

Reviewer #1:

**Scientific Quality:** Grade C (Good)

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

**Conclusion:** Minor revision

**Specific Comments to Authors:** This Observational Study comprehensively analyzed the correlation between the SSRS, SAS, and SDS scores of primary caregivers of patients with AMI who underwent interventional surgery, based on Pearson's correlation analysis, multiple linear regression, ROC, and AUC, confirming that the social support function of primary caregivers is closely related to anxiety and depression, which is instructive for clinical intervention. This topic is actual and well described. The design of this study is very well. The Results are presented clearly and have been discussed well. Comments 1: Chinese norm is mentioned in this Results, and AMI caregivers are compared with Chinese norm. However, it is not found in the text how the Chinese norm is calculated or how it is obtained, and it is suggested to add. Comments 2. The DISCUSSION describes that "In addition, problems such as side effects of drugs and social discrimination can indirectly lead to primary caregivers' self-isolation... "Can drug side effects affect primary caregivers? Comments 3. as recorded in the section on Investigation methods, "A total of 329 questionnaires were sent out; 306 questionnaires were returned, and 300 effective questionnaires were obtained, with an effective rate of 91.19%". How is effective rate calculated? According to the reviewers, should the recovery rate of questionnaire be 93.01% and the effective rate be 98.04%? Comments 4. The "Standard error a" in Table 7 should be the "Standard error".

**Answer:** Thank you for your guidance and advice!

1. Both of the two norms used in this study refer to the core articles of Chinese science and technology, among which the SSRS scoring of Chinese norms refers to literature [10], and the SAS and SDS scoring of Chinese norms refers to literature [13], both of which have been clearly marked in the paper, see the yellow highlighted serial number of the paper. These two norms are based on the population of the whole country as a sample population, which has reference value.
2. It was verified that there was insufficient evidence of a relationship between drug side effects and the primary caregiver, so the expression of drug side effects here was deleted.
3. We have corrected the correct effective rate.
4. The errors in Table 7 have been modified.

Reviewer #2:

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

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

**Conclusion:** Minor revision

**Specific Comments to Authors:** Acute myocardial infarction is often treated with direct coronary intervention and requires home-based rehabilitation. Caregivers with AMI need adequate social support to maintain high-quality care. Bao J et al conducted an observational study on the relationship between primary caregivers' social support function, anxiety, and depression after interventional therapy for acute myocardial

infarction patients, and found the social support function of the primary caregiver of patients with AMI after interventional therapy was lower and negatively correlated with anxiety and depression of the primary caregiver. The paper is written well, the introduction gives a good overview about the study background and the authors raised clearly the hypothesis of the study. The description of material studied is accurate. The aim of the study is fulfilled. Also, the data in the Tables is also very well, but there are many abbreviations used in the table, so it is necessary to note the full name of the abbreviations. I recommend that the manuscript can be published after polishing the English.

**Reply: Thank you for your guidance and advice! We have annotated all the abbreviations in the tables and Figures.**