# COVID-19 impact on physical activity

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# COVID-19 Impact on Physical Activity: A COVISTRESS Questionnaire Evaluation

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## Summary

A global health emergency based on the COVID-19 outbreak was declared on the 30th of January 2020. Countries more susceptible to the COVID-19 situation included those with compromised, weak or vulnerable healthcare systems. During the COVID-19 global pandemic it became apparent that the lives of the citizens of the world would be affected from a public health, lifestyle and economy perspective. As a consequence, the spread of the COVID-19 pandemic continued to grow which gave rise to observing quarantine measures, social distancing measures, hospitalisation / bed rest measures and risks of physical inactivity brought about by immobilisation. This study aims to evaluate the effect of COVID-19 on leisure physical activity among 10,121 participants using a validated COVISTRESS questionnaire.

## Introduction

The COVISTRESS network recently published a COVID-19 study associated with physical activity, sedentary action and psychological emotion [1]. Research in this area remains ongoing and continues to broaden. New COVISTRESS (http://www.covistress.org/index-en.html) questionnaires are developed ever so often to meet the demands of society in response to the changes brought about by the COVID-19 pandemic. On a global scale the impact of the COVID-19 pandemic continues to affect the lives of white-collared and blue-collared workers in our communities. Majority of these workers become emotionally distressed. In view of the first and second waves of the coronavirus, stringent lockdowns have been stipulated and as a consequence has led to reductions in physical activity levels and a rise in depression. This abstract highlights the impact COVID-19 has had on number of hours performed by the COVISTRESS questionnaire participants in terms of physical activity per week.

## Methods

Participants were recruited via the application of the convenience and snowball sampling technique. All participants that satisfied the recruitment criteria were granted online access to the COVISTRESS questionnaire. 10,121 participants (Male: 2850, Female: 6292) completed the questionnaire. Of the 10,121 participants 979 did not indicate their sex. Two observational study scenarios were evaluated namely "Prior" to COVID-19 pandemic and "Currently", i.e., during the COVID-19 period. Specific information requested included number of hours of leisure physical activity per week "Prior" to the Coronavirus Pandemic and "Currently". All these components were evaluated using a Spearman correlation (r) and the VAS with an intensity scale ranging from 0–100.

**Table 1:** Descriptive statistics showing the "Prior" and "Currently" dataset summary of the VAS intensity scale

| Physical Activity Measurement | Assessment "Before" COVID-19 (Mean ± SD) | Assessment "Now" during COVID-19 (Mean ± SD) |
|---|---|---|
| **Female:** Number of hours of leisure physical activity per week | 8.32 ± 7.29 | 5.99 ± 6.08 |
| **Male:** Number of hours of leisure physical activity per week | 10.39 ± 8.61 | 7.75 ± 7.61 |

## Results and Discussion

Both males and females displayed similar output measures (Table 1). A stronger correlation between "Prior" COVID-19 and "Currently" was also observed among the Males (r = 0.720) in comparison to the Females (r = 0.639). The results presented in this abstract provide insightful information pertaining to physical activity using the COVISTRESS VAS intensity scale. On completion of the current dataset analyses, a 90% compliance was achieved with respect to completed COVISTRESS questionnaires.

## Conclusions

A detailed assessment and report on the impact of physical activity has been presented. The aim of this study was achieved through the effective use and interpretation of the COVISTRESS questionnaire. These findings from the COVISTRESS questionnaire are encouraging and provide a platform from which future studies and collaborations across different countries can be fostered.

## Acknowledgments

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## References

[1] Ugbolue UC et al. (2020). *J. Clin. Med*, **9 (10)**: 3352.