

線上個人健康紀錄與放鬆治療對不孕症療效之評估

Patients' perceptions on a personal health record system: an early experience among infertility patients



蔡永杰¹ 張鳳麟² 劉忠峰³
奇美醫院 ¹生殖醫學科 ²精神科 ³嘉南藥理科技大學資訊管理系

Background

As healthcare organizations and professionals become increasingly interested in developing personal health record (PHR) to improve patients care. However, factors impacting patients' intention toward PHR use is still unclear.

Objective

This study presents an extended technology acceptance model (TAM) that integrates physician-patient relationship concept into the research model to explore what determinants influence infertility patients' behavior intention on using the PHR system.

Method

The research model was empirically tested using data collected from an investigation in a Taiwan's hospital. Reliability and validity of data were firstly examined to be sufficiently acceptable and consequently Partial Least Squares (PLS) technique was used to assess the causal relationships hypothesized in the model.



Results

Forty-eight valid questionnaires were completed, yielding a response rate of 53.33 %. The results indicated that perceived usefulness and physician-patient relationship had a significant effect on patients' intention to use PHR while perceived ease of use had not. Additionally, perceived ease of use indirectly influenced behavioral intention, through perceived usefulness.

Table 1. Demographics and baseline characteristics ^a				
	PHR Group ^a	Relaxation Group ^a	PHR & Relaxation Group ^a	Control Group ^a
No. patients ^a	34 ^a	25 ^a	18 ^a	27 ^a
Sex, women/men, n (%) ^a	28(82)/6(18) ^a	21(84)/4 (16) ^a	18(100)/0(0) ^a	23(85)/4(15) ^a
DSSS ^a				
Depression subscale ^a	7.35(6.23) ^a	5.92(5.48) ^a	8.00(6.26) ^a	5.89(5.37) ^a
Somatic subscale ^a	3.59(3.95) ^a	3.20(3.39) ^a	4.39(4.02) ^a	3.26(2.82) ^a
Pain subscale ^a	2.44(2.16) ^a	2.20(2.29) ^a	2.56(2.15) ^a	2.41(2.12) ^a
FertiQoL ^a				
A total scale ^a	2.12(0.77) ^a	2.08(0.86) ^a	1.83(0.92) ^a	2.19(0.68) ^a
B total scale ^a	2.35(0.77) ^a	2.36 (0.64) ^a	1.83(0.79) ^a	2.07(0.68) ^a
Total scale ^a	65.20(10.09) ^a	66.26 (12.39) ^a	57.35(10.25) ^a	64.71(12.32) ^a
A scale of the <i>FertiQoL</i> questionnaire: overall evaluation of physical health. ^a				
B scale of the <i>FertiQoL</i> questionnaire: satisfaction with quality of life. ^a				

Table 2. Mean Scores in ‘‘Depression Subscale (DS)’’ Subscale of DSSS From Baseline to Week 1, 2, 3, 4, 5, 6, 7 and 8 ^a								
	PHR Group ^a		Relaxation Group ^a		Relaxation&Biofeedback Group ^a		Control Group ^a	
	Mean (SD) ^a	P of Paired ^a	Mean (SD) ^a	P of Paired ^a	Mean (SD) ^a	P of Paired ^a	Mean (SD) ^a	P of Paired ^a
	score ^a	t Test ^a	score ^a	t Test ^a	score ^a	t Test ^a	score ^a	t Test ^a
Baseline ^a	7.35(6.23)(n=34) ^a		5.92(5.48)(n=25) ^a		8.00(6.26)(n=18) ^a		5.70(5.63)(n=27) ^a	
Week 1 ^a	4.77(3.91)(n=30) ^a	0.006, † t ₂₉ =2.98 ^a	4.64(3.62)(n=22) ^a	0.025, † t ₂₁ =2.41 ^a	5.64(5.18)(n=14) ^a	0.063, t ₁₃ =2.03 ^a	5.60(5.80)(n=23) ^a	0.091, t ₂₂ =1.77 ^a
Week 2 ^a	3.79(2.90)(n=28) ^a	0.008, † t ₂₇ =2.89 ^a	3.11(3.82)(n=18) ^a	<0.001, * t ₁₇ =5.41 ^a	5.83(7.00)(n=12) ^a	0.326, t ₁₁ =1.03 ^a	4.56(3.90)(n=20) ^a	0.184, t ₁₉ =1.38 ^a
Week 3 ^a	4.46(4.86)(n=24) ^a	0.032, † t ₂₃ =2.28 ^a	1.87(2.13)(n=15) ^a	<0.001, * t ₁₄ =4.77 ^a	4.33(4.30)(n=9) ^a	0.487, t ₈ =0.73 ^a	4.25(3.40)(n=17) ^a	0.352, t ₁₆ =0.96 ^a
Week 4 ^a	5.83(7.96)(n=23) ^a	0.61, t ₂₂ =0.52 ^a	2.43(2.34)(n=14) ^a	0.002, † t ₁₃ =4.00 ^a	3.13(4.55)(n=8) ^a	0.342, t ₇ =1.02 ^a	5.00(3.72)(n=16) ^a	0.884, t ₁₅ =-0.15 ^a
Week 5 ^a	5.20(8.33)(n=20) ^a	0.50, t ₁₉ =0.69 ^a	1.92(2.22)(n=13) ^a	0.003, t ₁₂ =3.79 ^a	2.88(5.08)(n=8) ^a	0.345, t ₇ =1.01 ^a	4.58(3.87)(n=13) ^a	0.522, t ₁₂ =-0.66 ^a
Week 6 ^a	5.50(8.47)(n=18) ^a	0.77, t ₁₇ =0.29 ^a	3.58(4.78)(n=12) ^a	0.162, t ₁₁ =1.50 ^a	4.14(4.88)(n=7) ^a	0.920, t ₆ =0.10 ^a	3.82(3.06)(n=12) ^a	0.692, t ₁₁ =0.41 ^a
Week 7 ^a	2.94(4.25)(n=17) ^a	0.014, † t ₁₆ =2.74 ^a	3.00(3.92)(n=10) ^a	0.021, t ₉ =2.79 ^a	3.29(2.50)(n=7) ^a	0.545, t ₆ =0.64 ^a	3.33(5.75)(n=10) ^a	0.888, t ₉ =0.15 ^a
Week 8 ^a	3.20(3.76)(n=15) ^a	0.005, † t ₁₄ =3.29 ^a	2.40(3.37)(n=10) ^a	0.008, t ₉ =3.38 ^a	1.29(1.38)(n=7) ^a	0.084, t ₆ =2.07 ^a	4.11(4.68)(n=10) ^a	0.588, t ₉ =-0.56 ^a

Table 3. Mean Scores in ‘‘Mind/Body’’ Subscale of <i>FertiQoL</i> From Baseline to Week 2, 4, , 6, 8 ^a		
	Mean (SD) Score ^a	P of Independent-Sample t Test ^a
Baseline ^a	61.33 (23.49) (n=25) ^a	
Week 2 ^a	66.25 (18.73) (n=20) ^a	0.125, † t ₁₉ =-1.61 ^a
Week 4 ^a	71.73 (20.09) (n=14) ^a	0.027, † t ₁₃ =2.50 ^a
Week 6 ^a	70.14 (25.37) (n=12) ^a	0.044, † t ₁₁ =2.28 ^a
Week 8 ^a	68.33 (27.37) (n=10) ^a	0.042, † t ₉ =2.37 ^a
† Significantly difference (P< 0.05) ^a		
‡ Significantly difference (P< 0.01) ^a		
* Significantly difference (P< 0.001) ^a		
n indicates the number of patients remained in trial. ^a		

Table 4. Mean Scores in ‘‘Treatment Tolerability’’ Subscale of <i>FertiQoL</i> From Baseline to Week 2, 4, 6, 8 ^a		
	Mean (SD) Score ^a	P of Independent-Sample t Test ^a
Baseline ^a	61.81 (20.32) (n=18) ^a	
Week 2 ^a	69.20 (17.92) (n=14) ^a	0.021, † t ₁₃ =2.64 ^a
Week 4 ^a	78.91 (11.54) (n=8) ^a	0.021, † t ₇ =2.96 ^a
Week 6 ^a	75.00 (16.54) (n=7) ^a	0.140, t ₆ =1.70 ^a
Week 8 ^a	79.17 (11.64) (n=6) ^a	0.237, t ₅ =1.34 ^a
† Significantly difference (P< 0.05) ^a		
‡ Significantly difference (P< 0.01) ^a		
* Significantly difference (P< 0.001) ^a		
n indicates the number of patients remained in trial. ^a		

Conclusion

Our results reveal that, in order to foster patients' intention to use PHR, it is important to provide necessary functions in PHR which are perceived useful for patients. Friendly user-interface as well as ease-to-operate procedure will contribute patients to realize the functions in PHR. However, perceived ease of use is not a critical concern for patients while estimating to use PHR. We proposed ‘‘physician-Patient relationship’’ as a potential determinant on behavior intention and the causal relation was validated in this study. Suggestions and future study issues are discussed.