



The effects of E-platform on health management and social support among women working at home

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Abstract Summary

Married women generally in middle age whose self-health care is relatively reduced are often working at home and taking care of their families at the same time. Therefore, it is increasingly important to establish an E-health mobile device management for them not restricted by time and place.

Introduction

It is normal for women to continue working after marriage, but they are more able to control family life as face their job work (Sharma & Mishra, 2018), as well as have higher life satisfaction than homemakers or non-working (Simha, 2017) as being professional women while facing a variety of roles. Further, married women, who as the homemaker may face more than just the burden of work at home, may not get the job space and working satisfaction of the general professional women since they need to carry out the homemaker's works as well as take care for the family, and the pressure on the psychological lever is greater accordingly.

Within the situation mentioned above, the middle age women's life till elderly will be affected if there is no concern about the health at the time of encountering health multiple changes at this time.

Therefore, women who work from home are increasing while their working places need to be balanced with their individual family, thus, establishing an unrestricted E-health and professional growth platform is increasingly important.

The aims of study were to establish an evidence-based of the E-health mobile device from the domain of subjective perspective for nursemaid women working at home.

Method

Mixed method with Ground theory (1st phase) and Quasi-experimental with repeated measurement (3rd phase) were applied, and both qualitative and quantitative data were collected within three phases separately.

First of all, 20 nursemaid women with the mean age of 51 and over 10 years nursemaids working experiences were recruited to have in-depth interview with researcher about their life experiences of working at home as nursemaids in 1st phase. Data were generated from interviews which were analyzed by constant comparative method.

Secondly, five experts major in Child-care, e-health management, community nursing was invited as expertise content validity. Three women working as nursemaids over ten years were invited as user content validity within 2nd phase.

At last, the 3rd phase, generalized Estimating Equation (GEE) was used for analysis and adjustment of the covariant variables to evaluate the effects of an E-health mobile device. A total of 37 in the experimental group and 38 in the control group, were recruited for evaluate the effects of the intervention of the E-health mobile devices.

Results.

In the 1st phase, the core category was issued as "Pursuing to increase family income and maintain her own health" for describing and guiding the process of working at home among these women. During this process, "self-awareness of the worse health"- "easily tired", "irritability", "weak", "Insomnia" was identified as the antecedent condition. Once the women became aware of their worse health, they would begin the process of "Pursuing to increase family income and maintain her own health". This process would be marked by action and interaction among the categories of "trying to pull the health change stop-loss point", "seeking support", "pursuit the professional growth across time and space", "taking care of their family is the first priority", Throughout this

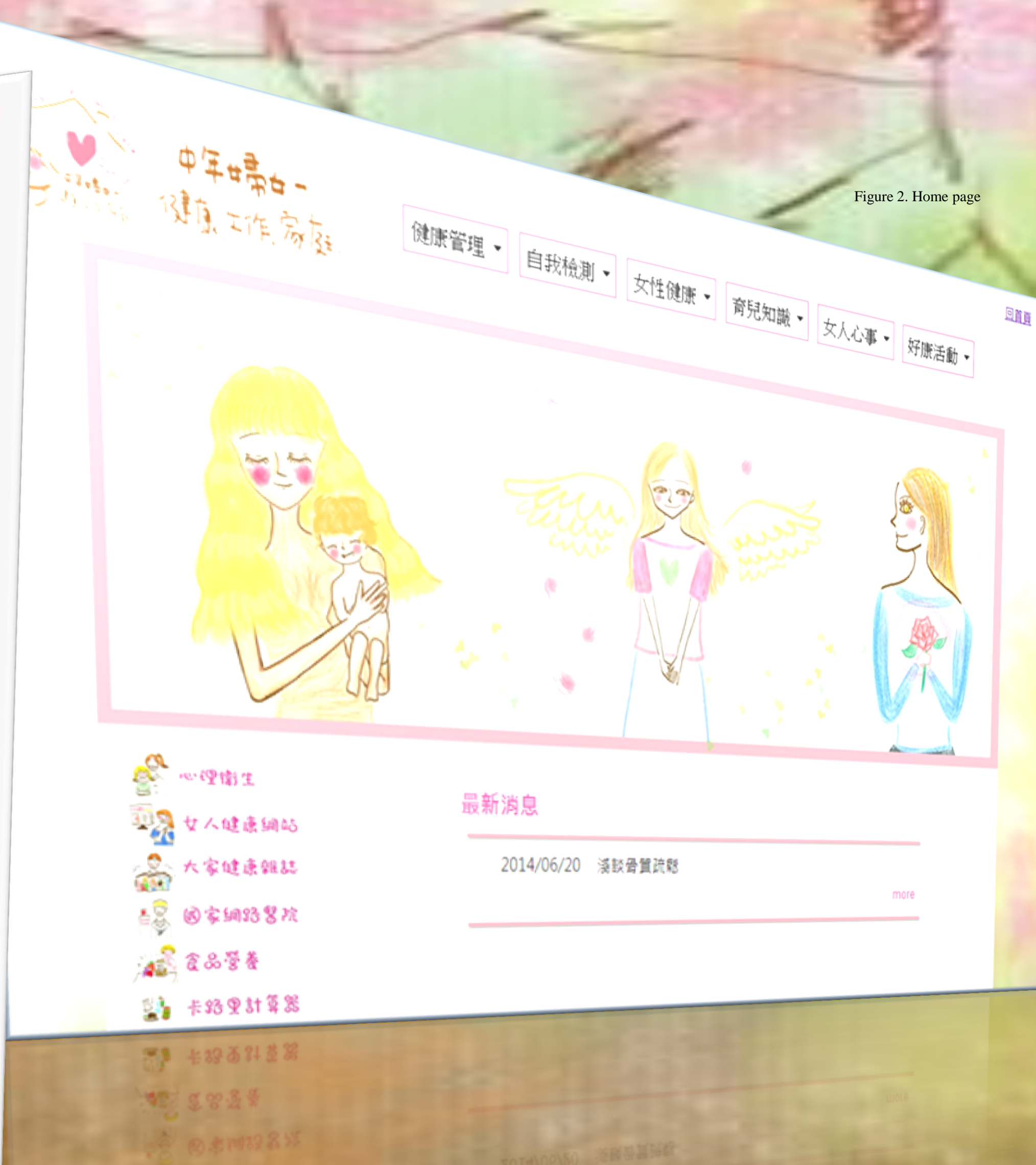
process women viewed working at home as "keeping in a busy working circle -- being a breadwinner, housewife and healthy midlife" during which they "Pursuing to increase family income and maintain her own health".

In the 2nd phase, then, established the E-health mobile device (Figure 1) and attained the expert validity was CVI 0.8-1.0 validity and user-evaluated validity: CVI 1.0., and seven interfaces as "Home page", "Child care knowledge", "women's inner world and concerns" "Self health management", "Women's Health" "self-health examination.", were provided (Figure 2). In addition, the reliability of eight scales for evaluating the effects of an E-health mobile device was in the range from 0.638 to 0.964.

Figure 1 The E-health mobile device



Figure 2. Home page



During the 3rd phase, a total of 37 in the experimental group and 38 in the control group were recruited, and resulted obtained as (1) Health management effectiveness - Menopausal health behavioral outcomes were achieved at 1 M to 6 M ($\beta=15.947$, $p=0.001$; $\beta=0.457$, $p=0.035$) ; However, the perimenopausal symptoms disturbance showed the reverse effects after intervention. This negative effects may be due to the increased perimenopause health knowledge for participant women in experimental group. However, it needs to further investigation; Work stress performance - workplace stress reduction effectiveness in the 1M to 6M appear to be effective ($\beta=-7.600$, $p<0.001$; $\beta=-8.161$, $p<0.001$) ; (2) The effect of social support was seen at 1 M and 6 M ($\beta=8.622$, $p=0.026$; $\beta=17.837$, $p<0.001$) .

Conclusions.

The E-health mobile devices showed the evidence-based of significant positive to enhance the health behaviors, social support and physical and mental health and professional growth for all of members in the child-care service center, as well as the novice family to expand the applicability of the platform.

Reference

- Caron, A., Ayala, A., Damián, J., Rodriguez-Blazquez, C., Almazán, J., Castellote, J. M., ... & de Pedro, J. (2017). Physical activity, body functions and disability among middle-aged and older Spanish adults. *BMC geriatrics*, 17(1), 150.
- Gordon, L. G., Beesley, V. L., Lynch, B. M., Mihala, G., McGrath, C., Graves, N., & Webb, P. M. (2014). The return to work experiences of middle-aged Australian workers diagnosed with colorectal cancer: a matched cohort study. *BMC public health*, 14(1), 963.
- LeFevre, A. E., Mohan, D., Hutchful, D., Jennings, L., Mehl, G., Labrique, A., ... & Moorthy, A. (2017). Mobile Technology for Community Health in Ghana: what happens when technical functionality threatens the effectiveness of digital health programs?. *BMC medical informatics and decision making*, 17(1), 1-17.
- Moody, D. L. B., Chang, Y., Brown, C., Bromberger, J. T., & Matthews, K. A. (2018). Everyday Discrimination and Metabolic Syndrome Incidence in a Racially/Ethnically Diverse Sample: Study of Women's Health Across the Nation. *Psychosomatic medicine*, 80(1), 114-121.
- Pei-Shan Lee, Lee-Ing Tsao, Chieh-Yu Liu & Chyi-Long Lee. (2014). Effectiveness of telephone-based counseling for improving the quality of life among middle-age women. *Health care for women international*, 35,74-86.
- Sharma, K., & Mishra, S. (2018). Comparative study of well-being of working and non-working women. *Indian Journal of Health & Wellbeing*, 9(5), 799-801.
- Shepherd-Banigan, M., Bell, J. F., Basu, A., Booth-LaForce, C., & Harris, J. R. (2016). Workplace stress and working from home influence depressive symptoms among employed women with young children. *International journal of behavioral medicine*, 23(1), 102-111.
- Sinha, S. (2017). Multiple roles of working women and psychological well-being. *Industrial psychiatry journal*, 26(2), 171.
- Xie, D., Zhou, Y., Zhang, Y., Fu, S., Fu, S., Wu, X., Ma, Y., & Sheng, Z. (2018). Osteoporosis screening based on body mass index, years since menopause and age among postmenopausal women in South Central China. *International Journal of Clinical and Experimental Medicine*, 11(3), 2543-2550.