



[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. Shnakhat, 3(3).  
<https://shnakhat.com/index.php/shnakhat/article/view/316>

## Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults

Dr. Sumaya Batool<sup>1</sup>

Sadia Saeed<sup>2</sup>

Fatima Shah<sup>3</sup>

Department of Psychology, University of Sargodha at- [sumaya.batool@uos.edu.pk](mailto:sumaya.batool@uos.edu.pk)

Department of Psychology, University of Sargodha at- [msaeedsadia@gmail.com](mailto:msaeedsadia@gmail.com)

Department of Psychology, University of Sargodha at- [fatimashaah2020@gmail.com](mailto:fatimashaah2020@gmail.com)

### Abstract

The present study aimed to investigate the impact of sedentary behavior on compensatory health beliefs among adolescents and adults. The study employed a correlational survey research design and sampled 300 adolescents and adults (N = 300), comprising 150 girls (n = 150) and 150 boys (n = 150), aged between 13 and 45 (M = 1.54, SD = 1.50). The sample was drawn from Sargodha and Shaheenabad using convenient sampling technique. Psychometrically sound self-report measures in the English language including the Sedentary Behavior Questionnaire and the Compensatory Health Beliefs Questionnaire were administered on the participants for measuring sedentary behavior and compensatory health beliefs respectively. Analysis revealed that all measure had satisfactory levels of internal consistency and majority of variables were related to one another in hypothesized directions. Sedentary behavior is positively correlated with Compensatory health beliefs. Limitations of the present study have been highlighted in this dissertation. Suggestion for future research and the implications of the results of the present study have been reflected upon.

**Keywords:** Sedentary Behavior, Compensatory Health Beliefs.

### Introduction

Prolonged periods of inactivity can have a profound impact on our emotional state, leading to increased anxiety, depression, and mood disturbances. When we fail to engage in regular physical activity, our brain's ability to regulate emotions is impaired, making it more challenging to manage stress and maintain emotional balance. Sedentary behavior can also disrupt the production of essential neurotransmitters,

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

such as serotonin and dopamine, which play a critical role in mood regulation. This disruption can lead to decreased emotional resilience and increased symptoms of depression and anxiety.

### Sedentary behavior

Sedentary behavior is characterized by activities that require minimal physical effort, typically involving sitting, reclining, or lying down. These low-energy pursuits can include screen time, socializing while seated, and other leisure activities that don't require much movement.

Icek Ajzen's Theory of Planned Behavior (TPB) helps us understand sedentary behavior through three key factors: personal attitudes, social influences, and perceived self-efficacy. These factors shape intentions and behavior, enabling us to predict and address sedentary behavior. By understanding TPB, we can promote healthier lifestyles and well-being (Prapavessis et al., 2015). Social Cognitive Theory shows how beliefs, environment, and health outcomes intersect. When people trust their ability to manage their well-being and understand the benefits, they're more likely to adopt active lifestyles. Confidence in their abilities and a clear understanding of benefits drive positive change. This insight helps us understand healthy behavior (Wilkerson et al., 2023).

### Emotional Dysregulation

The term "emotional dysregulation" refers to problems in efficiently controlling and regulating feelings. It may show itself as intense and erratic mood swings, trouble managing one's emotions, and feeling feelings that are out of proportion to the circumstances (Weilenmenn et al., 2018). According to the biosocial model in Dialectical Behavior Therapy (DBT), emotional dysregulation stems from a complex interplay between innate emotional sensitivity and adverse environmental influences. This framework proposes that individuals struggling with emotional regulation may face challenges due to a combination of biological predispositions and environmental factors that fail to provide validation and support (The Biosocial Model in DBT: Emotion Dysregulation and Invalidating Environments - Psychotherapy Academy, 2023).

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

### Studies on researches on relationship between study variables

"Spending too much time sitting or engaging in inactive pursuits has been shown to have a profound impact on mental wellbeing, leading to difficulties in managing emotions and increased symptoms of depression. This correlation has been observed in both young people and adults, suggesting that regular physical activity plays a crucial role in maintaining emotional balance and mitigating the risk of depression (Zou et al., 2023). Research has also revealed a connection between sedentary behavior and anxiety in college students, with negative emotions serving as a key factor in this relationship. In other words, excessive sitting and inactivity can lead to increased negative emotions, which in turn contribute to heightened anxiety levels in academic settings (Wen et al., 2023). Studies in adults have revealed a significant inverse relationship between sedentary behavior and positive emotional states, independent of physical activity levels. In contrast, research in pregnant women has shown that engaging in regular moderate-to-vigorous physical activity is associated with reduced symptoms of depression. These findings suggest that reducing sedentary behavior and increasing physical activity may be important targets for promoting emotional wellbeing in adults and vulnerable populations like pregnant women (Rodriguez-Ayllon et al., 2021).

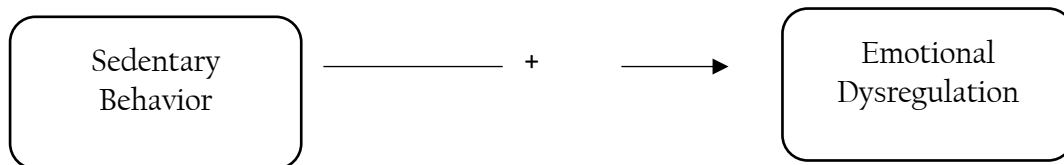
### Rationale

Sedentary behavior has a profound influence on emotional well-being in adolescents and adults. Studies have consistently identified a link between excessive screen time and increased symptoms of depression, anxiety, and psychological distress. Adolescents who engage in prolonged screen-based activities, exceeding 2-3 hours daily, are particularly vulnerable to emotional dysregulation. Furthermore, sedentary behavior has been linked to reduced self-esteem and increased suicidal ideation, emphasizing its significant impact on mental health. Importantly, the negative effects of sedentary behavior on emotional well-being are independent of physical activity levels, highlighting the need to address sedentary behavior as a distinct risk factor. Encouraging physical activity and reducing sedentary behavior can help mitigate emotional dysregulation, promoting overall mental well-being.

### Conceptual Framework

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

Figure I



**Objectives**

The current research has following objectives

1. TO investigate the impact of sedentary behavior on emotional dysregulation among adolescents and adults.
2. To identify demographic and psychosocial factors that may influence these relationships among adolescents and adults.

**Hypotheses**

- H1. There will be a significant relationship between Sedentary Behavior and Emotional Dysregulation among adolescents and adults.
- H2. Sedentary behavior will positively predict emotional dysregulation among adolescents and adults.
- H3. There will be significant differences among adolescents and adults regarding sedentary behavior and emotional dysregulation.

**Operational Definition**

**Sedentary Behavior**

A sedentary behavior is any awake behavior that involves little physical activity or energy expenditure (usually less than 1.5 metabolic equivalents [METs]) without interruption while sat down or lying position. Definition, operationally, sedentary behavior can be measured using validation self-reported measure such as (sedentary behavior Questionnaire). Higher scores on sedentary behavior questionnaire indicate a greater tendency of sedentary behavior while low scores indicate lesser degree of sedentary behavior. (Rosenberg DE et al., 2017).

**Emotional Dysregulation**

Emotional dysregulation is characterized by difficulties managing, controlling, or expressing emotions in effective and socially appropriate ways. People who suffer from emotional dysregulation may find it difficult to control their emotions, which can cause changes in their behavior, mood, and interpersonal interactions. Definition,

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

operationally, emotional dysregulation can be measured using validation self-reported measure such as (Brief Emotion Dysregulation scale). Higher scores on (Brief Emotion Dysregulation scale indicate a greater tendency of emotional dysregulation while low scores indicate lesser degree of emotional dysregulation (Wycoff et al., 2023).

### **Method**

This chapter is presenting the methodological explanation of the research. It gives the details of research design, sample, instruments and procedure of present research.

### **Research Design**

For current investigation, the survey research design was employed. This type of design is quantitative and non – experimental, enabling researchers to analyze numerous variables of interest simultaneously and establish connections among them.

### **Sample**

The sample of the present study consists of 300 adolescents and adults. The convenient sampling technique was used for data collection purpose. The respondents were Girls (n = 150) and Boys (n = 150) aged between 13 and 45 (M = 1.54, SD = 1.50). The sample was drawn from Sargodha and Shaheenabad demographic variables gender, age, education, residence was measured.

### **Demographic Data Form**

This form was designed for the collection of the information that is required for this research; this include information related to the gender, age, education, birth order and residence. Before collecting data through survey, the participants were asked to take them inform consent to assure them that their personal information will be utilized solely for research aims.

### **Instruments**

Following instruments were used for present research.

#### **Sedentary Behavior Questionnaire**

This scale was used to check sedentary behavior developed by Rosenberg DE et al., (2010). It is a 9-point Likert scale from 0 (none) to 6 (6 hrs or more). All items have significant high reliability ( $\alpha = 0.85$ ). Validity was significantly correlated.

#### **Brief Emotion Dysregulation Scale**

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

The BEDS is aimed at capturing the essence of emotion dysregulation, developed by author T.J.T., an expert on emotion dysregulation. This scale consists of 8 items scored on 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). All questions has significant high reliability and validity ( $\alpha = 0.84$ ).

### Procedure

Participants were recruited with the help of key informants and provided informed consent after receiving a thorough briefing on the study's purpose and ethical guidelines. The researcher administered questionnaires, ensured comprehensive responses, and expressed gratitude to participants for their involvement.

### Ethical Considerations

Participants received a detailed disclosure explaining the study's objectives, methods, and potential risks, as well as their rights and freedoms. They were assured of their ability to withdraw at any time without penalty and that their data would be kept confidential and used solely for research purposes. The informed consent process emphasized autonomy, confidentiality, and the importance of the research.

### Results

The present study aimed to examine the impact of Sedentary Behavior on Emotional Dysregulation among adolescents and adults. Data analysis was carried out using SPSS-26. Pearson correlation was computed to examine the relationship between variables. Linear regression analysis was applied to examine the impact sedentary behavior on emotional dysregulation. Then Independent sample t-test was applied to compare means on the basis of gender, family system and residence. Finally, One-Way ANOVA was applied to examine mean differences of adolescents and adults on the basis of education.

Table 1

*Pearson Correlation among Study Variables*

Variables	1	2
1. SB	–	.27**
2. ED		–

Note. SB = Sedentary behavior, ED = Emotional dysregulation

\*\* $p < .01$

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

Table 1 shows Pearson correlation among study variables. The findings indicate that Sedentary behavior has significant positive correlation with emotional dysregulation ( $r = .27, p < .01$ ).

**Table 2**

*Regression Coefficient on the Effect of Sedentary Behavior on Emotional Dysregulation*

Variables	B	$\beta$	SE
Constant	26.86***		0.74
Sedentary Behavior	0.02**	0.15	0.02
R <sup>2</sup>	.05**		

\* $p < .01$ . \*\*\* $p < .001$ .

Table 2 shows simple linear regression analysis with sedentary behavior as predictor variable and emotional dysregulation as outcome variable. The R<sup>2</sup> value of .05 indicate that 5% variance in the dependent variable explained by the predictor with  $F(1,298) = 1.72, p < .01$ . The findings indicate that sedentary behavior has significant positive effect on emotional dysregulation ( $\beta = 0.15, p < .01$ ).

**Table 3**

*Mean, Standard Deviation and t-Values for Men and Women on Sedentary Behavior and Emotional Dysregulation*

Variables	Men		Women		t(298)	p	Cohen's d
	M	SD	M	SD			
SB	30.52	13.24	34.80	13.77	2.75	.006	0.32
ED	25.97	4.07	24.98	5.98	1.67	.096	0.19

Table 3 shows mean, standard deviation and t-values for men and women on sedentary behavior and emotional dysregulation. Results indicate significant mean differences with  $t(298) = 2.75, p < .01$ . The findings show that women exhibited higher mean scores on sedentary behavior ( $M = 34.80, SD = 13.77$ ) as compared to men ( $M = 30.52, SD = 13.24$ ). The value of Cohen's d was .32 ( $< .20$ ) which indicate small effect size.

**Table 4**

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

*Mean, Standard Deviation and t-Values for Nuclear family system and Extended family on Sedentary Behavior and Emotional Dysregulation*

Variables	Nuclear		Extended		t(298)	p	Cohen's d
	M	SD	M	SD			
SB	36.58	12.17	28.68	13.96	5.23	.000	0.60
ED	24.63	6.53	26.33	2.92	2.90	.004	0.34

Table 4 shows mean, standard deviation and t-values for nuclear and extended family system on sedentary behavior and emotional dysregulation. Results indicate significant mean differences with  $t(298) = 5.23, p < .001$ . The findings show that nuclear family system exhibited higher mean scores on sedentary behavior ( $M = 36.58, SD = 12.17$ ) as compared to extended family system ( $M = 28.68, SD = 13.96$ ). The value of Cohen's  $d$  was .60 ( $> .20$ ) which indicate medium effect size.

**Table 5**

*Mean, Standard Deviation and t-Values for Urban areas and Rural areas on Sedentary and Emotional Dysregulation*

Variables	Rural		Urban		t(298)	p	Cohen's d
	M	SD	M	SD			
SB	36.92	12.13	28.67	13.83	5.48	.000	0.65
ED	25.07	6.35	25.58	3.62	1.32	.087	0.15

Table 5 shows mean, standard deviation and t-values for urban and rural area on sedentary behavior and emotional dysregulation. Results indicate significant mean differences with  $t(298) = 5.48, p < .001$ . The findings show that rural exhibited higher mean scores on sedentary behavior ( $M = 36.92, SD = 12.13$ ) as compared to urban area ( $M = 28.67, SD = 13.83$ ). The value of Cohen's  $d$  was .65 ( $> .20$ ) which indicate moderate effect size.



[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

**Table 6**

*Mean, Standard Deviation and F-value for Adolescents and Adults Belonging to Three Education Level on Sedentary Behavior and Emotional Dysregulation*

variable	Metric		Intermediate		Bachelor		F (2, 297)	$\eta^2$	Post-Hoc
	M	SD	M	SD	M	SD			
SB	29.12	15.18	36.10	10.48	32.78	14.02	6.62**	0.04	1<2>3
ED	25.61	2.99	26.53	4.07	24.37	7.05	4.61*	0.03	1<2>3

\*p < .05. \*\*p < .01.

Table 6 shows mean, standard deviation and F-value for adolescents and adults belonging to three education level on sedentary behavior and emotional dysregulation. The findings indicate significant mean differences on binge-watching among adolescents and adults with  $F(2, 297) = 23.88, p < .001$ . The findings indicate significant mean differences on sedentary behavior among adolescents and adults with  $F(2, 297) = 6.62, p < .01$ . The finding indicate that sample belong to intermediate ( $M = 36.10, SD = 10.48$ ) significantly scored higher on sedentary behavior as compare to sample belong to bachelor ( $M = 32.78, SD = 14.02$ ) and metric ( $M = 29.12, SD = 15.18$ ). the value of  $\eta^2$  was .04 ( $< .20$ ) which indicate no effect size. Post-hoc test revealed significant mean differences in pair wise comparisons. The findings indicate significant mean differences on emotional dysregulation among adolescents and adults with  $F(2, 297) = 4.61, p < .05$ . The finding indicate that sample belong to intermediate ( $M = 26.53, SD = 4.07$ ) significantly scored higher on emotional dysregulation as compare to sample belong to metric ( $M = 25.61, SD = 2.99$ ) and undergraduate/graduate ( $M = 324.37, SD = 7.05$ ). The value of  $\eta^2$  was .03 ( $< .20$ ) which indicate no effect size. Post-hoc test revealed significant mean differences in pair wise comparisons.

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. Shnakhat, 3(3). <http://shnakhat.com/index.php/shnakhat/article/view/316>

## Discussion

In recent years, sedentary behaviour have grown in popularity among adults and teenagers. The aim of this discussion is to investigate how sedentary behavior may impact adolescents' and adults' emotional dysregulation. A total of 300 sample of adolescents and adults were recruited for the study. Sedentary behavior questionnaire and the brief emotion dysregulation questionnaire were used to measure sedentary behavior and emotional dysregulation among adolescents and adults respectively. The very first hypothesis suggested that there will be a significant relationship between Sedentary Behavior and Emotional Dysregulation among adolescents and adults. Findings from current study supported this hypothesis and these findings were consistent with the literature review.

The second hypothesis suggested that sedentary behavior will positively predict emotional dysregulation among adolescents and adults. A research “A Cross-Sectional Association Between Screen-Based Sedentary Behavior and Anxiety in Academic College Students: Mediating Role of Negative Emotions and Moderating Role of Emotion Regulation” (Wen et al., 2023) suggests that sedentary behavior is a positive predictor of negative emotions and emotional dysregulation among adolescents and adults. The third hypothesis suggested that there will be significant differences among adolescents and adults regarding sedentary behavior and emotional dysregulation. Studies have shown that adolescents tend to experience a wider range of emotions, both positive and negative, with greater frequency and intensity compared to adults, suggesting a more emotionally dynamic and sensitive period of development (Bailen et al., 2018).

## Conclusion

Sedentary behavior harms emotional regulation in adolescents and adults, increasing depression and anxiety. Adolescents are most vulnerable, due to complex factors. Physical activity improves mood and emotional wellbeing. Encouraging activity and reducing sedentary behavior is essential for healthy emotional regulation.

## Limitations

The results of this study are limited since it relies on simple statistics, has a small sample size, and uses a small number of variables that might not fully reflect the

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

population. Additionally, bias may be introduced and the results' capacity to be applied broadly may be limited by the use of self-reported measurements and a narrow emphasis.

### Implications

Despite the shortcomings noted above, the current study has important theoretical implications as social psychologist, family counsellor, child and adolescent's counsellor and school counsellor can use this to reduce sedentary behavior and emotional dysregulation.

### Suggestions

To strengthen future researches we can use advanced statistics, different areas to increase external validity and mixed methodology to make our research more comprehensive.

### References

Bailen, N. H., Green, L. M., & Thompson, R. J. (2018). Understanding Emotion in Adolescents: A Review of Emotional Frequency, Intensity, Instability, and Clarity. *Emotion Review*, 11(1), 63–73. <https://doi.org/10.1177/1754073918768878>

Prapavessis, H., Gaston, A., & DeJesus, S. (2015b). The Theory of Planned Behavior as a model for understanding sedentary behavior. *Psychology of Sport and Exercise*, 19, 23–32. <https://doi.org/10.1016/j.psychsport.2015.02.001>

Rodriguez-Ayllon, M., Acosta-Manzano, P., Coll-Risco, I., Romero-Gallardo, L., Borges-Cosic, M., Estévez-López, F., & Aparicio, V. A. (2021). Associations of physical activity, sedentary time, and physical fitness with mental health during pregnancy: The GESTAFIT project. *Journal of Sport and Health Science/Journal of Sport and Health Science*, 10(3), 379–386. <https://doi.org/10.1016/j.jshs.2019.04.003>

The Biosocial Model in DBT: Emotion Dysregulation and Invalidating Environments - Psychotherapy Academy. (2023, November 8). Psychotherapy Academy. <https://psychotherapyacademy.org/section/biosocial-model-in-dbt-how-symptoms-arise-and-are-maintained/>

View of Electronic Devices as Correlates of Sedentary Behavior and Screen Time Among Diverse Low-Income Adolescents During the School Year and Summer

[Cite us here](#)- Sumaya Batool, Sadia Saeed, & Fatima Shah. (2024). Impact of Sedentary Behavior on Compensatory Health Beliefs among Adolescents and Adults. *Shnakhat*, 3(3). <https://shnakhat.com/index.php/shnakhat/article/view/316>

Time | *Journal of Healthy Eating and Active Living*. (n.d).

<http://profpubs.com/index.php/jheal/article/view/7/16>

Weilenmann, S., Schnyder, U., Parkinson, B., Corda, C., Von Känel, R., & Pfaltz, M. C. (2018). Emotion Transfer, Emotion Regulation, and Empathy-Related Processes in Physician-Patient Interactions and Their Association With Physician Well-Being: A Theoretical Model. *Frontiers in Psychiatry*, 9. <https://doi.org/10.3389/fpsy.2018.00389>

Wen, X., Cai, Y., Li, K., Wang, Z., Zhang, W., & Qin, M. (2023). A Cross-Sectional Association Between Screen-Based Sedentary Behavior and Anxiety in Academic College Students: Mediating Role of Negative Emotions and Moderating Role of Emotion Regulation. *Psychology Research and Behavior Management*, Volume 16, 4221–4235. <https://doi.org/10.2147/prbm.s430928>

Wen, X., Cai, Y., Li, K., Wang, Z., Zhang, W., & Qin, M. (2023b). A Cross-Sectional Association Between Screen-Based Sedentary Behavior and Anxiety in Academic College Students: Mediating Role of Negative Emotions and Moderating Role of Emotion Regulation. *Psychology Research and Behavior Management*, Volume 16, 4221–4235. <https://doi.org/10.2147/prbm.s430928>

Wilkerson, A. H., Abutalib, N., McFadden, N. T., Bhochohibhoya, S., Dragicevic, A., Salous, B. R., & Nahar, V. K. (2023). A Social Cognitive Assessment of Workplace Sedentary Behavior among a Sample of University Employees. *International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health*, 20(15), 6476. <https://doi.org/10.3390/ijerph20156476>

Wycoff, A. M., Griffin, S. A., Helle, A. C., Haney, A. M., Watts, A. L., & Trull, T. J. (2023). The Brief Emotion Dysregulation Scale: Development, Preliminary Validation, and Recommendations for Use. *Assessment*, 31(2), 335–349. <https://doi.org/10.1177/10731911231161800>

Zou, L., Wang, T., Herold, F., Ludyga, S., Liu, W., Zhang, Y., Healy, S., Zhang, Z., Kuang, J., Taylor, A., Kramer, A. F., Chen, S., Tremblay, M. S., & Hossain, M. M. (2023). Associations between sedentary behavior and negative emotions in adolescents during home confinement: Mediating role of social support and sleep quality. *International Journal of Clinical and Health Psychology*, 23(1), 100337. <https://doi.org/10.1016/j.ijchp.2022.100337>