

# **Edith Cowan University – Digitising Early Childhood International Conference**

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### **Abstract: Developing an innovative online intervention to support schooling for children and young people with cystic fibrosis.**

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#### Background:

Students with cystic fibrosis (CF) are often faced with rigorous daily treatments and challenging side effects, frequent hospitalisations and some socio-economic related factors that can contribute to increased school absences. Having CF can lead to social isolation, increased risk of mental health problems and poorer school performance compared to students without CF.

#### Aim:

To develop an innovative online intervention that will support students with CF to improve their mental health, social wellbeing and school connectedness by encouraging social interaction via online conversations with other students and peers with CF.

#### Methods:

A sequential mixed-methods approach was utilised which included online focus groups involving 11 young people with CF. These young people discussed their lived experience of being a school student with CF. Quantitative data were also collected via an online survey from 26 CF students (aged between 10 – 16 years of age) and their parents.

#### Results:

Focus group participants assisted with the development of the content and functionality of a mock-version of a mobile smartphone app (called a 'wireframe') that was designed to help to improve their social and mental health and wellbeing and school connectedness through a number of features. These features included:

1. 'School Connect' – an interface that allows students to manage their schoolwork via downloadable class curriculum, tasks and activities (to help them when they are absent)
2. 'Virtual Buddy' – an interactive artificial intelligence feature that prompted them to think about their feelings throughout the day and responded with positive messages
3. 'Medication Reminders' – a 'gamified' function that reminded students to take their medication and be rewarded with goals and achievements
4. 'Social Chat' – an interactive online chat room that allowed students to connect to other students with CF (given the limited face-to-face contact young people with CF can have with each other due to the risk of cross-infection)
5. 'Entertainment' – a function that allowed students to play entertainment while completing their daily physiotherapy

Focus group participants provided feedback on each of the features and responded very positively when it was presented to them.

#### Conclusion:

The use of the CF mobile app may help to improve the socio-emotional health outcomes and school connectedness for students with CF. The outcomes of the study found the need for systematic assessment of psychological outcomes for youth with CF attending school, and provide guidance for interventions to promote mental health and school engagement. This project has recently received funding to develop and test this app more fully.