

INTRODUCTION and METHOD

With the development of technology, there is an ever-increasing ownership and use of electronic devices, especially smartphones. The mentioned trend is particularly distinct among young people. The use of electronic devices is associated with problems in adolescent sleep, which is already subjected to many challenges due to biological changes, and with the area of academic engagement. Our study aimed to explore whether smartphone addiction predicts academic engagement and subjective sleep parameters. Furthermore, we wanted to explore whether specific subjective sleep parameters could explain the relationship between average time spent on a smartphone and academic engagement in a high school sample, which was evaluated cross-sectionally.

This prospective study was conducted on Slovenian high school students. Over 500 participants aged between 15 and 20 years old (78 % female) responded to sleep quality, daytime sleepiness, academic engagement, and the risk of smartphone addiction-related questions in an online survey.

RESULTS

Our preliminary results show that most high school students (77 %) do not sleep within the recommended time frame of at least eight hours per night. Most (95 %) use smartphones in the last hour before bedtime. Multiple regression analyses revealed that the average time spent on a smartphone and its use in the last hour before bedtime significantly predicts smartphone addiction and that smartphone addiction significantly predicts academic engagement, sleep efficiency, perceived sleep quality, daily dysfunction due to sleepiness, and sleepiness during the day. Furthermore, moderation analyses revealed that perceived sleep quality, daily dysfunction due to sleepiness, and daytime sleepiness moderate the relationship between average time spent on a smartphone and academic engagement.

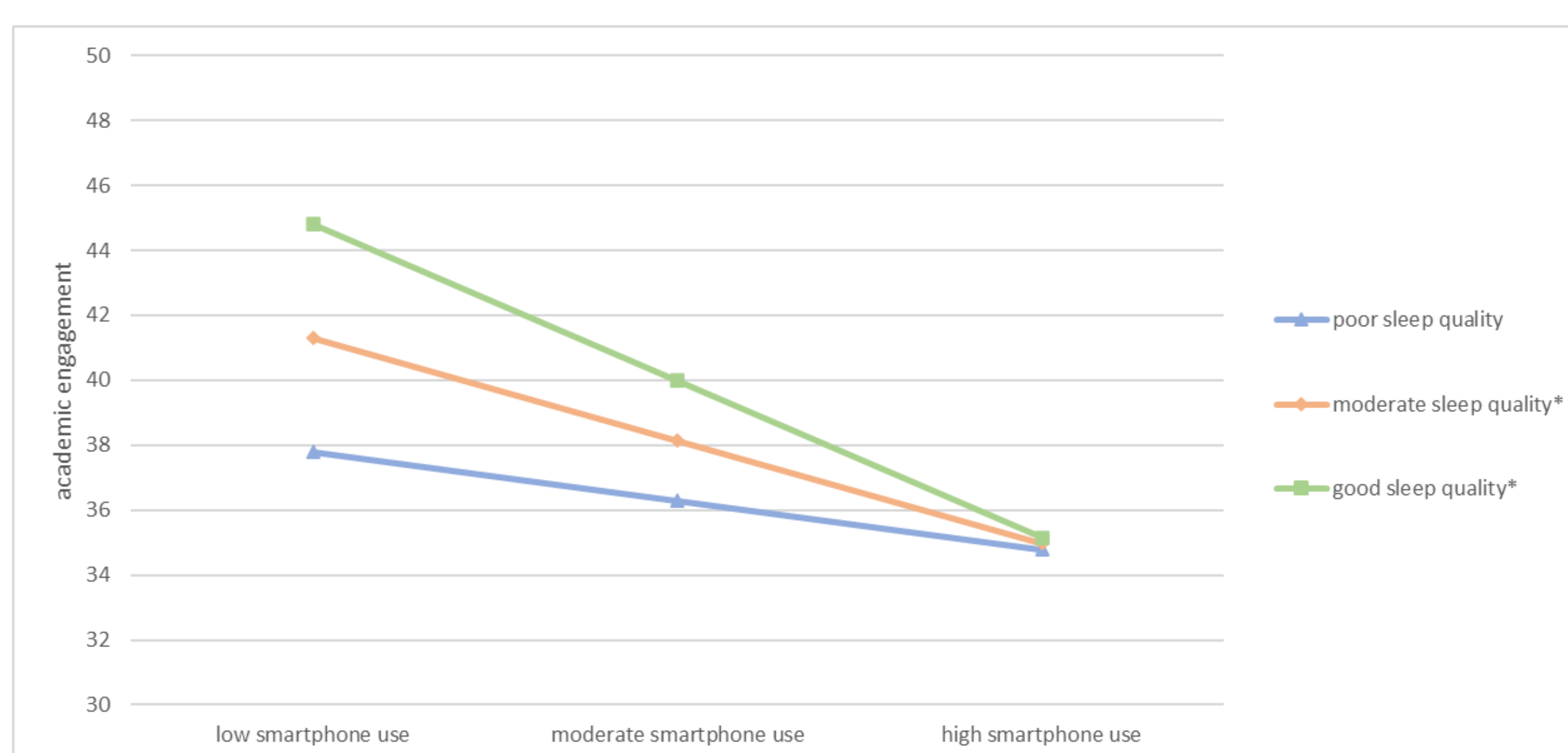


Fig. 1 Academic engagement in adolescents with low, moderate and high smartphone use with low, moderate and high sleep quality; *significant moderation effect

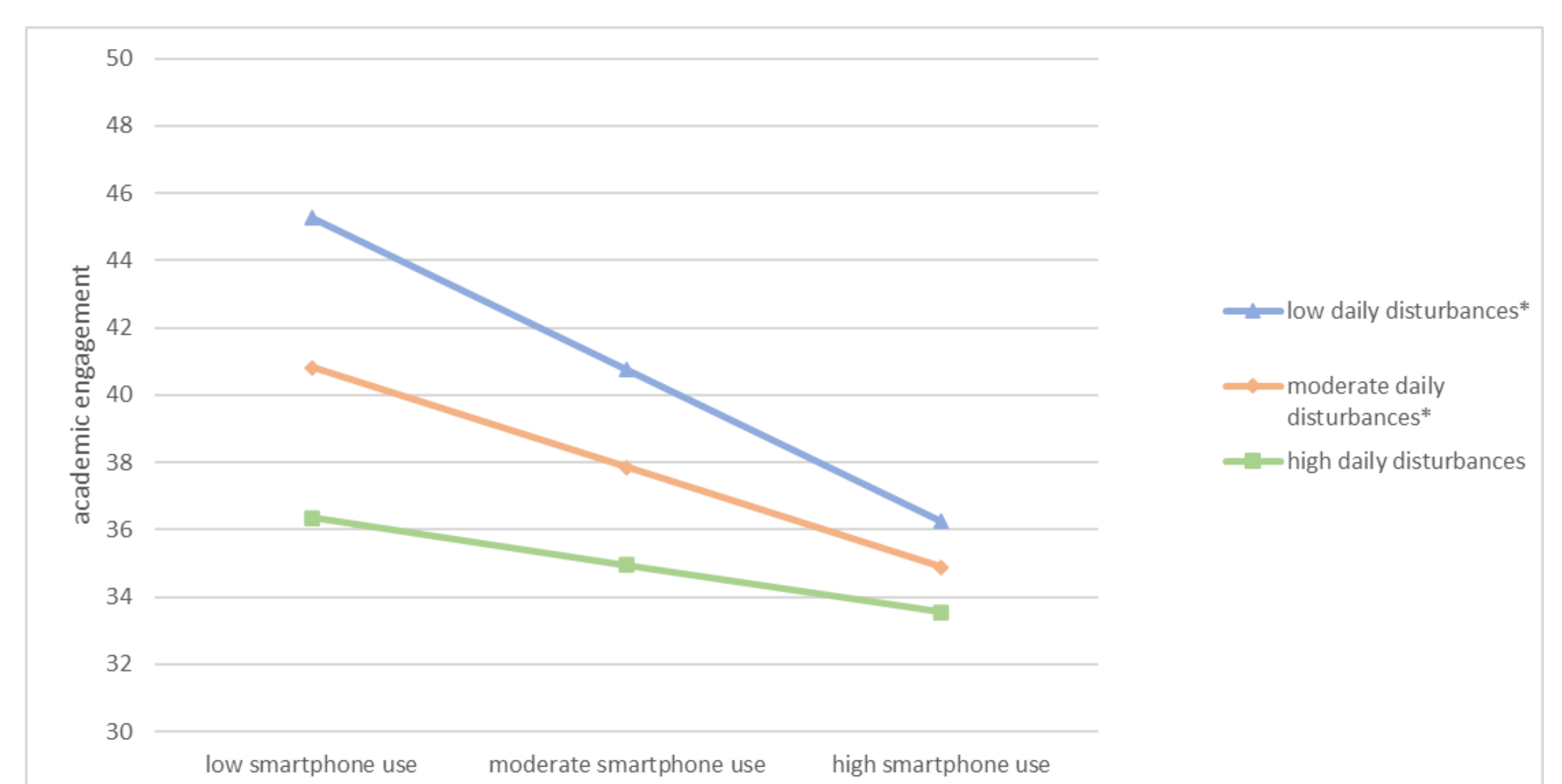


Fig. 2 Academic engagement in adolescents with low, moderate and high smartphone use with low, moderate and high daily disturbances due to sleepiness; *significant moderation effect

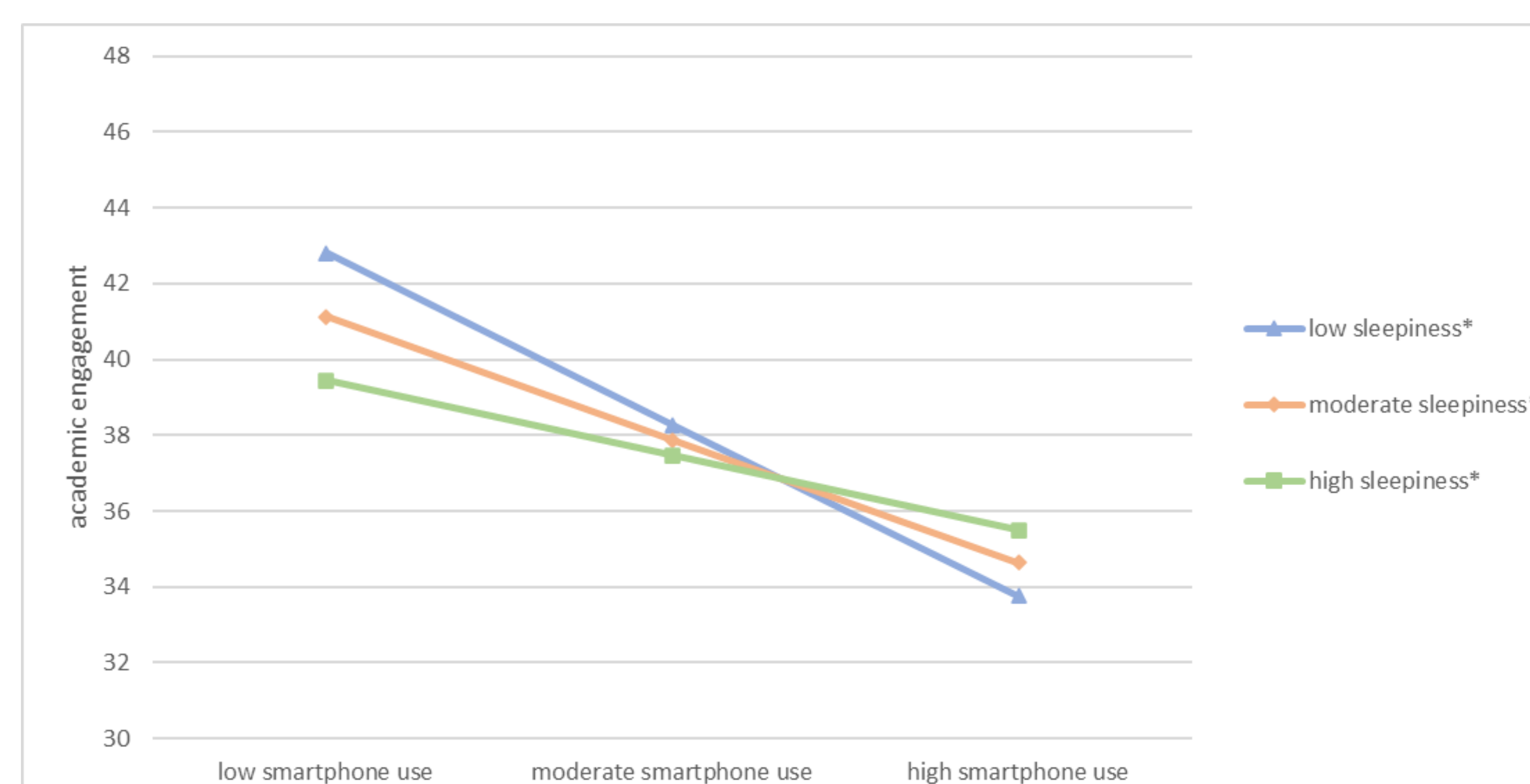


Fig. 3 Academic engagement in adolescents with low, moderate and high smartphone use with low, moderate and high daytime sleepiness; *significant moderation effect

CONCLUSION

Our data confirm evidence of an adverse effect of smartphone addiction on academic engagement and sleep. Preliminary results also highlight the potential role of different subjective sleep parameters in predicting time spent on smartphones and academic engagement. Our study highlights the importance of sleep, its challenges during adolescence, and its effects on academic engagement and smartphone use – sleep strengthens relationship, in which more time spent on smartphones leads to lower academic engagement.

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