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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 medical textbooks i.e. Iranian
23 traditional and classic medicine textbooks. In the field stage, 13 academic Iranian traditional medicine
24 experts with at least 5 years of work experiences in Iranian traditional medicine were interviewed. Then,
25 in the combinational phase, the results of two early phases have been summarized using descriptive
26 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; also, the results showed that 10 of
31 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 with the other 18 symptoms was less
34 than 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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48 **Introduction**

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

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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, aetiology,
86 physiology gastrointestinal sign and symptom in Iranian traditional medicine also the importance
87 of 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-
91 fet-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 in October
98 and November 2017. Each interview lasted for 30 to 50 minutes in which answers were saturated
99 at 7th interview. Findings of the interview and analysis which are summarized in Table 1.

100 The interview contained the following subjects:

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

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111 **Results**

112 The comparison between Iranian traditional and classic medicine sign base on Iranian traditional
 113 experts presented in Table1, the results of this study show that 12 of the 40 symptoms in this study had
 114 a compliance of 100%. These 12 symptoms are Increase of Salivation, Pica, Borborygmi, Hiccups,
 115 Abdominal distention, Melena, Anal Fissure, Anal Stenosis, Cryptitis, Anal pruritus, Halitosis, Rectal
 116 pain; also, the results showed that 10 of the 40 symptoms in this study had over 70% compliance. These
 117 10 symptoms are as Dysphagia, Belching, Regurgitation, Hematemesis, Flatulence, Increased Bowel
 118 sound, Abdominal pain, Diarrhea, Jaundice and Anal prolapse. Also, the percentage of compliance with
 119 the other 18 symptoms was less than 70%.

120 **Table1:** The comparison between Iranian traditional and classic medicine symptom base
 121 on Iranian traditional experts

Other Iranian Traditional sign		Classic Medicine sign	Major Iranian Traditional sign
		Salivation (increase)	ehraqriq (100%)
		Halitosis	bakhharol- famm (100%)
intibāghkhameri (10%)	khonāq (30%)	Odynophagia	'osrol- bal ' (60%)
khonāq (11%)	'osrol- bal ' (33%)	Globus hystericus	intibāghkhameri (56%)
other (17%)	khonāq (8%)	Dysphagia	'osrol- bal ' (75%)
thiql (9%)	tokhamah (8%)	Dyspepsia	sū ' ol-ḥaḍm (48%)
tokhamah (11%)	ḍa'fol-ḥaḍm (16%)	Indigestion	thiql (45%)
	sū ' ol-ḥaḍm (28%)	Belching	joshā (80%)
waji ' ol- mi 'dah (10%)	nafkh (10%)	Anorexia	Faqdshahwaho- (63%)
jū ' ol- kalbī (8%)	jū ' ol-baqarī (29%)	Pica	waḥam (100%)
other (11%)	jū ' (29%)	Polyphagia	jū ' ol- kalbī (57%)
other (24%)	jū ' ol-baqarī (18%)	Bulimia	jū ' ol- kalbī (58%)
Ḥorqatol-mi 'dah (10%)	joshā (18%)	Regurgitation	ḥomūḍah (72%)
	tahawwo ' (47%)	Nausea	ghathayān (53%)
tahawwo ' (11%)	inqilāb mi 'dah (22%)	Vomiting	qay' (67%)
	other (15%)	Hematemesis	qay ' od-dam (85%)
	other (14%)	Flatulence	nafkh (86%)
	other (11%)	Bowel sound (increase)	qarāqir (89%)
		Borborygmi	qarāqir (100%)
		Hiccups	fowāq (100%)
other (11%)	waja ' ol-fo 'ād (24%)	Heart burning	Ḥorqatol-mi 'dah (65%)
	tashannoj mi 'dah (33%)	Abdominal rigidity	jos' at ol- mi 'dah (67%)
	other (23%)	Abdominal pain	waji ' ol- mi 'dah (77%)
		Abdominal distention	nafkh (100%)
	birāzyabas (45%)	Constipation	ḥaṣr (55%)
	other (29%)	Diarrhoea	ishāl (71%)
zahīr (7%),khilfah (6%), zarab (6%)	hayḍah (10%)	Dysentery	ishālol-dam (57%)
	other (37%)	Dumping syndrome	zarab (38%)

other (37%)	zahīr (25%)	Bloody stool	ishālol-dam (38%)
other (16%)	qīyāmol-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	khōrūjmaq‘ad (86%)
		Anal pruritus	hikkahmaq‘ad (100%)
		Rectal pain	warammaq‘ad (100%)

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123 Discussion

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

144 To provide further evidence in this regard, it is possible to differentiate the definitions and causes of
145 digestive problems in the classical and traditional medicine perspective. Digestive problems are described
146 in classical medicine with the words Indigestion and Dyspepsia (15). Meanwhile, in traditional medicine,

147 this problem is expressed in terms of mild, moderate and severe digestion problem, as well as bloating, as
148 more prominent manifestations (16-19) In Iranian traditional medicine, the problem of digestion is
149 considered as a syndrome in which the severity of the symptoms is expressed by different definitions.
150 Mild digestion problems are defined as “ḍa‘fol-ḥaḍm”, moderate digestion problems as “sū ‘ ol-ḥaḍm”
151 and severe digestion problems as “tokhamah”(20, 21). Consequently, the lack of convergence of views of
152 traditional medicine professors can be justified (12) For example; traditional medicine experts have
153 reported dyspepsia as 48% “sū ‘ ol-ḥaḍm”, 35% of ḍa‘fol-ḥaḍm and 8% of tokhamah and indigestion as
154 45% thiql, 28% sū ‘ ol-ḥaḍm, 16% ḍa‘fol-ḥaḍm, and 11% tokhamah.

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

162 **Conclusion**

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

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