

Dear Editor-in-Chief

We would like to thank you and the reviewers for taking precious time to review the manuscript and suggest excellent recommendations. The implementation of these recommendations has markedly enhanced the quality of the manuscript tremendously.

We have revised the manuscript as per the suggestions of the esteemed reviewers. However, if there are some shortcomings or any further new suggestions, kindly do let us know. We would be delighted to carry out the changes.

The changes have been highlighted in yellow colour in the revised manuscript and have been included here along with the response to the questions.

Thanking you once again

Pankaj Garg

Corresponding Author

### **Reviewer #1:**

**Scientific Quality: Grade B (Very good)**

**Language Quality: Grade B (Minor language polishing)**

**Conclusion: Accept (General priority)**

**Specific Comments to Authors: A new scoring system for FI was formulated, which was simple, logical, comprehensive, and easy to use. The perceptions of patients and surgeons regarding the severity of different FIs did not correlate much. It has some potential for clinical research, however, there are still some issues.**

**Ans:** We would like to thank the esteemed reviewer for the excellent and encouraging comments.

### **Comments:**

**1. Since this is merely a single-center study, there needs to be an increase in the quantity of clinical cases because they are now quite few.**

**Ans:** We totally agree with the suggestion. We have included this as a limitation in the Limitation section

**Nonetheless, this is a single-center study, and NSS should be validated in a larger sample, preferably in multiple centers.**

**2. The subjective evaluation of patients has excessive influence, which can lead to the deviation of the results. Whether it can be quantified more specifically and reduce the interference of subjective factors.**

**Ans:** We agree with the excellent suggestion. Since the whole study and development of the scoring system is about the patient's perception of the different fecal incontinence types, therefore the element of subjectivity cannot be completely eliminated. However, several steps were taken during the study to minimize the interference of subjective factors.

The following paragraph has been added in the Discussion section.

The subjective evaluation of study subjects could lead to deviation of the results. Therefore, several steps were taken to maximize objectivity while developing NSS. First, in the Proforma, the six FI parameters were defined in simple language and in English as well as the native language, Hindi), which a patient and layperson could easily understand. Second, both the interviewer and interviewee (study subject) were blinded to the goals or the purpose of the study. Third, all the proformas in the study were filled out by the same interviewer. Fourth, in order to increase objectivity while filling out Proforma by the study subjects, a modified EQ-5D+ (EuroQol), 4D3L (4 dimensions, 3 levels) description system was utilized. Further, scoring (0-25) was also utilized in each dimension to guide study subjects and to increase objectivity.

### **Reviewer #2:**

**Scientific Quality: Grade B (Very good)**

**Language Quality: Grade B (Minor language polishing)**

**Conclusion: Accept (High priority)**

**Specific Comments to Authors:** The present manuscript aims to develop a new scoring system (NSS) for FI that is accurate, comprehensive, and easy to use.. It is have a good potential for publication.

**Ans:** We would like to profusely thank the esteemed reviewer for the wonderful and encouraging comments.

However, several comments should be addressed in MAJOR REVISION as follows.

**1. Why should six FI parameters have identified? Any reasons?**

**Ans:** Thanks for raising this point. This has been mentioned in the Discussion section.

The FI missed out in previous scoring systems like urge in Wexner, mucous in Wexner and Vaizey, and stress FI in all previous scoring FI have been included in the present new scoring system (NSS).<sup>[17]</sup> NSS is the first scoring in which six types of FI have been included- solid, liquid, flatus, mucus, stress, and urge. It is logical to include all these six FI in a scoring system as all of these are quite distinct and the presence of any of these six FI indicates a malfunction in the coordinated function of a portion of the sphincter mechanism.

**2. Please giving in brief explanation about “anxiety” in concept. Relevant reference encouraged to adopted as follows, doi: 10.3390/bioengineering9020048 and 10.3390/bioengineering9040157**

**Ans:** Thanks for the suggestion. The relevant references have been included as references number 25 & 26. We have included the following in the Methods section.

The two dimensions, self esteem and anxiety, are quite relevant to evaluate the impact of a medical condition and had not been given much importance in earlier scoring systems.<sup>[25, 26]</sup>

**3. The basis of disability score should be given.**

**Ans:** Thanks for raising this pertinent point. We have included the following in the Methods section.

The disability score was the measure of the impact of FI on all aspects of the life of the person. The worst parameter would be assigned a disability score of 100, and all other parameters would be assigned disability scores according to that.

**4. What is the meaning for A pilot test? Clarify it.**

**Ans:** We are extremely thankful for pointing this error in the Methods section. ‘A pilot test run’ has been replaced by the appropriate word.

A pilot study was done before commencing the main study to assess any shortcomings. This was helpful in removing questions that were irrelevant or difficult to comprehend, improving the proforma’s content and making the language simpler. The subjects in the pilot study were not included in the final study.

## 5. Giving the rationalisation why only two sample used for ANOVA test?

**Ans:** Thanks for raising this query.

We utilized three samples (patients, laypersons and surgeons) for ANOVA test. This has been mentioned clearly now in the following sections.

### Statistical Analysis

In the data, which was normally distributed, the continuous variables were tested by Student's t-test when there were two samples and ANOVA test was performed when there were more three of more samples.

### Results

The severity perception of the patients and laypersons regarding solid and urge FI was significantly different from the surgeons ( $p < 0.00001$ , ANOVA) (Table-9).

**Table-9:** Difference in mean ranking 6 types of fecal incontinence (FI) as per severity perceived by patients, laypersons, and surgeons

Patients (n=50) Type of FI Ranking Mean $\pm$ SD	Laypersons (n=50) Type of FI Ranking Mean $\pm$ SD	Surgeons (n=33) Type of FI Ranking Mean $\pm$ SD	Significance (ANOVA)
Solid 4.51 $\pm$ 1.5	Solid 4.8 $\pm$ 1.5	Solid 6.0 $\pm$ 0	P < 0.00001
Liquid 4.73 $\pm$ 1.25	Liquid 4.64 $\pm$ 1.35	Liquid 5.0 $\pm$ 0	P = 0.35
Urge 3.65 $\pm$ 1.52	Urge 3.70 $\pm$ 1.44	Urge 1.69 $\pm$ 1.07	P < 0.00001
Flatus 2.87 $\pm$ 1.50	Flatus 2.72 $\pm$ 1.45	Flatus 2.57 $\pm$ 1.06	P = 0.88
Mucous	Mucous	Mucous	P = 0.90

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2.57± 1.38

2.7± 1.44

2.81± 0.91

Stress

2.53± 1.53

Stress

2.46± 1.38

Stress

2.90± 1.07

P=0.29

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The persons in each group (patients, laypersons, and surgeons) were asked to rank the six FI in decreasing order of severity. The most severe was given 6, and the least severe FI was given 1 point. The average of each FI type in each group was calculated and compared

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**6. State the present article limitations before conclusion section.**

**Ans:** Thanks for the suggestion. This has been implemented.

The study had limitations. The new scoring system was not tested for inter-observer and intra-observer variability and test-retest reliability. However, this is planned in the next phase of the study. The validity of the NSS could not be checked because there was no gold standard against which the NSS could be validated. The NSS was based on assigning weights and had more types of FI types, due to which it was fundamentally quite different from the commonly used Wexner and Vaizey scoring systems. Nonetheless, this is a single-center study, and NSS should be validated in a larger sample, preferably in multiple centers.

**7. The novel of the present submitted article is not clear. Many published literature has been widely studied in the past. Further explanation in the introduction section in advance is mandatory.**

**Ans:** Thanks for raising this point. This has been addressed in the Introduction section

Due to these major lacunae in the existing scoring systems (not comprehensive, the different types of FIs were assigned the same weights, parameters included were not a direct measure of the degree or severity of FI, the patient perceptions were not taken into consideration while developing these scoring systems etc.), a need was felt to develop a new scoring system (NSS) that would be comprehensive, based on primarily patient and layperson's perceptions, was scientifically sound, accurate (free of bias or overlapping parameters), faithfully reflected the degree of disability and

yet simple and easy to use. Against this background, this study was done in two phases. In the first phase, a new scoring system was developed based on patients' and laypersons' perceptions, and in the second, it was analyzed to determine whether patients' and surgeons' perception of the disability of different FIs was similar or not.

## **(2) *Company editor-in-chief:***

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors.

Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

**Ans:** Thanks a lot for the comments.

The tables have been modified as per your kind recommendations.

Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>.

**Ans:** Thanks a lot for this suggestion.

We used RCA and found it to be an extremely useful tool especially the "Impact Index Per Article" feature. We are not aware if this remarkable feature is available on any other platform or website. This feature is far more useful and relevant than 'total number of citations' for an article. A recently published article can also rank high in the feature of "Impact Index Per Article". We would be using RCA regularly to improve the quality of our manuscripts. Thanks once again.