

## Peer Review File

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### Reviewer A

In this manuscript, the authors discuss their evaluation of the rapid rehabilitation surgical nursing model in patients with esophageal carcinoma (EC) after total cavity endoscopic esophagectomy with regard to the nursing effect based on a literature search for articles on case-control trials of nursing interventions. Moreover, the authors performed a meta-analysis that included hospital stay, extubation time, out-of-bed time, exhaust time, Riker Sedation-Agitation Scale (SAS) score, Severity of Dependence Scale (SDS) score, and postoperative complications. Based on these evaluations, the authors have concluded that the evaluated model was effective.

I think that, based on the results of this study, it is clinically significant that Fast-Track Recovery Surgery (FTS) care is being reported as beneficial in EC after total cavity endoscopic esophagectomy. However, I have a few questions and comments for the authors.

My major comments are as follows:

1) Introduction: First, the authors could have emphasized the novelty and importance of this study; as there are numerous studies on FTS, I would like to see a description of the characteristics of this study.

Response: Thanks very much for this suggestion. Yes, we have it. "However, the conclusions drawn by different studies are not entirely consistent, and there is considerable variation in the design and evaluation metrics of the various studies. The results of the clinical application of the FTS concept in nursing interventions for EC patients after total endoscopic esophagectomy are unconvincing. Thus, in order to collect related information, we conducted a meta-analysis to evaluate the effectiveness of the nursing intervention of the FTS concept in patients after total endoscopic esophagectomy."

2) Method, Inclusion criteria (line 130): With regard to the SAS score and the SDS score, the authors should indicate the timepoint wherein the data were evaluated.

Response: Thanks very much for this suggestion. We added it.

3) Method, Statistical processing (line 159): The authors mention that Eggers's test and the trim-and-fill correction method will be performed, but are the results presented?

Response: Thanks very much for this suggestion. Yes, we used the results, which are Figures 11 and 12.

4) Results, Meta-analysis results, the out-of-bed time for activity (line 192), and Discussion: With regard to the out-of-bed time, I think the concept of FTS encourages people to leave bed early; therefore, the data may be used to verify how well FTS was performed rather than as an outcome to ascertain the effectiveness of FTS. Why not present and discuss this result from the abovementioned perspective?

Response: Thanks very much for this suggestion. We added that “It seems to us that the concept of FTS encourages people to leave bed early; therefore, the out-of-bed time for activity may be used to verify how well FTS was performed.”.

5) Results, Meta-analysis results, and SAS and SDS scores (line 204): When were these scores measured? Were they aligned across the studies? The results would be easier to understand if you could more clearly explain this aspect.

Response: Thanks very much for this suggestion. We explained it “There were 8 clinical controlled studies comprising 613 samples in this study, and analyses of the SAS and SDS scores were conducted in the relevant paper.”.

6) Discussion (line 238): “This study is~,” this statement is a description of the FTS itself. The authors may want to correct the sentence as this study refers to a meta-analysis that was conducted.

Response: Thanks very much for this suggestion. We re-wrote it “Accelerated recovery surgery is an evidence-based postoperative management strategy (28)”.

My minor comment is as follows:

7) Table 1: The uneven spacing of the authors’ name column of the table should be corrected.

Response: Thanks very much for this suggestion. We have changed it.

## **Reviewer B**

Yujie Jia, et al. evaluated the nursing effect of the rapid rehabilitation surgical nursing model on patients with esophageal carcinoma (EC) after total cavity endoscopic esophagectomy using meta-analysis.

As a result, Ultimately, 8 clinical controlled trials, comprising 613 cases, were identified. A meta-analysis was conducted of the extubation times, and the results showed that the study group's extubation times were remarkably shorter. In relation to the exhaust times, the study group had significantly shorter exhaust times than control group ( $P < 0.05$ ). In relation to the time it took patients to leave bed, patients in the study group left bed in a considerably shorter time compared with controls. In relation to the hospitalization time, a remarkable reduction in the length of hospital stay was observed in the study group. The analysis of the funnel plots showed a small number of asymmetries, suggesting that the number of articles included was small due to the heterogeneity of the studies.

Therefore, it was hypothesized that fast-track recovery surgery (FTS) care is effective on accelerating patients’ postoperative recovery, reduction of the length of hospital stay and alleviates.

It is important to detect the nursing effect of rapid rehabilitation surgery for practice in rehabilitation.

However, this review has several problems as below.

## Major points

1) The difference between this present review and the previous review regarding fast-track or enhanced recovery after surgery (ERAS).

**Response: Thanks very much for this suggestion.**

There have been several previous reviews regarding conventional fast-track or enhanced recovery after surgery (ERAS), already.

(TRIANTAFYLLOU, Tania, et al. Enhanced recovery pathways vs standard care pathways in esophageal cancer surgery: systematic review and meta-analysis. *Esophagus*, 2020, 17: 100-112., PUCETTI, Francesco, et al. Impact of standardized clinical pathways on esophagectomy: a systematic review and meta-analysis. *Diseases of the Esophagus*, 2022, 35.2: doab027.)

Compared with these previous reviews, what is the novelty or strength of this review?

This point must be concretely stated in the discussion section.

**Response: Thanks very much for this suggestion. We added it. "Several case-control studies have demonstrated that nursing interventions based on the FTS concept can significantly promote postoperative recovery in patients undergoing EC total endoscopic resection (15). However, the conclusions of different studies are not completely consistent, and there are considerable differences in the design and evaluation indicators of different studies (33,34). The clinical application of FTS concept in nursing intervention of EC patients after esophagoendoscopic total resection is not convincing. Therefore, in order to collect relevant information, we conducted a meta-analysis to evaluate the effectiveness of the FTS concept in patient care interventions after total endoscopic esophagostomy."**

2) The definition of the rapid rehabilitation surgical nursing model

What is the rapid rehabilitation surgical nursing model?

It is unclear what is the result of the meta-analysis.

The definition of the rapid rehabilitation surgical nursing model must be clearly stated in the method section.

**Response: Thanks very much for this suggestion. We added it. "Rapid rehabilitation surgical nursing model: On the basis of traditional nursing measures, FTS also mainly includes perioperative optimization measures for patients, such as preoperative health education, intraoperative infusion volume control, postoperative intestinal nutrition enhancement, rehabilitation, etc., which can reduce the physiological and psychological stress reactions caused by surgery".**

3) The contents of the rapid rehabilitation

What contents were included in interventional studies?

Rehabilitation is a very wide term, including early mobilization, pulmonary rehabilitation, muscle strength training, aerobic exercise, instruction of moving, nutrition therapy, and so on.

It is unclear what is the result of the meta-analysis.

So, rehabilitation content in each study must be clear in the results section or supplemental.

Response: Thanks very much for this suggestion. We added it “For these studies, rehabilitation includes Extubation time, Exhaust time, The out-of-bed time for activity, Hospitalization time, Pulmonary rehabilitation, muscle strength training, aerobic exercise, exercise instruction, nutritional therapy and so on.”.

4) The results of each study

The results using the number in each study (Extubation time; Exhaust time; Get-out-of-bed time; Hospitalization time; Complication; SAS score; SDS score) must especially be present in the table because these studies are very small number and low evidence quality studies, as well as have bias risk.

In this case, authors must interpret the results using not only the meta-analysis but also each concrete result.

Response: Thanks very much for this suggestion. We discussed about this in the manuscript.

Minor points

1) The application for Literature search

The application for Literature search has to be stated in the method section, for example, MEDLINE, EMBASE, PubMed, and so on.

Response: Thanks very much for this suggestion. We have it. “All articles on case-control trials about nursing interventions after total endoscopic esophagectomy published in PUBMED, EMBASE, MEDLINE and Cochrane libraries between January 2010 and December 2022 were searched by computer.”.

2) SAS score, SDS score

When is the measurement time point?

Time points have to be clear in the method section.

Response: Thanks very much for this suggestion. For SAS score and SDS score, they were measured in the included articles.

## Reviewer C

1. Please revise your Title to “A systematic review and meta-analysis”.

3 **Meta-analysis** of nursing effect of rapid rehabilitation surgery on patients

4 **undergoing total endoscopic resection of esophageal cancer: Fast-track recovery**

Response: Thanks very much for this suggestion. We did.

2. Please unify the time span in your abstract and main text.

33 after total endoscopic esophagectomy. The search time was set from **January 2010 to**

34 **May 2022.** The data were independently extracted by 2 researchers. **Inclusion criteria:**

145 All articles on case-control trials about nursing interventions after total endoscopic  
146 esophagectomy published in PUBMED, EMBASE, MEDLINE and Cochrane libraries  
147 between January 2010 and December 2022 were searched by computer. The relevant

Response: Thanks very much for this suggestion. We changed it.

3. The citation of references below should be (17-24).

225 complete data and failed to highlight the main findings; thus, ultimately 8 controlled  
226 trials comprising 613 samples were included in the meta-analysis (Figure 1 and Table  
227 1) (17-22).

Response: Thanks very much for this suggestion. We changed it.

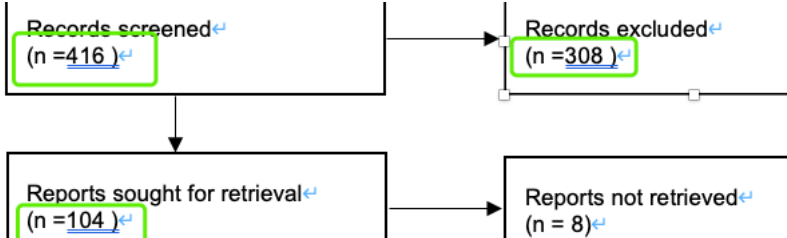
4. Please check if any more references need to be added in the below sentence since you mentioned “Studies”, but only one reference was cited. If not, “studies” should be changed to “a study/a previous study”.

126 psychological stress reactions caused by surgery (15). Several case-control studies have  
127 confirmed that nursing interventions based on the FTS concept can significantly  
128 facilitate the postoperative recovery of patients undergoing total endoscopic resection  
129 for EC (15). However, the conclusions drawn by different studies are not entirely

Response: Thanks very much for this suggestion. We changed it.

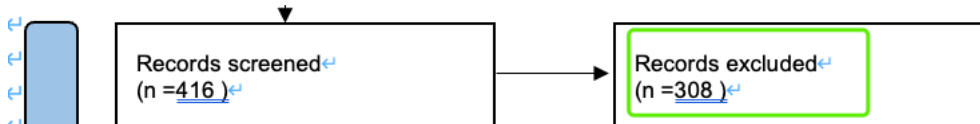
5. Figure 1:

1) The numbers are not equal.  $416 - 308 = 104$ ?



Response: Thanks very much for this suggestion. We have changed it.

2) Please indicate the specific reason for exclusion of 308 records.



Response: Thanks very much for this suggestion. We have changed it.

3) The numbers in your main text should match with your Figure 1. Please revise.

217 Based on a reading of the titles and abstracts of the articles, we retrieved 416 of the  
218 1,071 articles from a computer database. Among these, 655 articles were removed as  
219 the studies were did not meet the inclusion criteria, and 312 other articles were removed  
220 based on a reading of the titles and abstracts. Of the 104 remaining articles, 96 lacked  
221 complete data and failed to highlight the main findings; thus, ultimately 8 controlled  
222 trials comprising 613 samples were included in the meta-analysis (Figure 1 and Table

Response: Thanks very much for this suggestion. We have changed it.

6. Figure 3:

Please indicate the meaning of red, green, yellow dots in Figure 3 or Figure 3 legend.

Response: Thanks very much for this suggestion. We added it “Green: Low risk of bias; Yellow: Unclear risk of bias; red: High risk of bias.”

7. Figure 5:

There are only 6 studies in your Figure 5. Why in your main text, it's 8 studies?

240 A meta-analysis of the exhaust time was conducted. The heterogeneity test results  
241 indicated that there was a significant degree of heterogeneity among the 8 studies  
242 (Figure 5). An impressive reduction in the exhaust time was observed in the research

Response: Thanks very much for this suggestion. We modified it.

8. Quality assessment:

1) It's suggested to describe how to use the Cochrane assessment tool in **##Quality evaluation and data extraction** section.

Response: Thanks very much for this suggestion. We added that “Cochrane operation procedure: Risk of bias was determined by two reviewers according to the Cochrane Handbook for Systematic Review of Intervention version for RCTs. The following bias: selection bias, performance bias, detection bias, attrition bias, reporting bias and other bias were included. Discrepancies were discussed with a third reviewer.”.

2) It's not suggested to use Jadad scale to assess the quality. It's too old.

228 in detail how many subjects had missed interviews or withdrawn. Under the Jadad scale,  
229 a high-quality article had a score of  $\geq 3$ , and a low-quality article had a score of  $\leq 2$ .  
230 Figures 2,3 illustrate the results of the risk of bias analysis. ←

Response: Thanks very much for this suggestion. We changed it. The quality of the included literature was independently assessed by 2 reviewers using the Newcastle-Ottawa Scale (NOS). Articles with a NOS score of  $\geq 6$  were defined as high-quality articles. In case of disagreement, the two raters were resolved by discussion.

9. The below contents are repeated. It's unnecessary.

111 a number of clinical studies (11,12). For instance, Yang et al (13) described the clinical  
112 characteristics, treatment outcomes, and survival of surgical treatment in patients with  
113 esophageal cancer in Shanghai Chest Hospital (SCH). They revealed important surgical  
114 treatment effects of esophageal cancer patients and contributes to improvement of  
115 clinical management and future treatment development (13). However, patients may

312 rehabilitation time, are remarkable (29). Yang et al (13) described the clinical  
313 characteristics, treatment outcomes, and survival of surgical treatment in patients with  
314 esophageal cancer in Shanghai Chest Hospital (SCH). They revealed important surgical  
315 treatment effects of esophageal cancer patients and contributes to improvement of  
316 clinical management and future treatment development (13). When implementing care

Response: Thanks very much for this suggestion. We deleted one of them.