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Information Systems in the Behavioral Health Context

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TREO Talk Paper

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Abstract

Behavioral health (BH) disorders often co-occur with chronic medical conditions. Hospital readmission rates are higher among patients with co-occurring BH and medical conditions than among patients who do not have a BH disorder. This pattern of overutilization has been linked to fragmented care delivery systems and a lack of information sharing. Health information exchanges (HIEs) enable the sharing of clinical information. This study applied information systems theories to understand the factors that influence the exchange and use of BH data via HIE.

A modified Unified Theory of Acceptance and Use of Technology (UTAUT) survey was emailed to a convenience sample of participants in Alabama and Oklahoma to determine the influence of the following factors on intention to use and subsequent use of BH information via HIE: 1) performance expectancy, 2) effort expectancy, 3) social influence, 4) trust, and 5) perceived risk. The conceptual model also integrated a construct from the Diffusion of Innovation (DOI) theory: trialability. Partial least squares structural equation modeling (PLS-SEM) was used to test the conceptual model.

The results are presented in Table 1. Sixty-two participants completed the survey. Because the survey was distributed by the CIO and network administrators of the organizations, the total number of surveys distributed is unknown, thus making the response rate unknown. 83.87% of the respondents were between 30 and 59 years of age. 62.91% were clinicians. Participants' intention to use BH information in HIE increased if they perceived that having access to this information would improve patient care (performance expectancy) (β= 0.382, p= 0.01). Likewise, intention to exchange BH information increased if the information was thought to be trustworthy (β= 0.539, p= 0.000).

	Intention to use behavioral health information from the HIE
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Performance expectancy	0.382**
Effort expectancy	0.055
Social influence	-0.043
Perceived risk	0.061
Trust	0.539***
Trialability	0.093
Use behavior	0.127
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$	

Table 1: Path analysis of constructs tested in the conceptual model developed for the study.

The results of the study suggest that applying information systems theories to the context of BH could help us to understand clinicians' perceptions of the potential benefits of and barriers to this particular type of data exchange. However, there are currently few studies that examine the role that health information systems can play in integrating BH information. Further research is needed.