



## Digital Mental Health Interventions in the Workplace

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# Digital Mental Health Interventions in the Workplace: Insights from an Employee Wellbeing Support Hub

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## What is the problem?

- Engaging in meaningful work can improve our mental health and promote well-being. However, in 2021 to 2022, stress, anxiety and depression in the workplace resulted in 17 million working days lost in the UK.
- Digital mental health interventions can provide support to individuals, in a potentially low cost, efficient and scalable way. Primarily CBT[1], stress-management [2] and mindfulness-based stress reduction [3] programs have shown promise.
- It is difficult to identify digital interventions that are beneficial for particular workforce demographics as well as those that might be harmful due to a lack of gold standard evidence and best practices.
- The Inspire Employee Wellbeing Support Hub is a web-based employee wellbeing platform, providing tools and psychoeducation.

## What did we plan to do?

- The aim of the current study is to analyse real world usage of this platform, available to employees across different sectors of the workforce.
- Event logging has been built into the platform, anonymously recording page and button clicks, mood and sleep tracks, self-assessment results from validated tools such as the GAD7 for anxiety.
- The platform's event logs were analysed between February 2019 and June 2022, and this study was approved by the Ulster University Ethics Filter Committee.
- R studio was used to analyse the event logs collected and provide descriptive statistics. R packages dplyr and tidyverse were used for data cleaning and wrangling, and ggplot2 for data visualisation.
- K-means clustering, an unsupervised machine learning technique was utilised to identify clusters in the dataset, based on their user tenure, number of total interactions, number of daily interactions and unique days spent on the platform.

## What did we find out?

- Between February 2019 to June 2022, 9040 users registered, and 104,621 events were logged across 13 sectors.
- Anxiety, Covid-19 resources, and Stress were the top three interacted with topics, and Social Media, Drugs and Mindfulness the least interacted with.
- The Inspire Support Hub is mainly used between typical office hours; 9am to 5pm, Monday to Friday. (Figure 1).

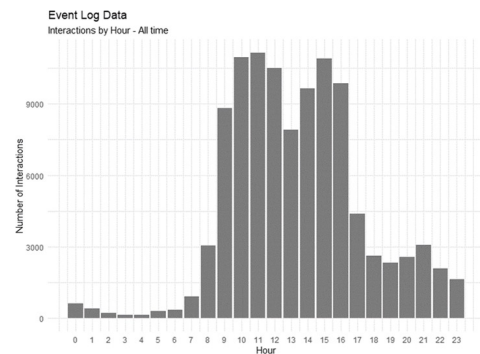


Figure 1 – Interactions by hour

- User tenure, unique days, total interactions, and average daily interactions were the features used to determine user archetypes with K Means Clustering. The data reveals three user groups: short-term, intermediate, and long-term users (Figure 2).

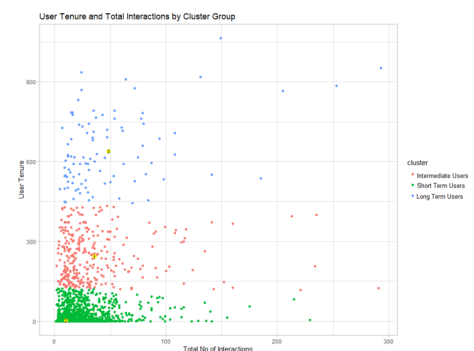


Figure 2 – Clusters by user tenure and total number of interactions

## Conclusions and Next Steps

- As is the case with other studies on digital mental health, the majority (95.5%) are short-term users with high sign-up rates but low long-term users.
- Further qualitative research would need to be undertaken to understand more about the characteristics of the “Long Term Users” cluster.
- Further analysis is being conducted to understand if there are any differences in usage between workplace sectors.
- These findings offer actionable insights to adapt the platform's content and inform the user experience.

## References

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