	0.35	<0.001	0.25	0.25	0.71	0.13	0.38	<0.001	0.31	
Coping												
Catastrophizing	2.61	0.57	0.35	<0.001	0.50	0.50	1.36	0.82	0.13	0.09	0.40	
Behavior Disengage	0.09	0.61	0.01	0.88			0.75	0.87	0.06	0.39		
Social Isolation	1.66	0.50	0.22	0.001			1.18	0.72	0.11	0.10		
Rest	-0.59	0.57	-0.07	0.30			2.25	0.81	0.20	0.006		
Problem Solving	-0.94	0.61	-0.12	0.12			-1.00	0.86	-0.91	0.25		
Social Support	-0.32	0.55	-0.04	0.55			0.99	0.78	0.09	0.21		
Massage/Guard	-0.33	0.28	-0.07	0.25			-0.25	0.40	-0.04	0.53		