PATIENT ACCEPTANCE OF HEALTH INFORMATION TECHNOLOGIES: COMPARATIVE INSIGHTS FROM WEARABLES, TELE-MEDICINE, AND MHEALTH

MT34

J. BRANTES FERREIRA[1], A.L. PARREIRAS[1], J.E.M.C. ZACOUR[1], T.A. CALDEIRA[1], M.F.R.PEIXOTO[1]

[1] Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil

INTRODUCTION

Advances in healthcare information technology have enabled healthcare providers and professionals to incorporate various technologies into their patient care and service delivery. Nonetheless, the adoption of **health information technologies** (HITs) by patients remains uneven across different technological modalities.

OBJECTIVES

Compare the determinants of patient acceptance across three categories of HITs (wearable devices, telemedicine, and mobile health apps), identifying both commonalities and divergences in adoption processes to inform targeted strategies to enhance patient engagement.

METHOD

- **3 independent harmonized surveys** focused on **wearable devices** (n=376), **telemedicine services** (n=360), and **mHealth apps** (n=467).
- **Structural Equations Modeling** (SEM) with **multigroup analysis**
- Use of **established scales** to measure **Behavioral Intention, Attitude, Perceived Ease of Use, Perceived Usefulness, Self-Efficacy,** and **Trust**
- Test for **moderation effects** of **HIT type** (including confidence interval)

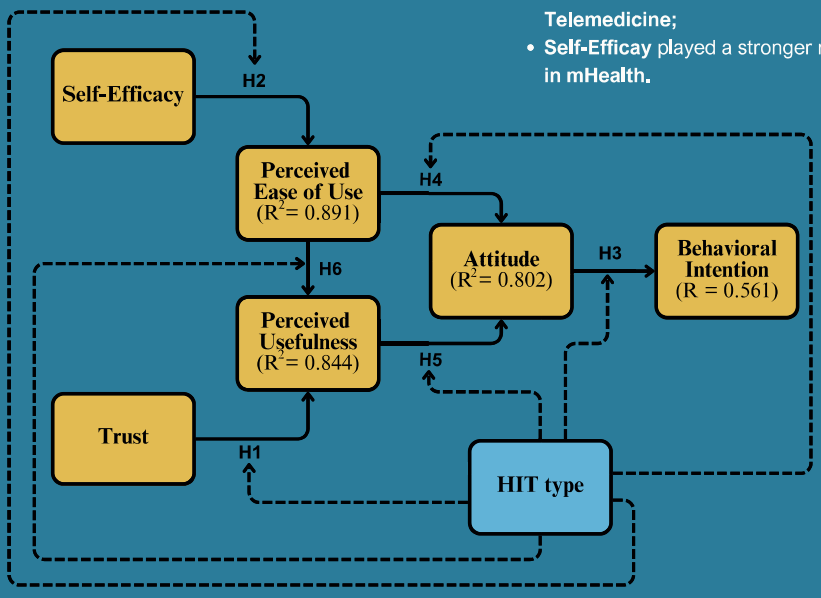
RESULTS

Findings show:

- **Trust** and **Self-Efficacy** influenced **Usefulness** and **Ease of Use across all technologies,** though the **strenght of the effect varied;**
- **Trust** was more influential **in Telemedicine;**
- **Self-Efficay** played a stronger role **in mHealth.**

HIT type moderation:

- **Telemedicine** showed the **highest readiness for adoption;**
- **Wearables** exhibited the **greatest variability;**
- **Technology type moderation** indicated **non-uniform adoption processes.**



	MHealth		Telemedicine		Wearables	
Relationships	non stand. coeff.	p-value	non stand. coeff.	p-value	non stand. coeff.	p-value
H1: TRU→PU	0.288	<0.001	0.763	<0.001	0.354	<0.001
H2: SE→PEU	0.425	<0.001	0.939	<0.001	0.774	<0.001
H3: ATT→INT	1.070	<0.001	1.301	<0.001	1.000	<0.001
H4: PEU→ATT	0.460	<0.001	-0.070	<0.001	-0.006	0.905
H5: PU→ATT	0.796	<0.001	0.796	<0.001	0.908	<0.001
H6: PEU→PU	1.174	<0.001	0.299	<0.001	0.695	<0.001

no overlaping in confidence interval

CONCLUSIONS

Implications for Academics:

- **HIT moderation** brings **significant variation** to the **effects** of the **antecedents of Attitude.**
- **Personal belief and perception of competence** greatly **influence technology acceptance** in the **health** sector.
- **Ease of use** presents different impacts on HITs, being **significant only for mHealth.**

Implications for Management:

- **Development, communication & diffusion strategies** should be **customized to HIT and user.**
- Communicating benefits of HIT use benefit is crucial.
- **App** interface should be **intuitive, easy to use,** and **integrated with other useful platforms.**
- **Telemedicine** should provide **reliable and well trained personnel**

REFERENCES

Canhoto, A. I., & Arp, S. (2017). Exploring the factors that support adoption and sustained use of health and fitness wearables. Journal of Marketing Management, 33(1–2), 32–60.

Chawla, N. (2020). AI, IoT and wearable technology for smart healthcare: A review. International Journal of Recent Research Aspects, 7(1).

Lee, S. Y., & Lee, K. (2018). Factors that influence an individual's intention to adopt a wearable healthcare device: The case of a wearable fitness tracker. Technological Forecasting and Social Change, 129, 154–163.

Moorthy, P., et al. (2024). Attributes, methods, and frameworks used to evaluate wearables and their companion mHealth apps: Scoping review. JMIR mHealth and uHealth, 12(1), e52179.

Peixoto, M. R., Ferreira, J. B., & Oliveira, L. (2021). Fatores para a adoção da teleconsulta no Brasil: Análise na perspectiva dos pacientes durante a pandemia de COVID-19. Revista de Administração Contemporânea, 26, e210063.

CONTACT INFO

Jorge Brantes Ferreira jorgebf@gmail.com