

ALLEVIATING CAREGIVERS' STRESS THROUGH AN E-PAINTING MOBILE APPLICATION: A FEASIBILITY STUDY

透過電子繪圖APPS緩減照顧壓力: 可行性研究

Project Leader 項目領導

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BACKGROUND

Caregivers of persons with dementia (CGPWD) experienced tremendous stress and anxiety due to caregiving. However, under the influence of Chinese culture, CGPWD do not actively seek help. A mobile app therefore was specifically designed for the Chinese CGPWD. Our study aims to find out the preferable features of the app, and the feasibility and acceptability of this e-painting app in the Chinese community.

背景

認知障礙症患者的照顧者 (CGPWD) 承受著無比壓力和焦慮，但是，受中國社會文化的影響，照顧者並沒有積極尋求幫助。因此，理大老年護理研究中心在2018年開發了一個專為香港照顧者而設的流動應用程式。我們希望透過研究了解適合應用程式的功能及這個電子繪畫應用程式在華人社區的可行性和可接受性。

METHODS

This is a mixed-method study with qualitative and quantitative components. Focus group interviews were conducted to collect caregivers' views on preferred features of the app and their comments after use. Caregivers completed the health assessment measures before and after the 8-week intervention.

研究方法

這是一項具有質性和量性的混合研究。我們進行了焦點小組訪談，以收集照顧者對應用程式功能的看法及使用後的意見。照顧者試用此電子繪畫應用程式八星期，並於使用程式前後填寫問卷。

RESULTS

CGPWD suggested the the following features to be included in the app: sharing of paintings, chatroom, public announcement and emotion assessment. Majority of the CGPWD found the app user-friendly and they were satisfied with the experience of sharing the paintings. However, most of the CGPWD could not participate in drawing as frequent as we recommended. Comparisons were made between the frequent and non-frequent users. We discovered that the non-frequent app users had a significant increase in stress level after the 8-week app trial. Although there was an increase in stress level for frequent app users, the changes were insignificant.

研究結果

認知障礙症患者照顧者建議應用程式具有以下功能：畫作共享，聊天室，廣播訊息和情感評估。大多數照顧者認為該應用程式簡單易用，他們對分享畫作的經驗感到滿意。但是，大多數照顧者都不能像我們建議的那樣頻繁繪畫。我們比較頻繁和非頻繁用戶的問卷調查結果，發現非頻繁用戶在試用應用程式八星期後其壓力指數顯著增加。雖然頻繁用戶壓力指數都有上升，但這種變化並不顯著。



Figure 1. E-painting App Interface
圖1. 電子繪畫應用程式介面

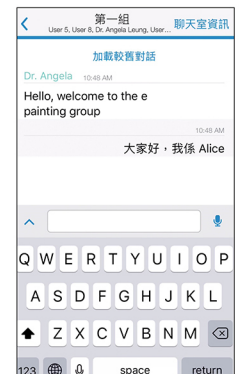


Figure 2. Chatroom function in E-painting app
圖2. 電子繪畫應用程式內「通訊」功能

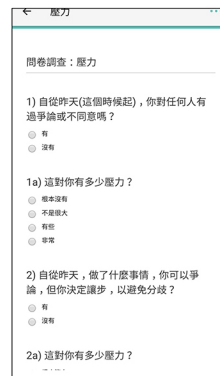


Figure 3. Emotion Assessment in E-painting App
圖3. 電子繪畫應用程式內情感評估功能



Figure 4. Example of drawings shared by app users (Topic: A plant I like)
圖4. 應用程式用戶畫作分享例子 (題目：我喜愛的植物)

	Mean Difference (Post - Pre)	n	SD	t	p
Caregiver Burden (CZBI-Short)					
Frequent App Users	2.20	10	5.77	1.21	0.259
Non-Frequent App Users	4.83	12	4.69	3.57	0.004
Self-Rated Health (SRH)					
Frequent App Users	0.30	10	0.82	1.15	0.279
Non-Frequent App Users	-0.33	12	1.15	-1.00	0.339
Depressive Symptoms (PHQ-9)					
Frequent App Users	1.50	10	4.38	1.08	0.307
Non-Frequent App Users	-0.42	12	2.75	-0.53	0.610
Social Support (mMOS-SS)					
Frequent App Users	3.00	10	4.81	1.97	0.080
Non-Frequent App Users	0.25	12	6.76	0.13	0.900

Table 1. Responses on Health Assessments between Frequent and Non-Frequent App Users
表1. 應用程式頻繁用戶和非頻繁用戶的問卷測量結果

DISCUSSION

This e-painting app was developed with the stakeholders, addressing the CGPWD's needs and cultural impacts on behaviour. The development of the app is intended to develop CGPWD's health literacy by providing a platform for self-assessing emotional level and encouraging decision to alleviate stress through e-painting. The use of the app is feasible. Although the CGPWD reported the increased burden over time, their depressive symptoms were not exaggerated. The app seems to become a platform for alleviating stress in some ways. Further investigation is needed to assess which features of this app best provide emotional support to the CGPWD.

研究討論

這個電子繪畫應用程式是與認知障礙症患者照顧者共同開發的，旨在解決其需求和行為上所受到的文化影響。該應用程式透過提供一個平台予照顧者自我評估情緒水平和鼓勵他們通過電子繪畫緩解壓力，從而推動照顧者的健康素養。該應用程式在使用上是可行的。雖然照顧者反映負擔會隨著時間相應增加，但他們的抑鬱症狀並沒有增加。該應用程式似乎可成為一個緩解壓力的平台。但需要進一步調查以評估該應用程式中哪些功能最能為照顧者提供情感上支持。