

## Effect of coping strategies on severity of symptoms in irritable bowel syndrome patients

By

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### Abstract

**Background:** It still not known exactly what triggers IBS, but it appears that stressors like life events and chronic stressors, as well as the individual's genetic background, can influence intestinal disease activity via complex psycho-immunologic mechanisms that act on both the systemic and mucosal levels of the digestive tract. **Objective(s):** The aim of this study is to find out the effect of coping strategies on severity of symptoms in IBS patients. **Methodology:** A quantitative descriptive, cross-sectional study used assessment approach with questionnaire items is conducted for the period from 7 November 2021 to 30 May 2022. A convenient sample of (N=150) patients is selected throughout the use of non-probability sampling approach. The study sample is distributed throughout (3) Hospitals in Baghdad City. A self-report questionnaire is developed from the literature, for assessing the effect of coping strategies on severity of Symptoms in Patients with Irritable Bowel Syndrome. The scales were used after the permission of their authors. Furthermore, it is translated to Arabic via a valid translator using the forward-backward translation technique. **Results:** The data analysis found that about three quarters (72.7%) of samples had High level, while other quarter of sample (6.7%,20.7 %) of sample were within Low and Moderate respectively. **Conclusion:** Patients' coping strategies with irritable bowel syndrome was high. Patients show high level in using: (active coping, planning dimension, positive reframing, acceptance, religion, self-distraction, denial, substance use and behavioral disengagement) as coping techniques. **Recommendations:** Using the Media and social media Platforms to shed light upon the IBS positive coping mechanisms. Establish programs that provide social and psychological support for patients with IBS.

**Keywords:** Coping Strategies, Irritable Bowel Syndrome (IBS), Patients.

### Introduction

Irritable Bowel Syndrome, often known as IBS, is the most common diagnosis made for digestive issues by primary care providers. It is also possibly one of the diseases that is the most difficult to treat and control. According to the ROMA criteria, there is a discomfort or pain in the abdominal region that is relieved by defecation, a change in the frequency of bowel movements, or a change in the type of feces over a period of 12 weeks (Riquelme-Heras, 2019). Irritable bowel syndrome (IBS) is a functional disease characterized by the occurrence of stomach pain or discomfort for at least 12 weeks in the previous 12 months. IBS is a chronic gastrointestinal disorder that can be disabling, and it is a gastrointestinal disorder that can be disabling (Stanculete et al., 2015). For example, the discomfort or pain is reduced by defecation, the onset is connected with an altered bowel movement, or the onset is related with an alteration in stool shape. At least two of these factors identify it (Longstreth et al., 2006). An IBS biopsychosocial model has been established, which includes both physiological and

psychological components (Stanculete et al., 2015).

It still not known exactly what triggers IBS, but it appears that stressors like life events and chronic stressors, as well as the individual's genetic background, can influence intestinal disease activity via complex psycho-immunologic mechanisms that act on both the systemic and mucosal levels of the digestive tract. Endocrine and exocrine functions of the digestive tract are coordinated by the enteric nervous system (ENS), which is also known as the vagus nerve (Bengtsson et al., 2013; Erliyani, 2022).

The brain-gut biopsychosocial interaction, which is essential for the development of irritable bowel syndrome (IBS), is influenced by a number of different variables. The interplay of the many life stresses, coping methods, and social supports that have an effect on gastrointestinal functioning, the perception of IBS symptoms, and the manifestation of the condition are an essential component of this picture (Roohafza et al., 2016; Friend et al., 2020).

Up to 94 percent of people who have irritable bowel syndrome also suffer from psychiatric illnesses, most frequently despair and anxiety. It is possible that psychosocial variables have a crucial role not only in the development of the condition, but also in the outcomes and prognoses associated with it (Ben-Ezra et al., 2015; Hammar & Renjaan, 2021).

The progression of the disease is long-lasting, and it appears that stress plays a role in that (Qin et al., 2014). Research that focuses on chronic diseases reveals that coping strategies may play a significant effect in the degree to which one's health impacts their quality of life. Previous research has revealed that a more optimistic approach to problem-solving is connected with improved psychological adjustment as well as improved physical functioning (Beisland et al., 2015; S.W.M. et al., 2013). According to Rosen (2014) and Verhoof et al. (2014), an avoidant coping style appears to be linked to maladjustment, which has a detrimental effect on an individual's psychological health (Stanculete et al., 2015).

## **Methodology**

### ***Study Design***

A quantitative descriptive, cross-sectional study used assessment approach with questionnaire items is conducted for the period from 7 November 2021 to 30 May 2022.

### ***Administrative Arrangements***

The official permissions were obtained from relevant authorities before collecting the study data as follow: Approval from the Research Ethical Committee at the College of Nursing, University of Baghdad. Official permissions are obtained from the Ministry of Planning Central Statistical System. Official permissions were also obtained from Al-Rusafah Health Directorate. Official permissions were also obtained from Al-Karkh Health Directorate. Official permissions were also obtained from The Medical City Health Directorate.

### ***Ethical Considerations***

Patients were informed that their participation was voluntary in the study. The purpose and the benefits of the study was explained by the researcher. After they agreed to participate in the study, anonymous questionnaire was published for the participants to contribute in the present study.

### ***Study Setting***

The study is carried out in three settings which are AL-Rusafah Health Directorate (Al-kindy Hospital), AL-Karkh Health Directorate (Al-Karamah Hospital) and The Medical City

Health Directorate (Gastrointestinal diseases Hospital).

### ***Study Sample***

A convenient sample of (N=150) patients is selected throughout the use of non-probability sampling approach. The study sample is distributed throughout (3) Hospitals in Baghdad City.

### ***Study Instruments***

A self-report questionnaire is developed from the literature, for assessing the effect of coping strategies on severity of Symptoms in Patients with Irritable Bowel Syndrome. The scales were used after the permission of their authors. Furthermore, it is translated to Arabic via a valid translator using the forward-backward translation technique.

### ***Data Collection Methods***

After completing the required approvals, data was collected by the use of a self-report questionnaire (Hard copy). The researcher introduced himself to the participants and explained the purpose of the study in order to get oral agreement. The questionnaire fills out an answer by the participants (Patients). The researcher gathered the questionnaire after participants self-administration on individual bases in a quiet place from the consultancy departments to provide suitable environment to draw the best and most accurate answer possible. Approximately each self-report took (15 to 20) minutes. Data collection was performed for the period of 17 March 2022 to 25 April 2022.

### ***Data analysis***

The data were analyzed by using The Statistical Package For Social Sciences (SPSS) Version 26, as well as Microsoft Excel Sheets.

## **Results of the study**

Table (1) illustrates descriptive analysis of the coping strategies questionnaire by brief cope scale for studied sample with irritable bowel syndrome. It can be interpreted that following items showed "High" as assessment based on their mean score which are (I've been concentrating my efforts on doing something about the situation I'm in, I've been taking action to try to make the situation better, I've been trying to come up with a strategy about what to do, I've been thinking hard about what steps to take, I've been trying to see it in different light, to make it seem more positive, I've been looking for something Moderate in what is happening, I've been accepting the reality of the fact that it has happened, I've been learning to live with it., I've been trying to find comfort in my religion or spiritual beliefs, I've been praying or meditating, I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, or shopping, I've been saying to myself "this isn't real, I've been giving up trying to deal with it, I've been giving up the attempt to cope. I've been using alcohol or other drugs to help me get through it. I've been expressing my negative feelings and I've been using alcohol or other drugs to make myself feel better). Moderate level for following items which are (I've been making jokes about it, I've been making fun of the situation, I've been getting emotional support from others, I've been getting comfort and understanding from someone, I've been trying to get advice from other people, I've been getting help and advice from other people, I've been turning to work or other activities to take my mind off things, I've been refusing to believe that it has happened and I've been saying things to let my unpleasant feelings escape). Also, Low level for following items (I've been criticizing myself and I've been blaming myself for things that happened). Overall assessment of coping strategies for the current sample of the study was High

**Table (1)** Descriptive analysis of the coping strategies questionnaire for studied sample with irritable bowel syndrome (brief cope scale)

Items of brief cope scale	M	SD*	Ass.
1. I've been concentrating my efforts on doing something about the situation I'm in.	2.80	0.51	High
2. I've been taking action to try to make the situation better.	2.80	0.46	High
3. I've been trying to come up with a strategy about what to do.	2.91	0.31	High
4. I've been thinking hard about what steps to take.	2.79	0.51	High
5. I've been trying to see it in different light, to make it seem more positive.	2.84	0.46	High
6. I've been looking for something Moderate in what is happening.	2.87	0.37	High
7. I've been accepting the reality of the fact that it has happened.	2.90	0.38	High
8. I've been learning to live with it.	2.71	0.54	High
9. I've been making jokes about it.	2.37	0.66	Moderate
10. I've been making fun of the situation.	2.09	0.85	Moderate
11. I've been trying to find comfort in my religion or spiritual beliefs.	2.65	0.59	High
12. I've been praying or meditating.	2.63	0.60	High
13. I've been getting emotional support from others.	2.39	0.59	Moderate
14. I've been getting comfort and understanding from someone.	2.28	0.56	Moderate
15. I've been trying to get advice from other people.	2.48	0.62	Moderate
16. I've been getting help and advice from other people.	2.33	0.84	Moderate
17. I've been turning to work or other activities to take my mind off things.	2.44	0.81	Moderate
18. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, or shopping.	2.75	0.53	High
19. I've been saying to myself "this isn't real."	2.67	0.62	High
20. I've been refusing to believe that it has happened.	2.40	0.78	Moderate
21. I've been saying things to let my unpleasant feelings escape.	2.12	0.65	Moderate
22. I've been expressing my negative feelings.	2.59	0.65	High
23. I've been using alcohol or other drugs to make myself feel better.	2.90	0.38	High
24. I've been using alcohol or other drugs to help me get through it.	2.91	0.33	High
25. I've been giving up trying to deal with it.	2.75	0.55	High
26. I've been giving up the attempt to cope.	2.66	0.63	High
27. I've been criticizing myself.	1.85	0.56	Low
28. I've been blaming myself for things that happened.	1.67	0.60	Low
Overall assessment of questionnaire	2.55	0.32	High

M. = mean, SD.= standard deviation Ass. = assessment level, 1-1.5=Very Low, 1.51-2= Low, 2.01-2.5=Moderate, 2.51-3=High

**Table (2)** Descriptive analysis of the coping strategies levels for studied samples with irritable bowel syndrome

Levels of coping	F	%*
Low	10	6.7
Moderate	31	20.7
High	109	72.7
Total	150	100.0

F-frequency, %= percentage

Table (2) illustrates descriptive analysis of the coping strategies levels for studied samples with irritable bowel syndrome by frequency and percentages. It can be found that about three quarters (72.7%) of samples had High level, while other quarter of sample (6.7%, 20.7 %) of sample were within Low and Moderate respectively.

## Discussion

The overall assessment of coping strategies for the current sample of the study was very good as in table (1). The data analysis of the study data illustrates that it can be interpreted that following items showed "High" as assessment based on their mean score which are (I've been concentrating my efforts on doing something about the situation I'm in, I've been taking action to try to make the situation better, I've been trying to come up with a strategy about what to do, I've been thinking hard about what steps to take, I've been trying to see it in different light,

to make it seem more positive, I've been looking for something good in what is happening, I've been accepting the reality of the fact that it has happened, I've been learning to live with it., I've been trying to find comfort in my religion or spiritual beliefs, I've been praying or meditating, I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, or shopping, I've been saying to myself "this isn't real, I've been giving up trying to deal with it, I've been giving up the attempt to cope. I've been using alcohol or other drugs to help me get through it. I've been expressing my negative feelings and I've been using alcohol or other drugs to make myself feel better). Good level for following items which are (I've been making jokes about it, I've been making fun of the situation, I've been getting emotional support from others, I've been getting comfort and understanding from someone, I've been trying to get advice from other people, I've been getting help and advice from other people, I've been turning to work or other activities to take my mind off things, I've been refusing to believe that it has happened and I've been saying things to let my unpleasant feelings escape). Also, fair level for following items (I've been criticizing myself and I've been blaming myself for things that happened).

With regard to the coping strategies levels for studied samples with irritable bowel syndrome. It can be found that about three quarters of the samples had very good level, while other quarter of sample were within fair and good respectively as illustrated in table (2).

There were many studies in the previous literature that support our findings the most important evidence is that of Jones and his colleagues (2006) In terms of the coping techniques that were described, there were also notable disparities across the groups. In particular, patients with IBS were significantly less likely to endorse items indicating positive reappraisal, and they also tended to be less likely to endorse items reflecting planful problem solving. This is in comparison to healthy participants, who were significantly more likely to endorse such items. Patients diagnosed with inflammatory bowel disease had scores that were significantly higher on measures of psychiatric distress, alexithymia, and somatosensory amplification, while they had scores that were significantly lower on measures of perceived interpersonal support, in comparison to healthy participants. These modifications were of a size that was equivalent to that which was observed in people with IBS (Jones et al., 2006).

In the same context, according to the findings of Stanculete et al. (2015), people with IBS employ more problem-focused tactics to deal with the symptoms of their condition. According to the findings of one study, those who suffer with IBS might seek further medical guidance and therapy. Patients who respond with hypervigilance to their symptoms typically respond in a similarly alert manner when it comes to the problem-solving aspects of their condition (Stanculete et al., 2015).

In accordance with a recent study by Selim et. al. (2022) who reached a hallmark declaring that individuals who suffered from irritable bowel syndrome had a considerably increased risk of experiencing psychological alarms such as anxiety, sadness, the degree of pain, an impairment in their everyday life, and a reduced ability to cope. It was previously believed that psychological distress plays a significant role in IBS; however, at this time, it is still unclear which of the two conditions (psychological distress or IBS) comes first. As a conceptual model of IBS, supporting a bidirectional brain-gut communication network between both the central nervous system and the gastrointestinal tract has been suggested (Selim et al., 2022).

Patients diagnosed with inflammatory bowel disease had a considerably lower likelihood of endorsing coping techniques that represented planful problem resolution and



positive reappraisal, in comparison to healthy participants. They were substantially more inclined to support techniques that indicated taking responsibility as well as behaviors that avoided escaping accountability (Jones et al., 2006).

The individuals who suffered from IBS were more likely to employ coping techniques that were avoidance-based. According to the findings of certain studies, when patients were experiencing a greater number of disease-related symptoms, they had a greater tendency to avoid specific settings. This, in turn, had a detrimental impact on their HRQOL. As a consequence of this, it is possible to postulate that when people with IBS encounter a greater number of symptoms, they make an effort to steer clear of situations and triggers that can cause it. Because of this sort of reaction, the person may choose to avoid particular activities, which will have a negative impact on their HRQOL. Processes of mental and behavioral disengagement, denial, and the use of alcohol and narcotics are examples of such methods (Stanculete et al., 2015).

## Conclusion

Patients' coping strategies with irritable bowel syndrome was high. Patients show effective level in dimension of coping as follows (active coping, planning dimension, positive reframing, acceptance, religion, self-distraction, denial, substance use and behavioral disengagement) as coping techniques.

## Recommendations

Using the Media and social media Platforms to shed light upon the IBS positive coping mechanisms. Doing further research to explore the other aspects of this health condition such as a specific symptom with a specific coping strategy. Establish programs that provide social and psychological support for patients with IBS.

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