

Peer review file

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Reviewer A

This is an interesting topic. However, the clinical relevance is limited. In an acute setting patient personality is rarely researched.

The paper clearly states the limitations however the personality testing is highly subjective as well as testing for other symptoms including depression. It is fraught with bias. Checking for final of symptoms etc is also fraught with recall bias.

It is difficult to appreciate that with such significant delays in the female population without TDP the adverse outcomes were not significant - this belies the door to needle or door to balloon time that is recommended in cardiology. Can the authors explain this discrepancy?

Data is also acquired from a single ethnic background making It difficult to generalize.

Reply: Thanks very much for your meaningful comment. Patient related factors, especially the time of symptom occurrence, must be informed by the patient, so there is inevitable recall bias. In our study, trained personnel used triangulation to minimize this bias. Triangulation is a usage events from the patient's daily routine to help them establish the chronology of symptom-onset. Patients were asked to give a broad estimate of the time of symptom-onset, which was then further specified by placing it in relation to times of regular activities, meals, sleeping habits and other routines. This

technique has previously been developed and tested by Moser et al., who found that this technique enabled patients who did not initially remember onset-time to successfully recall it. We described this in detail in the MEDEA FAR-EAST study (Reference 16).

The relationship between delays and adverse outcomes has been revised (see Page 11, line 216-218 and Page 17, line 328-331,334-337).

Reviewer B

Comment 1: The paper is not well written. In particular, the different terms used to define the time intervals before hospital admission are often unclear and could confuse the reader: the definition of prehospital delay and decision time are clear, while it is not so for “delay time” and “patient delay”. More uniform definitions should be used.

Reply1: Thanks very much for your constructive advice. we have modified our text as advised (see Page 3, line 62; Page 4, line 63,64; Page 5, line 87,89,90,100; Page 7, line134; 140; Page 8, line144,146; Page 11, line204,205; Page 12, line227,228; Page 13, line248; Page 14, line266,270,272; Page 15, line298,306; Page 16, line322).

Comment 2: The Authors assessed the impact of the Type D personality on pre-hospital delay, which is partly composed of factors other than those related to patient’s personality, such as transport time. It should be more correct to focus the paper on the decision time, as other Authors did (see reference 26).

Reply 2: Thanks very much for your comment. Although there is currently no relevant literature evidence, we think that the transport time as part of the prehospital delay time also related to the patient's personality factors. According to our research, 28.6% of patients with TDP were transported to the hospital by ambulance, and only 18.8% of patients with non-TDP ($p=0.094$). Type D personality may be related to patients' choice of transportation to hospital, which indirectly related to the transport time. It may be more clinically significant to focus on prehospital delay time, and we also take the patient's decision time as one of the main results.

Comment 3: A previous AMI was present in 22 patients. This is an important factor affecting the decision time, so these patients should not be included in the study population.

Reply 3: Thanks very much for your comment. We included patients with AMI history in our study for the three reasons:

1. The impact of MI history on prehospital delays is still unclear. Indeed, study have reported that patients with MI history had shorter prehospital delays (see reference1 below), but other have shown that these patients with MI history do not seek medical help more promptly than patients suffering their first MI (see reference2 below).
2. In the real world, many patients with MI history still had prehospital delay at the second MI. Moreover, one study showed that patients with prehospital delay ≥ 120 min at the first MI were more likely to have a prehospital delay ≥ 120 min at the second MI

(see reference3 below).

3. In our study, the median PHT of these 22 patients was 168 min (25-1954min). Among them, up to 13 patients had a prehospital delay ≥ 120 min, which may lead to adverse clinical prognosis.

Reference

1. Ottesen MM, Dixen U, Torp-Pedersen C, Kober L. Prehospital delay in acute coronary syndrome--an analysis of the components of delay. *Int J Cardiol* 2004; 96: 97-103.
2. Henriksson C, Larsson M, Arnetz J et al. Knowledge and attitudes toward seeking medical care for AMI-symptoms. *Int J Cardiol* 2011; 147: 224-227.
3. Stromback U, Engstrom A, Lundqvist R et al. The second myocardial infarction: Is there any difference in symptoms and prehospital delay compared to the first myocardial infarction? *Eur J Cardiovasc Nurs* 2018; 17: 652-659.

Comment 4: The Authors stratified their analyses by sex on the basis of a significant synergistic effect of TDP and sex on delay time. However, since the percentage of women living alone was higher (41.7% vs. 9.8%) and TDP subjects were more likely to live alone, the synergistic effect could be due to living alone rather than to sex difference. This point should be evaluated.

Reply 4: Thanks very much for your constructive advice. We further analyzed the interaction between living alone and TDP on $DT > 60$ min ($p=0.440$),

PHT>120min(p=0.539), PHT>360min(p=0.471) and PHT of 5 classification(p=0.551), but found no statistically significant relationship.

Comment 5: The Authors state that only one study (reference 26) investigated the impact of TDP on delay outcomes: this paper evaluated the pre-hospital decision delay, reaching an opposite conclusion (“TDP may be a risk factor for more delayed help-seeking”). These opposite results should be mentioned and discussed.

Reply 5: Thanks very much for your meaningful comment. We have revised this part. we have modified our text as advised (see Page 14-15, line284-295).

Comment 6:

Minor points

1. Line 208: the percentages in brackets must be inverted

Reply: We have revised this part. we have modified our text as advised (see Page 12, line238).

2. Page 8: all the Authors of the papers cited are followed by the year of publication. It is not necessary.

Reply: We have revised this part. we have modified our text as advised (see Page15-16, line296,299,300,306,309).

3. Page 12: References 25 and 27 are exchanged.

Reply: We have revised this part. we have modified our text as advised (see Page24 line460-462; Page25 line467-470).