

## Authors' Responses to the Comments on "Leisure Time Physical Activity and Risk of Developing Depression among the Youth of Kangra District, Himachal Pradesh, India"

Sir,

We thank Suhas *et al.*<sup>[1]</sup> for their interest in our article.<sup>[2]</sup> The authors of the letter have used the term "prospective study," which does not seem appropriate to us. Although the characteristic or exposure (leisure time physical activity) is being studied at the time of the study, it becomes a cross-sectional study.

Their critical comment on using less number of confounders is valid. However, it is important to note that the setting where the study participants were approached was in itself a limitation because of which the socio-demographic details of the family cannot be elicited. We agree that the study breaks no new grounds in the field of studies on physical activity and mental health, but the majority of studies have been conducted in a socio-cultural environment different from India, especially this part of the country (sub-Himalayan region). Factors affecting mental health differ in different settings. Hence, to proceed with any intervention, we needed a ground work on the same in this region. Therefore, to that extent, this study is a useful addition to the medical literature.

We also agree that the scale has not been validated for our country and that different cut-offs have varying sensitivity and specificity. The shorter version (10-item scale) is generally used for late-life depression.<sup>[3]</sup> We intentionally used the original scale

to introduce all the items to the study participants. The primary reason for doing this was that this study would serve as a base for further validating the scale in our settings.

According to the authors of the letter, the participants with depression should not have been excluded from the study. We, however, differ from this statement as the chronic morbidity and mental illness of any type will skew our data toward depression, giving a false result in favor of increased depression. Our objective was to study an apparently healthy population. The categorization of physical activity and depression scores was done to compare the results with other studies. However, we presented the mean scores of depression scale score in our results. We do agree that categorization of continuous variables may increase the possibility of type two error.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

**Mitasha Singh, Piyush Sharma<sup>1</sup>, Des Raj<sup>1</sup>,  
Shailja Sharma<sup>1</sup>, Ankush Kaushal<sup>1</sup>, Sunil K. Raina<sup>1</sup>**

Department of Community Medicine, ESIC Medical College, Faridabad, Haryana, 'Department of Community Medicine, DR. RP Govt. Medical College, Tanda, Kangra, Himachal Pradesh, India


**Address for correspondence:** Dr. Sunil K. Raina  
 Department of Community Medicine, DR. RP Govt. Medical College, Tanda, Kangra - 176 001, Himachal Pradesh, India.  
 E-mail: ojasrainasunil@yahoo.co.in

Questionnaire-9 (PHQ-9). *Arthritis Care Res.* 2011;63:454-66.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**REFERENCES**

1. Suhas S, Chakravarty RK, Ransing R, Vadlamani N, Andrade C. Comments on "Leisure time physical activity and risk of developing depression among the youth of Kangra district, Himachal Pradesh, India". *Indian J Psychol Med* 2019;41: 93-4.
2. Singh M, Sharma P, Raj D, Sharma S, Kaushal A, Raina SK. Leisure time physical activity and risk of developing depression among the youth of Kangra district, Himachal Pradesh, India. *Indian J Psychol Med* 2018;40:426-32.
3. Smarr KL, Keefer AL. Measures of depression and depressive symptoms: Beck Depression Inventory-II (BDI-II), Center for Epidemiologic Studies Depression Scale (CES-D), Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS), and Patient Health

Access this article online	
<b>Website:</b> <a href="http://www.ijpm.info">www.ijpm.info</a>	<b>Quick Response Code</b> 
<b>DOI:</b> 10.4103/IJPSYM.IJPSYM_474_18	

**How to cite this article:** Singh M, Sharma P, Raj D, Sharma S, Kaushal A, Raina SK. Authors' responses to the comments on "leisure time physical activity and risk of developing depression among the youth of Kangra District, Himachal Pradesh, India". *Indian J Psychol Med* 2019;41:94-5.  
 © 2019 Indian Psychiatric Society - South Zonal Branch | Published by Wolters Kluwer - Medknow