

# Digiceuticals: An Effective Healthcare Solution

# Wajiha Gul<sup>1,\*</sup>, Shaheen Parveen<sup>2</sup>, Saleha Israr<sup>1</sup>, Sehej Hussain<sup>1</sup>

<sup>1</sup>Dow College of Pharmacy, Dow University of Health Sciences, Ojha Campus, Suparco Road, Karachi. <sup>2</sup>Department of Pharmaceutics, Institute of Pharmaceutical Sciences, Jinnah Sindh Medical University, Karachi. \*E-mail: wajiha.gul@duhs.edu.pk

### ABSTRACT

Digiceuticals or digital therapeutics is the new era in the healthcare. It can be used alone or in combination with other treatment strategies to improve the health of the community. These are the apps which can be easily operated by the mobile phones. The real reason behind the mis to treat us properly, manage or avoid a medical condition and improve our health. Today they are proving to be big business with low cost and no side effects. They work by collecting data and then providing simultaneous guidance. Digiceuticals like Moovcare and Sleepio had been found successful for the treatment of lung cancer and insomnia respectively. More than hundred companies in the world are busy in the development of digiceuticals to treat different diseases like diabetes, smoking cessation, attention-deficit hyperactivity disorder, cognitive behaviors etc. However in our society, factors like lack of awareness and Access to digital programs, uneasiness regarding patient data privacy and reluctance to use non-traditional healthcare system may be the main challenges in the application of digiceuticals. There is a need to get the best of this budget-reducing technology so as to serve the mankind by better research in the coming years.

**Keywords:** Apps, Digiceuticals, Healthcare, Medical Condition.

### INTRODUCTION

The world is changing with the passage of time and the continuous increase in population has also increased the demand of medicines for masses. Today data is the most relevant resource. Pharmaceutical agents are the need of the day but their increasing cost and side effects are the major issues to masses. In Pakistan, the por financial, economic and environmental conditions have increased the health problems. Digiceuticals are the digital health facilities or resources can help in the proper treatment, avoidance or control of a medical condition [1]. It can be helpful both in terms of mixture of prevention and therapeutic value. Major plus point of digiceutical is the absence of side effects [2]. These apps collect data either by asking the patient or with the help of the sensors and thus provide perfect guidance like an app used to quit smoking is connected with a sensor and hence will be helpful to the patient. Development of such devices is the need of the day. Some of the digiceuticals used are enlisted in Table 1.

# **OBJECTIVES**

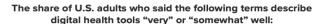
The main objective of this abstract is to enlightened digiceuticals in our every day life, their importance, clinical application, challenges and to discuss major updates in its development. Focus has also been given bring awareness among our society regarding it use. Digital healthcare tools are in use in many countries and are now must for the community there.

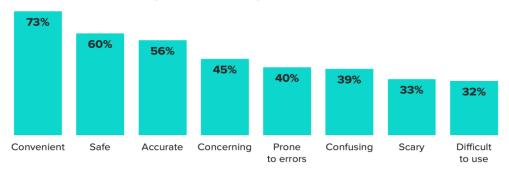


Digiceutical	Launched By	Domain
INNOVO	Atlantic Therapeutics	stress urinary incontinence in women
Sleepo	Big Health	Insomnia
Asthma	Propeller Health in partnership with	Asthma
	GlaxoSmithKline	
Blue Star	WellDoc Inc.	Diabetes
ReSET-O	PearTherapeutics	Opioid disorders
Moovcare	SivanInnovation Ltd.	Treatment of lung cancer
Omada	Abbott Laboratories	Glucose monitoring
Onedrop	Bayer Pharma	Diabetes, high blood pressure

Table 1. List of some of the digiceuticals available [3-4].

# Most of the Public Views Digital Health Tools as Convenient, Safe and Accurate





**Figure 2.** Results of poll done at U.S to review regarding digiceuticals.

#### METHODOLOGY

Digiceuticals are the need for today. Informative sessions regarding their importance, workshops to explain their usage and written materials should be distributed to make the people aware of their effectiveness. Medical professionals must also step forward and pour their part. Different companies and pharmaceutical industries are working on it. Awareness has to be developed among the people regarding the usage of digiceuticals and their advantages. Although somewhat development has started regarding digitalization of healthcare but more serious steps are required.

#### CONCLUSION

There is a need to make digiceuticals availability to patients as it is not only safe but also economical. These works more effectively by collecting evidences on outcomes and a day will come when these Will provide a successful healthcare solution. There are many pharma industries who are working in collaboration so as to provide innovation in effective therapies. Chronic diseases are causing an increase in morbidity and finances and introducing digiceuticals in our society will reduce the healthcare cost and improve the treatment outcome too. Therefore investment in digiceuticals will be greatly helpful in the betterment of health of the community.



# REFERENCES

- 1. Rogozinski B, Greenleaf W, Sackman J, Cahana A. Digital therapeutics in the management of chronic pain. In Handbook of Pain and Palliative Care 2018 (pp. 601-621). Springer, Cham.
- 2. Khirasaria R, Singh V, Batta A. Exploring digital therapeutics: The next paradigm of modern health-care industry. Perspectives in Clinical Research. 2020 Apr;11(2):54. Tom SE, Hubbard RA, Crane PK, Haneuse SJ, Bowen J, McCormick WC, McCurry S, Larson EB. Characterization of dementia and Alzheimer's disease in an older population: updated incidence and life expectancy with and without dementia. American journal of public health. 2015 Feb;105(2):408-13.
- 3. Khirasaria R, Singh V, Batta A. Exploring digital therapeutics: The next paradigm of modern health-care industry. Perspectives in Clinical Research. 2020 Apr;11(2):54.
- 4. Trifirò G, Crisafulli S, Puglisi G, Racagni G, Pani L. Digital therapeutics like pharmaceuticals?. Tendenze.:149.