

The Effects of E-Brochure Functions and Attitudes to E-Brochures on Self-Efficacy and Salespeople Job Satisfaction in Pharmaceutical Companies[☆]

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ABSTRACT

Today, companies are making efforts to improve the performance of workers by utilizing various IT-based mobile and internet devices. In pharmaceutical companies, salespeople are using the e-brochure to search for diverse expertise in real time. Through the e-brochure, pharmacists and doctors can be provided with the information they need, thereby increasing confidence in pharmaceuticals and salespeople. Salespeople can also use e-brochures to improve their work performance and to be more satisfied with their jobs. This study examines which functions of e-brochures satisfy salespeople and what attitudes to the e-brochures they need to have. This paper explains the effect of satisfaction and attitude to the e-brochures on job satisfaction through self-efficacy with statistical analysis. As a statistical result, the functions of e-brochures (professional knowledge, massive amount of data, easy searching, information updates, and the reflection of feedback) and attitudes to the e-brochures (importance, intention to use, belief in improvement, efficacy to use, and negative cognition) influence on self-efficacy of salespeople. Further, self-efficacy has mediating effects on the relationship between the functions of e-brochures / attitudes to e-brochures and job satisfaction. Exceptionally, the mediating effect of self-efficacy was not significant in relation to information updates / reflection of feedback and job satisfaction. These results will explain what functions should be focused for the future development of e-brochures. It will also suggest what attitudes the salespeople should have about e-brochures. Through these efforts, salespeople will be able to utilize new technology of e-brochures to satisfy their jobs and improve their performance.

☞ keyword : e-brochure, job satisfaction, self-efficacy, salespeople

1. Introduction

Recently, most Korean pharmaceutical companies use mobile-based technologies such as e-brochures. These mobile-based information systems or technologies usually increase a firm's performance [1]. Hence, companies should utilize particular mobile-based technologies like e-brochures

for organizational performance and management [2]. An e-brochure contains complex information on a variety of drugs and has the capacity to update new and changing information in real time. The e-brochure is a technology that can be continuously improved by reflecting opinions of not only workers, but also pharmacists and doctors. Pharmacists and doctors can get information quickly and accurately through e-brochures. Thus, they can be more confident and satisfied with salespeople, drugs, and pharmaceutical companies. In addition, when salespeople use e-brochures to satisfy pharmacists and doctors, their work performance will also improve.

This study focuses on the importance of the e-brochure and suggests ways to develop it.

First, the e-brochure involves a variety of functions. There are more important or necessary functions for salespeople. Having these specific functions of the e-brochure will improve

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salesperson self-efficacy and job satisfaction [3], [4]. Further, understanding the important functions for salespeople will help to understand the direction of improvement of e-brochures.

Second, there are certain attitudes of workers to new technologies [5]. Having specific attitudes to the e-brochures will affect worker behavior. For example, workers with a more positive attitude toward the e-brochure will use this technology more to achieve high performance. Thus, workers who have specific attitudes to the e-brochure will be able to utilize this technology to have higher self-efficacy and job satisfaction. Knowing the specific attitudes that influence self-efficacy and job satisfaction will allow the company to improve performance by facilitating salespeople to take on these attitudes.

It is important to understand what functions are required for e-brochures and to further develop them so that workers have a positive attitude to this technology. Through these efforts, e-brochures will evolve to perform better, and salespeople will be better equipped to use the technology. Therefore, salespeople's performance will also improve. Doctors and pharmacists will also be more confident and satisfied with salespeople utilizing this technology. These results will lead to the improvement of pharmaceutical companies' information systems and their performance, and also improve corporate performance in sales, corporate image, trust in organization and the like.

2. Literature Review

2.1 E-brochure

E-brochures are responsible for the brochure function of the product, giving accurate information such as article services and insurance reviews to the customer and improving the salesperson's knowledge of the product.

E-brochures feature information such as product categories, core item information, latest updated item information lists, product displays, product descriptions, clinical data, advertising, and insurance information.

Because pharmacists and doctors need to take care of their patients, they cannot spend a lot of time searching and studying information about drugs. Salespeople can provide more accurate and up-to-date information via e-brochures.

2.2 Functions and Self-efficacy

This study describes five functions of e-brochures. The e-brochure is a tool for sales workers to distribute information about drugs. Thus, it has basic advantageous functions such as professional information about drugs, a massive amount of information, an ease of information retrieval, quick updates and feedback from users. If workers are satisfied with the various functions of the e-brochure, they will have confidence that they can improve their work performance (self-efficacy).

2.2.1 Functions of the e-brochure

First, professional knowledge refers to the degree to which the e-brochure has expertise information that a doctor or pharmacist needs. Doctors and pharmacists may want more specialized knowledge, but salespeople may not have the expertise on their own. Therefore, it is necessary to find more specialized and accurate knowledge and provide it to pharmacists and doctors.

Second, the amount of information that doctors and pharmacists need may be a massive amount of data. One salesperson faces a variety of doctors and pharmacists. In addition, they will be facing even more patients. Therefore, pharmacists, doctors, and patients may want more information than a salesperson has prepared or available. A vast amount of information will help salespeople answer various questions and unexpected problems.

Third, easy searching means that workers can search for information easily and quickly. Doctors and pharmacists do not meet only one salesperson. They meet a number of salespeople from various pharmaceutical companies and in turn look after even more patients. Hence, salespeople need to provide information faster to doctors and pharmacists. Accurate information, along with rapidly supported information, will enhance the satisfaction of physicians and pharmacists.

Fourth, information updates means the degree to which new information and changes are updated quickly. E-brochures should have new information in a variety of rapidly changing environments, such as new test results for pharmaceuticals, changes in insurance calculation methods, and new regulations. Salespeople, doctors, and pharmacists will be satisfied with the belief that the e-brochure has the latest

information.

Fifth, reflection of feedback refers to the degree of reflection of opinions, complaints, and suggestions of users (workers). It is necessary to compensate for the problems perceived by salespeople using e-brochures. In addition, e-brochures should be developed to be more worker-friendly. E-brochures that reflect the opinions of salespeople will improve both their satisfaction and performance.

2.2.2 Self-efficacy

Self-efficacy is the belief that performance can be achieved in a given situation and improves motivation [3]. Self-efficacy refers to a person's belief and confidence in their ability or capacity to succeed in tasks. Self-efficacy can be increased when an individual successfully achieves goals [6]. Those who have high self-efficacy are more likely to trust that they can successfully complete what they are doing, and will make a greater effort and actively seek solutions when faced with challenges or facing difficult problems. Conversely, when self-efficacy is low, this effort is absent and difficult situations are considered negative. People with low levels of self-efficacy often seem helpless and have a poor sense of accomplishment. Therefore, self-efficacy is an important factor in explaining differences in motivation, attitudes, learning and the performance of tasks among individuals [7]. Self-efficacy refers to people's belief in their abilities to produce a specific level of performance. These beliefs create various effects on cognitive, emotional, motivational and selection processes [8]. Therefore, self-efficacy influences the behavior and performance of workers [9]. Workers who have greater self-efficacy are more likely to accept new challenges. In addition, an effective perspective promotes deeper commitment and creativity to work. Also, these variables are able to increase employees' efforts to overcome frustration and failure. Therefore, self-efficacy increases performance levels and reduces negative factors such as stress and depression [8], [10].

2.2.3 Functions of the e-brochure and Self-efficacy

The various functions of e-brochures and salespeople's satisfaction to it will enhance their self-efficacy.

First, if a salesperson believes that the knowledge or information in e-brochures is correct, workers will be able to have confidence in the information that he or she provides to doctors and pharmacists. Hence, they will be more confident about their work and they will be able to improve self-efficacy [3], [6].

Second, a massive amount of data can enhance the ability of salespeople to solve unexpected problems. If workers experience success in solving their problems through e-brochures, they will increase the efficacy of their work [6], [8].

Third, easy searching helps salespeople find information quickly and easily. Workers who have the experience of being able to solve their tasks faster will have a positive expectation of their ability to complete their work [3], [6], [8]. Therefore, workers will be able to have self-efficacy in their work performance being improved.

Fourth, information updates is related to the belief that e-brochures have the latest information. Hence, salespeople have the assurance that the information they can provide through the e-brochure is accurate and current. The confidence that the information supports their work will have a direct bearing on their job performance. Therefore, workers who have accurate information will have higher efficacy in their work.

Fifth, the reflection of feedback is accompanied by inconvenience or opinion felt directly by salespersons. Salespeople will be able to improve their e-brochures in the direction they want. When workers have the skills they need, their confidence in work will rise [3], [6], [8]. Therefore, a work system that reflects workers' opinions will improve both satisfaction and self-efficacy.

Based on the relationship between these five functions and self-efficacy, the following hypotheses were set.

h1 The functions of the e-brochures will increase self-efficacy

h1.1 Professional knowledge will increase self-efficacy

h1.2 Massive amount of data will increase self-efficacy

h1.3 Easy searching will increase self-efficacy

h1.4 Information updates will increase self-efficacy

h1.5 The reflection of feedback will increase self-efficacy

2.3 Attitudes and Self-efficacy

2.3.1 Attitudes toward the e-brochure

Workers can have five certain crucial attitudes for new technologies such as big data, AI, and IoT related to the Fourth Industrial Revolution. These five attitudes are importance, intention to use, belief in improvement, efficacy to use, and negative cognition [5].

First, importance is the degree to which workers think that the e-brochure is important to their work. If workers believe the e-brochures are important to their work, they will utilize it for work.

Second, even if a company recommends e-brochures to workers, it is unlikely that all workers would prefer to use it. The intention to use means an employee's attitude toward making more use of the e-brochure in their work.

Third, belief in improvement is the belief that the e-brochure will help improve salespeople's work and performance. Workers who believe that the e-brochure is helpful to them will use this technology to improve their performance.

Fourth, as the e-brochure has different preferences, the ability to utilize the e-brochure will vary from employee to employee. Efficacy to use means the belief in one's ability to work better than the e-brochure in one's work.

Fifth, not everyone will always have a positive attitude toward new technology. Just as AI threatens a temporary job, the e-brochure can be perceived as negative for certain workers. Negative cognition refers to an employee's attitude that the e-brochure may not be helpful or may even be interfering with their work.

2.3.2 Attitudes toward the e-brochure and self-efficacy

Performance-related factors such as efficacy may increase if workers have certain attitudes to technologies and factors such as big data, AI, IoT, and cloud computing [5]. Thus, specific attitudes toward the e-brochure will also improve self-efficacy.

First, importance means the degree to which workers consider the e-brochure valuable to own work. Salespeople will be able to use e-brochures as much as they are valuable

to them, which will improve their performance. Experience in improving work performance directly increases self-efficacy [3, 6]. In addition, salespeople who believe that the e-brochure is helpful to their work will become more aware of the importance of the e-brochure. Therefore, the e-brochure will have a positive effect on the performance of the salesperson and furthermore, on self-efficacy.

Second, intention to use is the willingness of salespeople to use the e-brochure more. If the e-brochure does not help their business, workers will not be willing to use them. On the other hand, workers who believe that the e-brochure is helpful to their work have the intention to use it. Thus, intention to use will have a positive relationship with self-efficacy, as the willingness to use the e-brochure implies that this technology is related to worker performance.

Third, belief in improvement means that the e-brochure directly enhances the work performance. Therefore, a salesperson who believes that the e-brochure has improved his or her work performance will become self-confident and will increase in self-efficacy.

Fourth, efficacy to use is the belief in one's ability to use the e-brochure well. A high efficacy to use presupposes that people have adequate abilities to use the product. It also means that people have enough training or experience to use the e-brochure. Hence, a salesperson with a high efficacy to use would have used the e-brochure in his or her work, and it is likely that the worker also experiences performance improvements. Therefore, efficacy to use will have a positive relationship with self-efficacy.

Fifth, negative cognition means workers' perception that the e-brochure is not helpful to their work. A company or team suggests that salespeople use the e-brochure. However, a salesperson who believes the e-brochure does not help them will not believe that this technology can improve own performance. Thus, the negative perception of the e-brochure will result in an inhibition of job performance and a decrease in self-efficacy. Based on these relationships, the following hypotheses were established:

h2 Attitudes to the e-brochures will increase (decrease) self-efficacy

h2.1 Importance will increase self-efficacy

h2.2 Intention to use will increase self-efficacy

h2.3 Belief in improvement will increase self-efficacy

h2.4 Efficacy to use will increase self-efficacy

h2.5 Negative cognition will decrease self-efficacy

2.4 Self-efficacy and Job Satisfaction

2.4.1 Job satisfaction

Job satisfaction refers to the form of attitude that a member has about a job. Job satisfaction is a state of pleasantness or good emotions obtained by an individual evaluating his or her job or experience gained through work [4]. Job satisfaction is defined as the emotional reaction resulting from the comparison between the expected and actual outcomes of job performance [11].

Although the definition of job satisfaction is somewhat different according to the researcher, it can be said that job satisfaction means the affective and emotional preference of how much people like their job as one of their attitudes toward their own job.

2.4.2 Self-efficacy and job satisfaction

Workers experiencing success have a high sense of efficacy in their work. [3], [6], [7]. Having the belief that people can better accomplish their work will improve their performance, and also and make them more satisfied with their job [12].

Self-efficacy affects actual success and this success improves satisfaction with the job [13]. Likewise, workers with self-efficacy can overcome problems when they face difficulties or problems in their work [14]. Therefore, workers with high self-efficacy are more likely to value their work [12].

As mentioned earlier, the satisfaction of salespeople with regard to the e-brochure functioning and specific attitudes toward the e-brochure will enhance self-efficacy. Workers with high self-efficacy will be more satisfied with their jobs. Therefore, the satisfaction of salespeople with regard to the functionality of e-brochures and specific attitudes toward them will enhance job satisfaction through self-efficacy. Based on these relationships, hypotheses about the immediate effect of self-efficacy in the relationship between the satisfaction of salespeople about e-brochure functions and specific attitudes toward e-brochures and job satisfaction were set as follows.

h3 Self-efficacy will mediate the relation between functions of e-brochure and job satisfaction

h3.1 Self-efficacy will mediate the relation between professional knowledge and job satisfaction

h3.2 Self-efficacy will mediate the relation between a massive amount of data and job satisfaction

h3.3 Self-efficacy will mediate the relation between easy searching and job satisfaction

h3.4 Self-efficacy will mediate the relation between information updates and job satisfaction

h3.5 Self-efficacy will mediate the relation between reflection of feedback and job satisfaction

h4 Self-efficacy will mediate the relation between attitudes e-brochures and job satisfaction

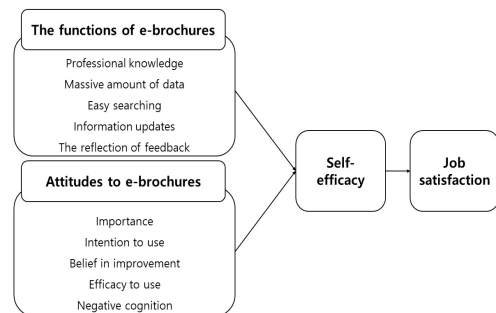
h4.1 Self-efficacy will mediate the relation between importance and job satisfaction

h4.2 Self-efficacy will mediate the relation between intention to use and job satisfaction

h4.3 Self-efficacy will mediate the relation between belief in improvement and job satisfaction

h4.4 Self-efficacy will mediate the relation between efficacy to use and job satisfaction

h4.5 Self-efficacy will mediate the relation between negative cognition and job satisfaction



(그림 1) 연구모형
(Figure 1) Research model

3. Participants and Measurement

Data was collected from 150 salespeople from pharmaceutical companies in Korea. Demographic information

on these 150 workers is as follows: In terms of gender, there were 137 males (91.3%) and 13 females (8.7%). In terms of their types of organizations, 87 worked for pharmacies (58%), and 63 worked for hospitals (42%). In terms of age, 26 were in their twenties (17.3%), 81 were in their thirties (54%), 42 were in their forties, and 1 was fifty or older (.7%). In terms of academic background, 139 had bachelor degrees (92.7%), and 11 had masters degrees (7.3%). In regards to their length of employment, 9 had worked for less than 1 year (6%), 65 had worked 1-5 years (43.3%), 30 had worked 5-10 years (20%), and 46 had worked longer than 10 years (30.7%).

In addition, all items were measured on a Likert 7-point scale. First, the five functions of the e-brochure were each measured by 3 items. (See appendix).

Second, the five attitudes to the e-brochures were each measured by 3 items [5]. For example, importance included “I believe e-brochures are valuable to me”, and “E-brochures play an important role in my work”. Intention to use included “I am willing to use e-brochures”, and “I will use e-brochures for my work”. Belief in improvement involved “I think e-brochures are helpful for my job”, “E-brochures will help me improve my performance”. Efficacy to use involved “I have an ability to use e-brochures”, and “I can use e-brochures well in my work”. Negative cognition included “I do not think e-brochures helps me”, “E-brochures will have a negative impact on my work and job”.

Third, self-efficacy was measured by 4 items, including, “I am confident that I can successfully perform any tasks assigned to me on my current job”, and “I am not as well prepared as I could be to meet all the demands (r)” [15].

Fourth, job satisfaction was measured by 7 items’ including, “I receive recognition for a job well done”, and “I feel good about my job” [16].

4. Analysis

For statistical analysis, this study used a confirmatory factor analysis (CFA) for validity, Cronbach’s for reliability and correlation, and structural equation modeling for mediating effect. Table 1 shows the results of the CFA. The results indicate the measurements of this study have significant validity.

(표 1) 확인적 요인분석 결과
(Table 1) Results of CFA

variables	item	t	p	C.R	AVE
importance	i3			.893	.878
	i2	21.817	***		
	i1	19.756	***		
intention to use	u3			.882	.865
	u2	18.351	***		
	u1	18.49	***		
belief in improvement	h3			.864	.836
	h2	17.269	***		
	h1	19.422	***		
efficacy to use	e3			.836	.807
	e2	20.379	***		
	e1	15.431	***		
negative cognition	n3			.757	.694
	n2	11.504	***		
	n1	11.139	***		
professional knowledge	p1			.834	.758
	p2	13.456	***		
	p3	14.148	***		
massive amounts	a1			.878	.819
	a2	16.928	***		
	a3	17.027	***		
easy searching	s1			.782	.732
	s2	11.717	***		
	s3	11.183	***		
information update	u1			.882	.841
	u2	18.54	***		
	u3	18.432	***		
reflection of feedback	f1			.889	.852
	f2	19.869	***		
	f3	18.395	***		
job satisfaction	j1			.866	.618
	j2	11.102	***		
	j3	9.659	***		
	j4	9.735	***		
	j5	8.839	***		
	j6	10.88	***		
	j7	11.838	***		
self-efficacy	f4	8.474	***	.803	.719
	f3	16.201	***		
	f2	16.563	***		
	f1	11.835	***		
model fit	$\chi^2(p)$: 1394.885, χ^2/df : 1.965, RMSEA: .080, CFI: .901, IFI: .903, PNFI: .710, PGFI: .580				

Table 2 indicates the results of reliability and descriptive statics. All variables has greater than 0.8 Cronbach’s values.

(표 2) 신뢰도와 기술통계
(Table 2) Reliability and descriptive statistics

	Cronbach's	Mean	Std. Deviation
professional knowledge	.905	4.298	1.256
massive amounts	.931	3.991	1.288
easy searching	.877	4.104	1.363
information update	.940	3.609	1.377
reflection of feedback	.944	3.324	1.395
important.	.953	4.131	1.545
intention to use	.945	4.384	1.512
belief in improvement	.943	4.362	1.478
efficacy to use	.925	4.382	1.460
negative cognition	.864	3.024	1.328
self-efficacy	.918	5.518	1.246
job satisfaction	.889	5.105	1.089

Table 3 indicates the results of the correlation analysis. Information updates and reflection of feedback have no significant relationship with self-efficacy, and other factors have significant relationships with each other. Among these factors, except negative cognition, all variables have a positive relationship with each other.

(표 3) 상관관계 분석
(Table 3) Correlation analysis

	01	02	03	04	05	06	07	08	09	10	11	12
01	.											
02	.755***	.										
03	.613***	.672***	.									
04	.539***	.671***	.709***	.								
05	.523***	.632***	.656***	.743***	.							
06	.473***	.468***	.464***	.418***	.469***	.						
07	.572***	.506***	.512***	.456***	.492***	.881***	.					
08	.521***	.481***	.534***	.423***	.505***	.854***	.910***	.				
09	.443***	.378***	.518***	.395***	.441***	.808***	.853***	.865***	.			
10	-.300***	-.225**	-.276**	-.224**	-.269**	-.486***	-.516***	-.542***	-.522***	.		
11	.216**	.193*	.218**	.068	.105	.208*	.173*	.241**	.233***	-.265***	.	
12	.224**	.301***	.298***	.175*	.228**	.283***	.256**	.315***	.301***	-.197*	.757***	.

***:p<.001, **:p<.01, *:p<.05

01:professional knowledge, 02:massive amounts, 03:easy searching, 04:information update, 05:reflection of feedback, 06:important, 07:intention to use, 08:belief in improvement, 09:efficacy to use, 10:negative cognition, 11: self-efficacy, 12: job satisfaction

Table 4 indicates the results of the SEM analysis for mediating effects. As shown in the correlation analysis, all the independent variables (attitudes and functions) have a significant effect on self-efficacy except information updates and reflection of feedback. Thus, h1.1 (hypothesis 11), h1.2 and h1.3 were accepted, but h1.4 and h1.5 were not accepted. Also h2 (and all five sub-hypothesis) was accepted. In addition, Table 5 shows whether the hypothesis 3 and hypothesis 4 have been verified with the Sobel test result, and proves a partial mediating effect and a perfect mediating effect.

(표 4) 구조방정식을 통한 매개효과 분석 결과
(Table 4) The result of mediating effect analysis through SEM analysis

	loading	p	χ²(p)	χ²/df	TLI	CFI	IFI	PNFI	PGFI
06 -> 11	.234	.005							
11 -> 12	.804	***	206.220	2.787	.913	.929	.930	.728	.591
06 -> 12	.122	.027							
07 -> 11	.187	.026							
11 -> 12	.810	***	182.053	2.460	.927	.941	.842	.736	.599
07 -> 12	.119	.030							
08 -> 11	.263	.02							
11 -> 12	.800	***	192.757	2.605	.919	.934	.935	.730	.589
08 -> 12	.125	.026							
90 -> 11	.231	.007							
11 -> 12	.807	***	193.983	2.621	.914	.930	.631	.726	.596
09 -> 12	.111	.050							
10 -> 11	-.277	.001							
11 -> 12	.826	***	227.507	3.074	.884	.906	.907	.705	.579
10 -> 12	-.026	.659							
01 -> 11	.255	.003							
11 -> 12	.820	***	184.935	2.499	.917	.932	.933	.726	.600
01 -> 12	.050	.391							
02 -> 11	.219	.011							
11 -> 12	.796	***	172.545	2.332	.929	.942	.943	.735	.606
02 -> 12	.164	.003							
03 -> 11	.209	.018							
11 -> 12	.800	***	194.384	2.627	.908	.925	.926	.720	.594
03 -> 12	.156	.007							
04 -> 11	.063	.469							
11 -> 12	.824	***	195.749	2.645	.915	.931	.932	.727	.599
04 -> 12	.145	.008							
05 -> 11	.097	.258							
11 -> 12	.816	***	186.319	2.518	.922	.937	.937	.732	.600
05 -> 12	.167	.002							

***:p<.001, **:p<.01, *:p<.05

01:professional knowledge, 02:massive amounts, 03:easy searching, 04:information update, 05:reflection of feedback, 06:important, 07:intention to use, 08:belief in improvement, 09:efficacy to use, 10:negative cognition, 11: self-efficacy, 12: job satisfaction

(표 5) 소벨 테스트와 가설 검증 결과
(Table 5) Sobel test and hypothesis verification result

mediate effect	model	sobel test	hypothesis
perfect	01 -> 11 -> 12	2.624**	h3.1 accepted
partial	02 -> 11 -> 12	2.348**	h3.2 accepted
partial	03 -> 11 -> 12	2.670**	h3.3 accepted
partial	04 -> 11 -> 12	0.836	h3.4 not accepted
partial	05 -> 11 -> 12	1.282	h3.5 not accepted
partial	06 -> 11 -> 12	2.539*	h4.1 accepted
partial	07 -> 11 -> 12	2.109*	h4.2 accepted
partial	08 -> 11 -> 12	2.956**	h4.3 accepted
partial	09 -> 11 -> 12	2.860**	h4.4 accepted
perfect	10 -> 11 -> 12	-3.265**	h4.5 accepted

***: $p < .001$, **: $p < .01$, *: $p < .05$

01: professional knowledge, 02: massive amounts, 03: easy searching, 04: information update, 05: reflection of feedback, 06: important, 07: intention to use, 08: belief in improvement, 09: efficacy to use, 10: negative cognition, 11: self-efficacy, 12: job satisfaction

5. Conclusion

5.1 Conclusion and Implications

Similar to previous studies, self-efficacy has a direct effect on job satisfaction. All of the attitudes and functions, which are the main variables of the study, were found to have a significant effect on job satisfaction. Therefore, it has been proven that these key variables in this research are valuable. The effects of these variables on job satisfaction through self-efficacy are as follows:

First, professional knowledge improves job satisfaction through self-efficacy rather than directly affecting job satisfaction. Professional information does not satisfy the job itself, but it plays a major role in enhancing the efficacy of work.

Second, a massive amount of data and easy searching affect both job satisfaction and self-efficacy, and self-efficacy has a partial mediating effect. Thus, if the e-brochure has enough information and is possible to be searched easily, salespeople will have a high sense of efficacy and be more satisfied with their job.

Third, the e-brochure information updates and reflection

of feedback have no significant correlation with self-efficacy, and they only improve job satisfaction. Reflection of feedback reflects salespeople's opinions, which are not necessarily job-related. Therefore, workers do not lack confidence in completing the task because their complaints are reflected. They can only be seen as affected by their own jobs. In addition, information updates will need to be discussed in depth in the future. Information updates can only increase trust in e-brochures, or it can be taken for granted by workers. From another point of view, the accuracy of new information and the ease of searching for new information may be prerequisites. Therefore, although information updates are related to job satisfaction, theoretical research should be conducted on the reason why it is not related to self-efficacy.

Next, in terms of attitudes toward e-brochures, self-efficacy has a partial mediating effect between the independent variables (belief in improvement and efficacy to use) and job satisfaction. This result implies that importance, intention to use, belief in improvement and efficacy to use affects both job satisfaction and self-efficacy. Therefore, salespeople should be aware of the importance of the e-brochure and believe that using it well can improve their performance. Also, if people increase confidence by working hard to utilize the e-brochure, this will result in higher self-efficacy and job satisfaction.

Furthermore, negative cognition of e-brochures does not reduce job satisfaction but decrease self-efficacy. Workers' satisfaction is not diminished by the fact that e-brochures are not helpful to them. However, salespeople are less confident about job performance because they perceive negatively what they should use in their work.

The results of this study suggest the direction of improvement for e-brochures and the attitude needed to improve their performance.

First, e-brochures should have more specialized information and functions. Professional information will increase the efficacy and job satisfaction of the salesperson and will increase trust in the pharmaceutical company and in the salesperson that doctors and pharmacists perceive. Therefore, pharmaceutical companies should bring in more diverse experts to ensure e-brochures have professional information, and educate salespeople to use professional knowledge.

Second, a sufficient amount of information improves the

efficacy and satisfaction of the salesperson. With the advancement of technology today, machines are getting smaller and their capacity is getting larger. Therefore, e-brochures will have to create various methods to utilize new technology such as big data.

Third, the ease of information retrieval improves self-efficacy and job satisfaction as well as satisfaction of use. It is necessary to develop more user-oriented interfaces and improve the ease of searching by applying faster computer technology.

Fourth, although information updates does not improve efficacy, it increases job satisfaction. Hence, the company still needs to consider it. E-brochures will need to provide online-based real-time services to quickly provide new information.

Fifth, the reflection of user opinions is a factor that companies should not ignore, like information updates. Sales staff are not machines, but people who enhance performance through e-brochures. Therefore, it is necessary to react sensitively to user opinions or complaints to improve work performance using e-brochures.

Finally, salespeople should have positive attitudes toward e-brochures. First of all, workers should have the belief that e-brochures are important and that they can improve their performance using this technology. Accepting new technologies and using them will lead to more progressive results. Thus, with the willingness to use e-brochures, people will be confident that they can make better use of this technology. Companies should also encourage their employees to have more positive attitudes toward e-brochures through education.

5.2 Limitations and Potential Areas of Future Study

The limitations of the research and suggestions for future research are as follows:

First, the attitudes and functions set in this paper will not be all about e-brochures. Thus, more diverse attitudes and new functions should be studied. In this regard, other than the improvements suggested in the research, other factors should also be considered. For example, when members share a variety of new information, group performance can be

enhanced [17]. If the e-brochure enables mobile-based communication, information exchange among salespeople can be facilitated [18]. In addition, companies and leaders could also enable online leadership or communication. This influence can motivate members and improve performance [19]. Therefore, we should also consider adding and improving other features, such as online usage, communication, and so on.

Second, it is necessary to compare the differences between salespeople who correspond with pharmacies, and those who correspond with hospitals, although this paper does not distinguish between them. The information the pharmacist and the doctor want can be different. Hence, we need to study what is more necessary for workers facing different situations.

Third, the relevance of variables other than self-efficacy and job satisfaction, which are the parameters used in this study, should be clarified. For example, particular attitudes or functions can improve work engagement and creativity. Salespeople can be satisfied with the e-brochures in an e-business environment and satisfied with the job (intrinsic and extrinsic motivation). With this new technology, workers will be able to gain more creativity [20].

Finally, we need to pay attention to the negative impact of e-brochures. Technologies that can be used in real time have various disadvantages. For instance, being able to exchange information or communicate in real time can cause stress. Workers can assume that they are being monitored, and their supervisor can issue work orders during off-hours [21]. Therefore, studies on the disadvantages of various technologies should be considered.

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Appendix. functions of the e-brochure

1) professional knowledge

The e-brochure has expertise.

With the e-brochure, I can find the professional information my pharmacist / doctor wants.

The e-brochure helps me answer professional questions from pharmacists / doctors.

2) massive amount of data

There is enough information.

There is a lot of information.

Most of the information you need is there.

3) easy searching

I can easily find the information.

I can search for information quickly.

I can search for information at any time.

4) information updates

New information is updated quickly.

The changed information is reflected quickly.

I can find the latest information.

5) reflection of feedback

My comments or suggestions are well reflected.

The suggestions of the employees are well reflected.

It quickly handles users' opinions and complaints.

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