Author’s response to reviews

Title: Examining the association of career stage and medical specialty with personality preferences - a cross-sectional survey of junior doctors and attending physicians from various specialties

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Point-by-point response of MEED-D-19-00403

Examining the association of career stage and medical specialty on personality preferences - a cross-sectional survey of junior doctors and attending physicians from various specialties

Reviewer 1

General comments: The research topic of this manuscript is of potential interest and importance in medical education. However, the whole paper still needs to be improved to ensure its correctness before final publication. I provided a number of specific comments below that I hope they are helpful.

Ans: Thanks for your specific comments on improving the quality of this paper.

1. To restructure some parts in the manuscript, for example, -- You don't need to re-state aim of the study in the Methods; you have already illustrated it in the second paragraph of Background section. -- Please replace the sub-section "Characteristics of participants" with a paragraph that focused on how you conducted this convenient sampling, because this is in the "Methods" part instead of the "Results". In addition, a sentence "The sample size was predetermined according
to previous MBTI studies (12, 23)" in the sub-section "Statistical analysis" should be combined with this sampling sub-section.

Ans: Thanks for your great comments. We have revised the methods section based on your suggestions. We have replaced the "Characteristics of participants" with a subsection entitled “Participants”, which focuses on how we conducted the convenience sampling and our rationale behind our recruitment process. The sentence “The sample size was predetermined according to previous MBTI studies (19, 20)” was appropriately relocated.

The revised content is as follows:

Study design and setting

Our cross-sectional study utilized the Myers Brigg Type Indicator (MBTI) instrument for personality assessment and included junior doctors (post-graduate year 1-3) and attending physicians. The sample size was predetermined according to previous studies wherein the MBTI was deployed (19, 20). Convenience sampling was used. The study was conducted between August 1st, 2015 and July 31st, 2016 at Chang-Gung Memorial Hospital, Linkou branch, a large 3800-bed tertiary private multispecialty medical center located in an urban area in North Taiwan. Ethical approval for this study was obtained from the Chang Gung Memorial Hospital and Chang Gung University Institutional Review Board (103-7538B). Participation was voluntary, informed consent was gained and participants’ anonymity is protected.

Participants

Attending physicians from internal medicine, pediatrics, surgery, obstetrics and gynecology (OB/GYN), EM and family medicine were recruited. These six key medical specialties were chosen because they tend to encompass a high proportion of attending physicians. Notably, in the United States these six specialties are in the top nine specialties, in terms of number of physicians (21). These specialties encompass 66% of working physicians in the United Kingdom (22) and 72% in Australia (23). In Taiwan these medical specialties are similarly prominent and all medical graduates are, in fact, required to participate in a clinical rotation curriculum in the aforementioned specialties (24). When taking into account the prominence of these six medical specialties, their inclusion in our sample of attending physicians was an important element of building a representative sample of attending physicians’ personality preferences. From here on these specialties will be referred to as surgical specialties (surgery and OB-GYN), EM and non-surgical specialties (family medicine, pediatrics and internal medicine). By differentiating between surgical, non-surgical and EM, our study attempted to consider if any distinctions, between attending physicians, could be noted. Junior doctors do make provisional specialty choices, however these provisional choices will not be considered in our research.

2. You stated in the "Limitation" sub-section that "the sample size for each of the specialties was relatively small," while I do care about the sample representativeness of physicians in this study.
Reviewer 1 highlights that it might be selection bias in our quantitative study if the representative sample is not a subset of a population (physicians) that accurately reflect the characteristics of the larger group. With respect to this problem, it is difficult to infer the polarization of personality preferences between junior doctors and attending physicians, or to discuss the associations between professional development and personality preference. Therefore the true limitation this manuscript needs to defense is the samples' representative. The authors do need to carefully think about it and give us more evidences and reasons about this study sample.

Ans: Thanks for your great comments about the sample representativeness of physicians in this study.

a. The convenience sampling in our study means that we invited attending physicians from internal medicine, pediatrics, surgery, obstetrics and gynecology (OB/GYN), EM and family medicine physicians. These six key medical specialties were chosen because they tend to encompass a high proportion of attending physicians, which is supported by references cited in the manuscript. We hope that our clarification of why we recruited attending physicians from the aforementioned specialties demonstrates that the rationale behind our recruitment process and clarifies the concern that our sample does not “reflect the characteristics of the larger group” (Reviewer 1).

b. We have also added the number of participants enrolled from these six specialties into the first paragraph of the results section and categorized them into surgical related, nonsurgical related and emergency physicians. We have included the following sentence in our final manuscript:

The study included 59 attending physicians, comprised of 23 non-surgical physicians (12 internists 6 pediatrics and 5 family medicine physicians); 18 EPs; and 18 physicians from surgical specialties (14 surgeons and 4 OB-GYNs).

The content of the manuscript, table 2 and figure 1 were revised accordingly.

3. The language issues are still very common in revised manuscript. A number of fragmented sentences confused me with its meaning, for example, "This study was a cross-sectional survey study…” or "Junior doctors, which included postgraduate year (PGY) 1-3, and attending physicians, who were qualified specialists from various specialties, were invited to participate." I strongly suggest that the native speakers could make efforts to thoroughly revise manuscript.

Ans: Thanks for your great comments. We have invited a native speaker to check and edit the revised manuscript thoroughly. The characteristics of the participants were clearly addressed in subsection ‘Study design and setting’ and ‘Participants’.

The two sentences you have highlighted have been changed to ensure clarity.
“Our cross-sectional study utilized the Myers Brigg Type Indicator (MBTI) instrument for personality assessment and included junior doctors (post-graduate year 1-3) and attending physicians.“

“Attending physicians from internal medicine, pediatrics, surgery, obstetrics and gynecology (OB/GYN), EM and family medicine were recruited. These six key medical specialties were chosen because they tend to encompass a high proportion of attending physicians.”

Thank you again for your precious time and valuable comments.

With kind regards,

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