

Key Threats of Self-Health Management of Students Study Abroad

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Abstract

Health is vital to the success of an overseas learning. An effective instruction on particular self-health management plays an important role in fostering student's preventive behavior in overseas journey. This research attempted to apply the importance-performance analysis (IPA) techniques with the concept of health threats in the theory of health belief model (HBM) to identify the priorities for health care management. Different quadrants of the IPA represent different implication for practical use in terms of advising healthcare management. Using 302 student samples, we found that to take local foods was viewed as highly susceptible, yet the severity was underestimated. The threat of being infected by visiting host places was overlooked by the respondents. We concluded that the IPA could be adopted to identify the critical factors that need to be included in the orientation program in the study abroad program.

Key Words: Study abroad, Health belief model, Importance-Performance Analysis, Disease prevention, College students

Introduction

People travel around the world, like as birds did for centuries. Virus travel as well when people and birds move from one place to another. Infectious diseases thus spread over places across nations and states, such as Ebola, SAS among others. People moving brought benefits to the human societies by infusing the human culture to be diverse, fascinating, and attractive that one single culture may not achieve at its own. However, like as two faces of a sword, people and birds act as an efficient and effective carrier to deliver virus at the same time.

Study abroad has become as a trend in recent youth development. Students study abroad may enhance the students' knowledge, skills, attitudes toward the world, facilitate their capabilities in handling problems, with which would be beneficial to their future career as well as to the human society. An overseas study certainly benefits the students in many different ways provided that the students remain healthy during their study journey. According to the

statistics of the Department of International and Cross-strait Education of the Ministry of Education, students study abroad has mounted to a new record of 34,423 in the year of 2014, as shown in table 1.

Table 1 Statistics on students study abroad

Country/Year	2010	2011	2012	2013	2014
USA	15,890	16,023	15,219	14,563	14,135
UK	3,610	4,446	3,378	3,367	3,826
Australia	3,633	3,149	3,198	2,553	5,237
Japan	3,253	2,825	2,810	3,140	3,885
Canada	2,814	912	826	1,771	1,109
France	935	814	N/A	955	1,064
Germany	702	636	512	787	901
New Zealand	379	743	250	553	540
S. total	31,216	29,548	26,193	27,689	30,697
Others	2,665	2,798	2,509	3,321	3,726
Total	33,881	32,346	28,702	31,010	34,423

Source: Department of International and Cross-strait Education of the Ministry of Education

As the medical experts and the literature generally recommended, prevention is the best approach to assure health before and during a travel. Preventing activities may be ranging from simply getting advices from parents or friends to a physically visiting a travel medicine for a comprehensive examination and vaccination.

This research attempted to apply the importance-performance analysis (IPA) technique (Martilla & James, 1977; Abalo, Varela & Manzano, 2007). IPA has been successfully applied in various contexts and been proved as a simple yet effective decision making tool in identifying and prioritizing items that need improvement (Azzopardi & Nash, 2013; Dewi, Gundavarapu & Cugati, 2013; Pan, 2015). In the other hand, Health belief model (HBM) is developed to understand the predicting factors behind a person's healthy behavior (Becker, 1984). HBM scholars argued that the possibility of a healthy behavior can be determined by one's perception of susceptibility and severity toward a disease, along with barriers and benefits one perceived onto the actions to be taken for such health behavior. Contextual factors in the HBM may also affect such a decision at the same time (Maiman & Backer, 1974; Janz & Becker, 1984).

Perceived threats and IPA

This research deploys the logic of IPA in the HBM in an innovative way. The logic of this implication is illustrated as follow.

Perceived susceptibility of HBM as Importance of IPA

Perceived susceptibility is an estimate of one's judgment based on health information one

received and understood. The nature of “importance” of IPA is also estimated based on one’s experience and expectation toward an object (Rosenstock, Strecher, & Becker, 1994).

In general, susceptibility is often used to measure the suffering of individuals from the disease for an invasion (Ronis, 1992). Perceived susceptibility is the kind of advance estimate in accordance with the health information received, whether a person will suffer from these diseases. Its nature is similar to the dimension of importance in IPA. The stronger the magnitude of an individual perceived or estimated a criterion, the more the individual will rely on for a decision (Rosenstock, Strecher, & Becker, 1994).

Perceived severity as performance of IPA

Severity refers to a judgment on how serious of a disease may affect; it comes after a possibility (Champion, 1984) (<http://chirr.nlm.nih.gov/perceived-severity.php>). It is similar to the theories of outcome expectancies, such as Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Theory of Planned Behavior (TPB) (Ajzen, 1985). Perceived severity varies from one person to another because of varied outcome expectancy (Janz & Becker 1984; Rosenstock, 1974). A judgment on the severity is a kind of performance (outcome) of a possible disease (Rogers, 1983; Witte, 1992; Sturges & Rogers, 1996).

Application of IPA with HBM

A set of data is gathered with 302 samples taken from three colleges in southern Taiwan for this analysis, as shown in table 2. Scores of two dimensions of susceptibility and severity of the threats of health belief model are shown detailed in the table 2.

Table 2 Sample distribution

Items	Groups	n	%
Gender	1.M	77	25.5
	2.F	225	74.5
Education	1.University	299	99.0
	2.Community college	3	1.0
School	1.Huamnities & Arts	183	60.6
	2.Engineering & Business	45	14.9
	3.Others	74	24.5

Table 2 IPA scores of perceived threats

Items	Severity Rank	Susceptibility Rank	Quadrant
1 Infectious diseases	4.14	8	3
2 Infected by unintended contact	4.32	5	1
3 Infected while local visiting	3.99	9	3
4 Infected by local food	4.15	7	2
5 Infected by local animals	4.36	4	4
6 Overseas hospitalization	4.32	5	1
7 Infect friends when return	4.46	2	4
8 Jeopardize to life	4.65	1	4
9 Complex diseases	4.46	2	1
Average	4.32	4.01	

Use the two dimensions of perceived threats of HBM in IPA; we may infer the same logic of Martilla & James (1977) in this application. Q 1 in a conventional IPA matrix represents items that are high in both importance and performance, items 2 and 9 shows that the respondents have good sense of disease prevention. Q1 is generally viewed as a most important quadrant that requires continuous attention and resource commitment. Q2 is a quadrant for items of important yet poorly performed. Item 4 is apparently the one that featured with high importance and low performance. This means the threats of infection by taking local foods in the second quadrant shows the severity was underestimated, and thus worth special noticing. Q3 as the item 1 and 3 located, represents the respondents are unaware of the possibility and the severity of infections associated with local infectious and to be infected by local visiting. Both susceptibility and severity were under estimated in Q3. As shown in figure 1.

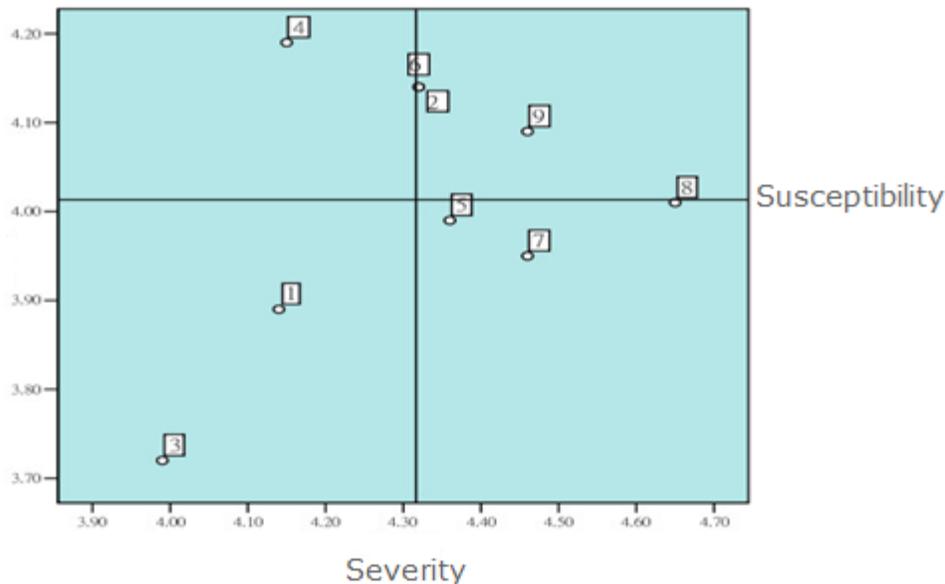


Figure 1 IPA Matrix for perceived threat

Conclusion

This research attempted to adopt IPA technique with HBM. We interpret the perceived susceptibility as the dimension of importance in IPA, this means the possibility or the risk levels of expectance of getting infected by travel-related diseases. The severity is interpreted as the dimension of performance of IPA, because the levels of severity and the performance are results that made of certain antecedents. Application in this case successfully identified those critical preventive factors that may be underestimated or overlooked. Main limit to this study will be the limited discussion on the variations of the construct of perceived susceptibility that should be closely related with the targeted behavior, and the construct of perceived severity that should be the results of the questioned diseases.

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