

Is Digitisation the key to the Student Mental Health Crisis?

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INTRODUCTION

- Students understandably at high-risk of mental health issues
- Mental health strategies in place to support students suffering from poor mental health are Wellbeing Services
- Students show great concern that university provisions are not adequate to address or keep up with their mental health needs
- Students need to be fully supported to achieve their personal and academic potential
- This project investigated the current student mental health crisis and focused on a potential solution using technology and digitisation

AIM & OBJECTIVES

Aim:

Explore how technology can improve student interaction with University Wellbeing Services

Objectives:

- Establish effectiveness of student wellbeing services at present
- Determine how effectiveness of student wellbeing services can be improved
- Explore how digitisation of student wellbeing services can bridge shortcomings identified
- Deliver informed guidance for universities to incorporate digitisation into their Wellbeing Services

METHODOLOGY

Holistic answer to the research through 5 steps:

- Interview University Wellbeing Staff to gain insider insights of Wellbeing Services
- Online Student Survey to gain information on student experiences of mental health and Wellbeing Services
- Using results from 1 and 2, designed and developed a prototype wellbeing application
- Trialled prototype application ('SOS Student') among group of students to gain feedback on it's wellbeing benefits and general usability
- Based on learnings from tasks 1 to 4, developed criteria/set of guidelines for Universities to utilise a wellbeing mobile application

DESIGN & IMPLEMENTATION

Design

After confirming that students supported a digital solution. The next step was to design the solution:

- The first step in the design process was developing a list of MosCoW requirements for the app, which is a prioritisation technique using 'must have', 'should have', 'could have', 'won't have' features
- UML (Unified Modelling Language) diagrams were utilised to visually represent the software systems and use case diagrams to specify the expected behaviour
- The software prototype design was kept simplistic to ensure ease of use
- Database was chosen based on compatibility with Xamarin Forms and supports both Android and iOS devices



Implementation

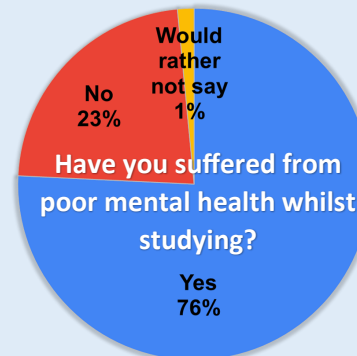
- FDD (Feature Driven Development) where features are developed within short iteration
- MVVM (Model-View-ViewModel) was utilised to display the views of the data stored within the database
- New concept of using emojis to quantify emotions implemented



RESULTS & ANALYSIS

Staff Interview and Student Survey

- Staff and students agreed that availability of wellbeing staff is poor, resulting in long waits for support
- Over two-thirds of student sample (76%) stated that they have suffered from poor mental health (females even more likely)
- Only 62% had access to Wellbeing Services, but 96% stated they would benefit from one
- Online and digital services among least common resources available, even though students feedback that they would benefit from these



Prototype Testing	Mean Score (out of 5)
Wellbeing Support	4.35
Usability	4.5

Prototype Testing

- Students trialled prototype for 10 minutes then rated 14 statements which tested effectiveness in meeting wellbeing needs and usability
- Usability mean score **4.5** out of 5
- Wellbeing mean score **4.35** out of 5
- Overall, very positive results but limitations must be acknowledged; including that users were selected by researcher
- Areas for further analysis: usability across age-groups, frequency of use and implementation of emojis

CONCLUSION

- Literature review, student survey and staff interview established a large gap between supply and demand of Wellbeing Services; too few resources overwhelmed by student needs
- Research showed that Wellbeing Services could be improved through digitisation and technology; mobile application offered most advantages. This was backed by students.
- SOS Student was endorsed by students through hands-on testing of prototype; extremely positive feedback on usability and wellbeing support
- Application design and requirements provide universities with detailed advice on how to implement this solution
- However, further wide-scale testing required to inform further iterations of SOS Student with recommendations

RECOMMENDATIONS

- Alternative database solution needed (e.g. SQL Server)
- Spatial analysis of locational wellbeing factors using GIS (Geographical Information Systems)
- Further research into use of emojis to quantify emotions
- Implementation of in-app counselling to create 'one stop shop'
- Major data analysis potential to identify patterns in student wellbeing and help balance supply and demand
- Expand concept to create suite of tailored wellbeing applications (e.g. SOS Employee)



CONTACT

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Key references: Jisc, "Can we tackle the student mental health challenge using data analytics?," Jisc, 13 March 2019. [Online]. Available: <https://www.jisc.ac.uk/news/can-we-tackle-the-student-mental-health-challenge-using-data-analytics-13-mar-2019>. [Accessed October 2019]. F. Alqahtani and R. Orji, "Insights from user reviews to improve mental health apps," *Health Informatics Journal*, 2020. E. G. Lattie, S. K. Lipson and D. Eisenberg, "Technology and College Student Mental Health: Challenges and Opportunities," *Front Psychiatry*, 2018. E. Reynolds, "How effective are mental health apps?," *Wired*, 8 May 2017. [Online]. Available: <https://www.wired.co.uk/article/mental-health-apps>. [Accessed October 2019]. J. Marshall, D. Dunstan and W. Bartik, "Smartphone psychology: New approaches towards safe and efficacious mobile mental health apps," *Professional Psychology*, 2019.