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2 **The Signs and Symptoms Comparison of Gastrointestinal Diseases between Classic**
3 **Medicine and Iranian Traditional Medicine**
4 **A Hybrid Qualitative Study**
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9 **ABSTRACT**

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11 **Background:**

12 Iranian traditional medicine is the oldest form of medical structure and is, in fact, an inseparable part of
13 the life of various Iranian societies. On the other hand, gastrointestinal and liver diseases are one of the
14 most common causes of morbidity in the world, including in Iran. Such that 10% of diseases are allocated
15 to them and their diseases are spreading increasingly.

16 **Objective:**

17 Considering the mentioned issues and the high prevalence of gastrointestinal symptoms, the aim of this
18 study is to investigate the compliance of the symptoms of gastrointestinal diseases in classical medicine
19 with Iranian traditional medicine from the viewpoint of Iranian traditional medicine experts.

20 **Methods:**

21 This is a hybrid qualitative study which was conducted in three phases, including: 1- theoretical, 2- field
22 and 3- combinational phases. In the theoretical phase, two types of medicine text books *i.e.* Iranian
23 traditional and classic medicine text books. In the field stage, 13 academic Iranian traditional medicine
24 experts with at least 5 years of work experiences in Iranian traditional *medieine,medicine* were
25 interviewed. Then, in combinational phase, the results of two early phases have been summarized using
26 descriptive statistics.

27 **Results:**

28 The results of the study show that 12 of the 40 symptoms in this study had a compliance of 100%. These
29 12 symptoms are Increase of Salivation, Pica, Borborygmi, Hiccups, Abdominal distention, Melena, Anal
30 Fissure, Anal Stenosis, Cryptitis, Anal pruritus, Halitosis, Rectal pain; *Alsoalso*, the results showed that **8**
31 **10** of the 40 symptoms in this study had over 70% compliance. These 10 symptoms are as *Dysphagia*,
32 Belching, Regurgitation, Hematemesis, Flatulence, Increased Bowel sound, Abdominal pain, Diarrhea,
33 Jaundice and Anal prolapse. Also, the percentage of compliance of the other **18** symptoms was less than
34 70%.

35 **Conclusion:**

36 Considering the results of this study and the capabilities of Iranian medicine in relation to symptoms of
37 gastrointestinal diseases with classical medicine, it is possible to design appropriate patterns to expose it.
38 Also, an integrated approach to clinical research is recommended to improve the efficacy and safety of
39 gastrointestinal treatments.

40 **Keywords:** Sign, Symptom, Gastrointestinal, Traditional Persian Medicine, Classic Medicine.
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Comment [k1]:

- Please recheck for spelling and grammar mistakes.
- Font type, size and line spacing must be uniform throughout the manuscript.
- Authors are requested to go through the author's guidelines in the journal web site and in Science Domain International website. Also to go through one original article published in the latest issue of the journal JPRI.

Comment [k2]:

- Word count for abstract should exceed 300.

Comment [k3]:

- Duration of study has to be mentioned in Abstract and in main text also.

Comment [k4]:

- Data in abstract, results and discussion do not tally with that in Table 1.

Comment [k5]:

- Key words must be 4-8 in number in MeSH terms other than those found in title in alphabetical order.

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48 Introduction

49 Traditional and complementary medicine is a collection of knowledge and skills and activities that are
50 established based on theoretical and culturally different ~~experiences which is~~ experiences which are used
51 in the prevention, diagnosis, and treatment of the physical and psychological conditions of patients. In
52 recent years, researchers and physicians all around the ~~world,world~~ have paid increased attention to
53 complementary medicine. In such a way that, annually the use of complementary medicine in addition to
54 commonly used medicine is used as a solution (1, 2). No complete success in common medicine in the
55 definite treatment of many diseases on the one hand, and the popular acceptance of complementary
56 medicine for the non-use of chemical compounds and the use of herbal and natural medicines on the other
57 hand are among the main factors of this attention (3). The great attention paid by international
58 organizations such as the WHO to the development and use of traditional medicine in the health services
59 and treatment system has led to a greater appreciation of the valuable heritage of traditional medicine and
60 taking action in relation to traditional treatments used in the different disease (4). Iranian traditional
61 medicine is the oldest form of medical structure and is, in fact, an inseparable part of the life of various
62 Iranian societies. Traditional medicine in Iran, with several hundred years of existence, has a high
63 capacity for the prevention and treatment of diseases. which this point solves many health and medical
64 problems (5). In traditional medicine text books, symptoms and signs have sometimes been raised as
65 illnesses and have been discussed independently in the titles of the book. In modern medicine texts
66 symptom is defined as “Any mental evidence of a disease or condition of a patient that is felt by him”. It
67 also suggests a change in the patient's state of health, which indicates a physical or mental state, for
68 example, pain and itching. Sign is an objective finding received by the examiner, for example, a rash of
69 skin (6). The gastrointestinal and liver diseases are one of the most common causes of morbidity in the
70 world, including in Iran. So that they cause 10% of the deaths. And the incidence of this disease is
71 increasing (7-9). The prevalence of gastrointestinal symptoms is high. Among the symptoms of the
72 gastrointestinal tract, heartburn, abdominal pain, diarrhea, constipation, nausea, vomiting, and anorectal
73 problems are among the most common symptoms (10). In a study of Reviews of System, the prevalence
74 of symptoms is as abdominal pain 8-54%, heartburn, 48-10%, regurgitation, 45-9%, and heartburn
75 together with regurgitation were reported about 59-29% (11). Considering the mentioned issues and the
76 high prevalence of gastrointestinal symptoms the aim of this study was to investigate the compliance of
77 the symptoms of gastrointestinal diseases in classical medicine with Iranian traditional medicine from the
78 viewpoint of Iranian traditional medicine experts.

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- Reference numbers of in text citations must be within square brackets before punctuation.
- Please correct it throughout the text.

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81 **Material and Methods**

82 This is a hybrid qualitative study carried out in three phases, including: 1- theoretical, 2- field and,
83 3- combinational phases.

84 **Phase I: Theoretical study**

85 The theoretical phase was conducted in two steps. In step 1, the description, etiology, physiology
86 gastrointestinal sign and symptom in Iranian traditional medicine also the importance of
87 matching in viewpoints of Iranian traditional medicine resources were studied. In step 2, we
88 reviewed the sign and symptom using recent articles and projects in addition traditional
89 resources. We searched these references via several reliable sources such as PubMed, Google
90 scholar, Scopus, Irandoc, Mag Iran, SID, Iran MEDEX, Iranian traditional book like Qanoon-fet-
91 tteb, Tebbe-Aakbari, kamel-os-ssanae, Zakhire, Sharh-ol-asbab, using keywords including
92 "sign", "symptom", "gastrointestinal", "Iranian traditional medicine", "comparison ", " classic
93 medicine. The flowchart of the study can be seen in diagram 1.

94 **Phase II: Data collection**

95 In the phase, we provided a semi-structural interview with 20 Iranian traditional experts, of
96 whom 13 of them completed the interview. The experts had at least 5 years history of work
97 experiences in Persian medicine at Tehran province. This interview was performed within
98 October and November 2017. Each interview was lasted for 30 to 50 minutes in which answers
99 were saturated at 7th interview. Findings of the interview and analysis which are summarized in
100 Table 1.

101 The interview contained the following subjects:

- 102 1) The definition of gastrointestinal sign and symptom base on Iranian traditional and
103 classic medicine.
- 104 2) Request to match defined gastrointestinal sign and symptom based on their experience.
- 105 3) Collecting the data and primary analysis
- 106 4) Feedback of primary result presented to the expert and some problems or corrective
107 comments have been made
- 108 5) Final result prepared and tabled in table1.

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Results

The comparison between Iranian traditional and classic medicine sign base on Iranian traditional experts presented in Table1, the results of this study show that 12 of the 40 symptoms in this study had a compliance of 100%. These 12 symptoms are Increase of Salivation, Pica, Borborygmi, Hiccups, Abdominal distention, Melena, Anal Fissure, Anal Stenosis, Cryptitis, Anal pruritus, Halitosis, Rectal pain; ~~Also~~also, the results showed that 8-10 of the 40 symptoms in this study had over 70% compliance. These 10 symptoms are as Dysphagia, Belching, Regurgitation, Hematemesis, Flatulence, Increased Bowel sound, Abdominal pain, Diarrhea, Jaundice and Anal prolapse. Also, the percentage of compliance of the other 18 symptoms was less than 70%.

Table1: The comparison between Iranian traditional and classic medicine sign base on Iranian traditional experts

Other Iranian Traditional sign		Classic Medicine sign	Major Iranian Traditional sign
		Salivation (increase)	ehraqriq (100%)
		Halitosis	bakhharol- famm (100%)
intibāghkmeri (10%)	khonāq (30%)	Odynophagia	'osrol- bal ' (60%)
khonāq (11%)	'osrol- bal ' (33%)	Globus hystericus	intibāghkmeri (56%)
other (17%)	khonāq (8%)	Dysphagia	'osrol- bal ' (75%)
thiql (9%)	tokhamah (8%)	Dyspepsia	sū ' ol-ħadm (48%)
tokhamah (11%)	ħa' fol-ħadm (16%)	Indigestion	thiql (45%)
	sū ' ol-ħadm (28%)	Belching	joshā (80%)
	waji ' ol- mi ' dah (10%)	Anorexia	Faqdshahwahol- (63%)
	jū ' ol- kalbī (8%)	Pica	waham (100%)
	other (11%)	Polyphagia	jū ' ol- kalbī (57%)
	other (24%)	Bulimia	jū ' ol- kalbī (58%)
	Horqatol-mi ' dah (10%)	Regurgitaition	ħomūdah (72%)
	joshā (18%)	Nausea	ghathayān (53%)
	tahawwo ' (47%)	Vomiting	qay ' (67%)
tahawwo ' (11%)	inqilāb mi ' dah (22%)	Hematemesis	qay ' od-dam (85%)
	other (15%)	Flatulence	nafkh (86%)
	other (14%)	Bowel sound (increase)	qarāqir (89%)
	other (11%)	Borborygmi	qarāqir (100%)
		Hiccups	fowāq (100%)
	other (11%)	Heart burning	Horqatol-mi ' dah (65%)
	waja ' ol-fo ' ād (24%)	Abdominal rigidity	jos' at ol- mi ' dah (67%)
	tashannoj mi ' dah (33%)	Abdominal pain	waji ' ol- mi ' dah (77%)
	other (23%)	Abdominal distention	nafkh (100%)
		Constipation	ħaṣr (55%)
	birāzyabas (45%)		

Comment [k7]:

• Data in abstract, results and discussion do not tally with that in Table 1.

		other (29%)	Diarrhea	ishāl (71%)
zahīr (7%), khilfah (6%), zarab (6%)	haydah (10%)	ishāl (14%)	Dysentery	ishālol-dam (57%)
	other (37%)	khilfah (25%)	Dumping syndrome	zarab (38%)
	other (37%)	zahīr (25%)	Bloody stool	ishālol-dam (38%)
	other (16%)	qiyāmol-kabidī (17%)	Hematochezia	ishālol-dam (67%)
			Melena	ishālol-dam (100%)
		other (50%)	Stool, clay colored	Zalaqol-'am'ā' (50%)
		other (8%)	Jaundice	yaraqān (92%)
			Anal Fissure	shiqāqmaq'ad (100%)
			Anal Stenosis	warammaq'ad (100%)
			Cryptitis	warammaq'ad (100%)
		other (33%)	Fecal incontinence	istirkhā' sharaj (67%)
		other (14%)	Anal prolapse	khurūjmaq'ad (86%)
			Anal pruritus	hikkahmaq'ad (100%)
			Rectal pain	warammaq'ad (100%)

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124 Discussion

125 Considering the role of complementary medicine and traditional medicine in the treatment of known
126 diseases, the aim of this study was to investigate the adaptation of the symptoms of gastrointestinal
127 diseases of classical medicine to traditional medicine of Iran from the viewpoint of Iranian traditional
128 medicine experts. The results of this study showed that from 40 identified symptoms in the library study
129 phase the following results were shown: Compliance of 12 symptoms was 100%, compliance of 8-10
130 symptoms was more than 70%, and the compliance of 20-18 other symptoms was less than 70%. Of
131 course, the first point in examining this compliance is that the low or high compliance of a symptom does
132 not necessarily mean that it is of less or more importance, and in some cases, the low compliance
133 indicates more precision of traditional medicine in comparison with the recognition of the symptoms of
134 the disease in the classical medicine. One of the reasons for low compliance in some common symptoms,
135 such as nausea and vomiting is due to the continuity of the definitions and the causes of their causes in
136 traditional medicine. The term nausea and vomiting is used in classical medicine to express the symptoms
137 of nausea and vomiting. The same symptoms in traditional medicine are known as “tahawwo
138 ghathayānqay” and “taqallobnafs” (12) “qay”, is called gastric motility, which results in the repulsing
139 of the substance through the mouth (13). However, this movement is existed in “tahawwo” but there is
140 not any substance repulsed. Traditional medicine, “ghathayānis” the primary cause of nausea, in which
141 the person feels uncomfortable, but the movement of the substance has not yet happened. In all the above
142 mentioned items such as “tahawwoghathayānqay” the causative agent of the disease can either be related
143 to the stomach itself or from another part of the gut.(12) If the substance is specifically related to the
144 stomach, it is called “taqallob o nnafs”(14).

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• Data in abstract, results and discussion do not tally with that in Table 1.

145 To provide further evidence in this regard, it is possible to differentiate the definitions and causes of
146 digestive problems in the classical and traditional medicine perspective. Digestive problems are described
147 in classical medicine with the words Indigestion and Dyspepsia (15). Meanwhile, in traditional medicine,
148 this problem is expressed in terms of mild, moderate and sever digestion problem, , as well as bloating, as
149 more prominent manifestations (16-19) In Iranian traditional medicine, the problem of digestion is
150 considered as a syndrome in which the severity of the symptoms is expressed by different definitions.
151 Mild digestion problems are defined as “da’fol-hādm”, moderate digestion problems as “sū ‘ ol-hādm”
152 and sever digestion problems as “tokhamah”(20, 21). Consequently, the lack of convergence of views of
153 traditional medicine professors can be justified (12) For example; traditional medicine experts have
154 reported dyspepsia as 48% “sū ‘ ol-hādm”, 35% of da’fol-hādm and 8% of tokhamah and indigestion as
155 45% thiql, 28% sū ‘ ol-hādm, 16% da’fol-hādm, and 11% tokhamah.

156 Another important point to justify the mismatch of traditional medicine experts' opinions is that some of
157 the symptoms cause some other symptoms. Constipation, for example, has been mentioned in traditional
158 medicine with the term "Hasr", that means constraint. the equivalent of constipation and "birāzyabas
159 which means (Dried fecal materials) is its cause (22-25) in this study. constipation is about 55% in
160 compliance with Hasr and 45% with birāzyabas, Also, some of the symptoms or results of a patient in
161 traditional medicine are equated with a sign or symptom in classical medicine. For example, swelling is
162 due to Cryptitis, Anal Stenosis and Rectal pain (26).

163 **Conclusion**

164 Regarding the results of this study and the Iranian medicine's competence is in terms of the symptoms of
165 gastrointestinal diseases with classical medicine, it is possible to design appropriate patterns for dealing
166 with it. Also, an integrated approach to clinical research is recommended to improve the efficacy and
167 safety of gastrointestinal treatments.

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