Emotional intelligence and frustration: predictors of quality of life in patients with irritable bowel syndrome

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Abstract

The aim of the present research is to determine the relationship of emotional intelligence and frustration with quality of life in patients with IBS. The research sample consisted of 40 subjects selected from the patients with irritable bowel syndrome in Ardabil hospitals through the simple random sampling method. To collect the data, Emotional Intelligence Scale, frustration Scale and IBS-36 questionnaire were used. The results of Pearson correlation coefficient showed that emotional intelligence and frustration are related to the quality of life (P <0.01). The results of multiple regression showed that optimistic and entitlement, had significant contribution in prediction of quality of life in patients with IBS. The results suggested that emotional intelligence and frustration influenced quality of life. Our findings also pointed to the possibility that among IBS patients, emotional intelligence and frustration might be useful predictors of treatment response.

Keywords: Emotional intelligence, frustration, quality of life, irritable bowel syndrome.

1. Introduction

Irritable bowel syndrome (IBS), potentially is a common functional gastrointestinal disorder that is characterized by chronic abdominal discomfort or pain, bloating and changes in bowel habits (Agrawal and Whorwell, 2006). The reported prevalence of IBS is 15–24% in the general population, with the reported variation due to epidemiological studies using different diagnostic criteria, population selection and data sources (Frank et al., 2002; Hungin et al., 2003). Most of the literature comes from Western industrialized societies, but this disorder appears to be equally common in Asia (Dong et al., 2005; Spiller, 2004).

IBS does not permanently damage the intestines and does not lead to serious diseases such as cancer, and most people with IBS can control their symptoms with diet, stress management and prescribed medications. However, IBS has a major impact on quality of life. Aspects of social and professional life are affected, resulting in increased
absenteeism from work and reduced job opportunities and social interaction (Camilleri and Williams, 2000; De Giorgio et al., 2004).

The studies have found that individuals who experienced chronic interpersonal stress (e.g., relationship difficulties and higher frustration) were more likely to develop long-standing IBS symptoms than do individuals without interpersonal stress (Gwee et al., 1999). The impact of interpersonal stress does not appear limited to patients with IBS (Creed, Craig and Farmer, 1988).

Toner et al (2000) argues that a major source of stress among female IBS patients arises from patients’ difficulty negotiating traditional social and cultural roles, which encourage women to be non-assertive, putting others needs before their own and not expressing anger, and being attuned to other people’s feelings (P. 51).

Lackner and Gurtman (2005) found that interpersonal profile of IBS patients was characterized by difficulties with assertiveness and, to a lesser extent, social inhibition. Patients with diarrhoea-predominant subtype or longer symptom duration had more pronounced interpersonal problems than did their respective counterparts. Son, Jun and Park (2009) revealed that higher stress, anxiety, and depression were independently associated with increased IBS occurrence.

The protective and risk factors of IBS are not well understood but are probably multiple, including biological, psychological and social factors (Dapoigny et al., 2003; Drossman, 2006). It is not yet possible to precisely diagnose the individual causes of IBS and the underlying maintenance mechanisms, despite these factors being researched extensively over the past few decades. Considerably less attention has been paid to stressors and frustrations most frequently experienced by individuals with IBS. The specification of frustrations related to IBS has important implications for better understanding its clinical course.

The possibility of associations between emotional intelligence and frustration with health status is an interesting one which has not been widely studied. It seems reasonable to assume that high emotional intelligence and frustration would be associated with quality of life in women.

The present study has attempted to extend or improve the previous researches in one way. Due to the relative neglect in psychology, the research examined the relationship of both emotional intelligence and frustration with quality of life in women. We first have anticipated that emotional intelligence will correlate with quality of life in patients with IBS since their emotional intelligence has been generally inefficient. We also have anticipated that frustration will correlate with quality of life in patients with IBS. Finally, we have hypothesized that emotional intelligence and frustration will predict quality of life in women.

**Body**

This study included 40 IBS patients that visited gastroenterology clinics in the Ardabili. To qualify, IBS participants had to meet Rome II IBS diagnosis (Drossman et al., 2006) of IBS confirmed by a board-certified Gastroenterologist. Patients had symptoms of at least 3 years in duration. IBS was defined as the presence of abdominal pain, distension and altered bowel habit according to the Rome I Criteria, after full evaluation by a gastroenterologist and normal findings on hematological and sigmoidoscopic examination.

The comparison group of 40 healthy controls deemed eligible if they were reported no current or previous history of gastrointestinal or psychiatric complaints during screening for study eligibility. 20 subjects (25%) were single, 54 subjects (67.5%) mirages, 4 (5%) were divorced/separated, and two (2.5%) were widowed. The sample covered an age range of 25–50 years (mean=39.5 years; SD=8.4 years).

The study measures were administrated in the following order: 1. *Frustration-Discomfort Scale* (FDS; Harrington, 1991) is a self-report measure consisting of 20 items, with 5 items per subscale. It was designed to assess three subscale of frustration (discomfort, entitlement and achievement). Coefficient alphas were: .87 (emotional intolerance), .88 (discomfort), .85 (entitlement), .84 (achievement) and .94 (full scale). The FDS sub-scales significantly distinguished between clinical and non-clinical groups. Consistent with results from the preliminary scale, the revised sub-scales showed unique relationship with specific psychological problems and evidence of convergent and divergent validity (Harrington, 2005). 2. *Trait Emotional Intelligence Questionnaire* (TEIQ, Petrides & Furnham, 2001) Short Form is a 30 item self-report questionnaire designed to measures the main aspects of theoretical structure of the emotional intelligence construct, including perception and assessment of affects in self and others, optimism, self-awareness, and social skills (Petrides & Furnham, 2006). The internal consistency reported for the TEIQ were 0.88. Azghandi et al (2007) revealed that internal consistency and test–retest reliability
reported for the Trait Emotional Intelligence Questionnaire were 0.74, and 0.71, respectively.

3. The IBS-36 questionnaire: The IBS-36 is a self-report measure consisting of 36 items. Internal reliability testing of the IBS-36 revealed excellent reliability, with Cronbach’s equalling 0.95. Groll et al.(2002) found that quality of life scores for IBS patients are lower than those of the general population in all eight domains of the SF-36. The scores on the IBS-36 correlated strongly (0.40 or above) with the social function, emotional role, emotional well-being, and pain subscales of the SF-36 and less strongly (0.39 or below) with the physical function, physical role, and general health subscales.

All analyses were carried out with the statistics program SPSS 14.0 for Windows. Data was analyzed using Pearson correlation coefficient and multiple regression analyses.

Table 1 shows the means, standard deviations, for all variables used in the analyses. The t-test results showed that there were significant differences between the emotional intelligence (t=3.15), frustration (t=-2.76) and quality of life(t=18.09) in patients with IBS and healthy group(P<0.01).

Table 2. Means and standard deviations of emotional intelligence, frustration and quality of life in patients with IBS and healthy group

| variables | healthy group | IBS group |
|-----------|--------------|-----------|
|           | M  | SD  | M  | SD  |
| OP        | 35.20 | 6.417 | 29.25 | 7.37 |
| SA        | 47.57 | 7.52  | 42.90 | 7.96 |
| ASO       | 31.47 | 6.83  | 28.42 | 7.27 |
| SS        | 26.42 | 4.85  | 25.15 | 4.98 |
| EI        | 140.17 | 18.71 | 126.05 | 21.28 |
| EN        | 14.65 | 4.02  | 15.60 | 3.27 |
| DI        | 12.05 | 4.21  | 14.10 | 3.60 |
| AC        | 13.22 | 3.12  | 14.62 | 2.96 |
| FR        | 51.92 | 11.01 | 57.85 | 7.95 |
| QL        | 159.48 | 13.47 | 110.08 | 10.80 |

OP=Optimism, SA= Self-Awareness, ASO= Affects in Self and Others, SS= Social Skills, EI= Emotional Intelligence

EN= Entitlement, DI=Discomfort Intolerance, AC=Achievement, FR=Frustration, QL= quality of life

The Pearson correlation coefficients of emotional intelligence and frustration with quality of life are presented in Table 2 for women with IBS and healthy group. Emotional intelligence was negatively correlated with quality of life in women. Also, the results showed that emotional intelligence components of optimism(r=.427), perception and assessment of affects in self-others(r=.274), self-awareness(r=.299) and social skills(r=.216) are related to quality of life in women(P<0.01). The results revealed a relationship between emotional intelligence and quality of life in patients with IBS and healthy group(P<0.01). This result is consistent with previous research findings (e.g., Dapoigny et al., 2003; Drossman, 2006; Camilleri and Williams, 2000; De Giorgio et al., 2004). The results revealed that have to patients with IBS of low trait emotional intelligence and quality of life.

Also, a significant negative correlation was observed between frustration and quality of life in patients with IBS and healthy group (P<0.01). Also, the results showed that frustration components of entitlement (r=-.268), and achievement (r=-.240) are related to quality of life(P<0.01); While discomfort intolerance (r=-.09) not correlated with quality of life in women. This result is consistent with previous research findings (e.g., Dapoigny et al., 2003; Drossman, 2006; Son et al., 2009; Lackner and Gurtman, 2005).

Table 2. Bivariate correlations of emotional intelligence and frustration with quality of life

|     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | healthy |
|-----|------|------|------|------|------|------|------|------|-------|--------|
| 1- OP | **.562** | **.410** | **.364** | **.787** | -.166 | -.020 | -.518 | -.219 | -.339 | **.427** |
| 2- SA | 1    | **.473** | **.356** | **.802** | -.085 | -.060 | -.271 | -.228 | -.232 | **.299** |
| 3- ASO | 1    | **.503** | **.772** | -.213 | .041 | -.323 | -.339 | -.283 | -.274 |

OP=Optimism, SA= Self-Awareness, ASO= Affects in Self and Others, SS= Social Skills, EI= Emotional Intelligence

EN= Entitlement, DI=Discomfort Intolerance, AC=Achievement, FR=Frustration, QL= quality of life
Table 3 shows two stepwise multiple regression analyses, including components of emotional intelligence and frustration, used to determine which variables best predicted quality of life in patients with IBS. A significant model was produced for the subjects, adjusted $R^2 = 0.223$ $F(2, 77) = 11.03, p < 0.001$. For patients with IBS, however, optimism and entitlement were the best predictors for quality of life in patients. The results also showed that optimism and entitlement were the best predictors for quality of life. These results indicate that 22% variance of quality of life in women can be accounted for by optimism and entitlement variables.

| Model | Unstandardized Coefficients | Standardized Coefficients |
|-------|-----------------------------|---------------------------|
|       | B       | Std. Error | t      | Sig. | B       | Beta   |
| 1 (Constant) | 83.953 | 12.494 | 6.720 | .000 |          |        |
|          | OP     | 1.577    | .378  | .427 | 4.175   | .000   |
| 2 (Constant) | 112.319 | 18.792 | 5.977 | .000 |          |        |
|          | OP     | 1.452    | .376  | .394 | 3.863   | .000   |
|          | EN     | -1.914   | .961  | -2.03| -1.992  | .050   |
|       | R=.472 | RS=.223  | Adjusted | RS=.203 |        |        |

**p < .01  **p < .001

Conclusion

The results showed that emotional intelligence is related to quality of life. A possible explanation for the results include deficits in self-assertion skills or an inability to execute a repertoire of assertiveness skills due to anxiety, negative self-evaluations, or other sources of interference. The finding that optimism and entitlement accounted for significant variance of quality of life at women may have important implications for intervention. The results revealed that frustration is related to quality of life. It seems that frustrations and causal attributions for stress and psychological factors are of particular importance in patients with IBS because they reflect scientific models of its etiology showing links between the experience of stress and increases in symptom severity(Moennikes et al., 2001).

Although the present study was to investigate the relationship between emotional intelligence and frustration with quality of life in patients with IBS and healthy group, two limitations should be noted. First, the results reported here are based on a sample derived from one city. Additional samples from various locations are needed to support external validity. Second, this study relies on cross-sectional and correlational data. At best, our data can be
construed as suggestive of possible causal relationships (e.g., duration of IBS symptoms and emotional intelligence and frustration) that can be confirmed through longitudinal methodology.

In conclusion, we suggest that managing frustrations and emotions are very important for reducing the symptoms and morbidity associated with IBS. Thus, it is clinically important to assess the psychological factors contributing to illness in IBS patients. This line of research may also be useful in optimizing the efficient delivery of psychological treatments by targeting specific emotional and interpersonal problems.

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