# V.G. Girish / Choong-Ki Lee / Shyju P.J. / Yae-Na Park Examining the Feasibility of Vaccine Tourism

#### **Abstract**

The study assesses the feasibility of vaccine tourism. Psychological factors, such as perceived stress and fear of COVID-19, were treated as the antecedents of the constructs of the theory of planned behavior (TPB). Data were collected from the respondents from India, and the partial least squares-structural equation modeling (PLS-SEM) method was employed for the analysis. Results reveal that perceived stress and fear of COVID-19 positively and significantly influence attitude, subjective norms, and perceived behavioral control. Furthermore, subjective norms predominantly influence behavioral intention. Likewise, perceived behavioral control and attitude influence behavioral intention.

Keywords: vaccine tourism, stress, fear of COVID-19, theory of planned behavior, India, Russia

#### 1. Introduction

A total of 94% of the global population was extremely, slightly, or quite concerned about the consequences of COVID-19 (Global Data, 2021). In India, 34,587,822 COVID-19 confirmed cases and 468,980 deaths were reported as of December 1, 2021(John Hopkins University, 2021). Thus far, only 32.36% of India's population is fully vaccinated (John Hopkins University, 2021). The shortage of COVID-19 vaccines and lengthy delays influence individuals to travel to other destinations (Global Data, 2021). 'Vaccine tourism is defined as the act of travelling to another destination to receive a vaccine that is hard to get or unavailable within the traveller's home country' (Global Data, 2021). Russia, Maldives, Indonesia, and the USA were the four countries that initiated vaccination opportunities for tourists (McDonagh, 2021). Russia was the first country to offer vaccine tourism (Snow, 2021), and Sputnik V was one of the approved vaccines by the government of India (Ministry of Health and Family Welfare, 2021). Based on the preceding reasons, this study specifically explores the intention of Indians to visit Russia for vaccine tourism.

Theoretical and empirical attention to associate stress to understand health behaviors was highly recommended (Payne et al., 2005). Stress significantly impacts health behaviors and health outcomes (e.g., Louis et al., 2009). Moreover, the link of stress with the theory of planned behavior (TPB) was highlighted (e.g., Ammar et al., 2020). Yahagi et al. (2021), in their study on Iranians' intention to get vaccinated, revealed the positive relationships between fear of COVID-19 and TPB. Integrating the above-mentioned perspectives, this study specifically examines the relationships of psychological variables, such as perceived stress and fear of COVID-19, with TPB (Ajzen, 2012) to predict the behavioral intention to engage in vaccine tourism. Ultimately, positive and significant relationships exist amongst attitude, subjective norms, perceived behavioral control, and behavioral intention (e.g., Lee et al., 2021).

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#### 2. Methods

This study measured the pandemic-related perceived stress scale of COVID-19 with four items which were adapted from Campo-Arais et al. (2020). Fear of COVID-19 was assessed with four items adapted from Ahorsu et al. (2020). Attitude was measured with three items, and subjective norms, perceived behavioral control, and behavioral intention were measured with four items each, which were adapted from Lee et al. (2021) and Song et al. (2012). Three scholars from the tourism field were asked to check the content validity of the measurement items, and a pilot study was conducted amongst 30 individuals. The procedures enabled researchers to clarify the measurement items in the study context.

An online survey was conducted among Indians from June 8, 2021, to September 13, 2021, using Google online survey forms. A total of 214 responses were collected, and 183 responses were used for final analysis after excluding missing and insincere responses. A 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) was used to assess the measurement items.

#### 3. Results

The PLS-SEM method was employed to estimate the research framework. PLS-SEM is more suitable for non-normal distribution data, small sample sizes, and/or complicated models than traditional covariance-based SEM.

As shown in Table 1, factor loadings ranged from 0.763 to 0.971, and the average variances extracted (AVE) ranged from 0.619 to 0.921, confirming the convergent validity (Hair et al., 2017). Composite reliability (CR) ranged from 0.867 to 0.979, and Cronbach's alpha ranged from 0.796 to 0.971, confirming the good reliability of the measurement (Hair et al., 2017).

**Table 1** *Results of the factor analysis* 

Construct and items	λ	AVE	CR	α
Perceived stress		0.619	0.867	0.796
I have not been confident about my ability to handle personal problems related to COVID-19.	0.763			
I have felt that I cannot control the difficulties that could appear in my life due to COVID-19.	0.764			
I have felt that I cannot keep everything under control due to COVID-19.	0.817			
I have been upset that things related to the COVID-19 are out of my control.	0.802			
Fear of COVID-19		0.831	0.952	0.932
Thinking about COVID-19 makes me uncomfortable.	0.836			
My hands become clammy when I think about COVID-19.	0.939			
I cannot sleep because I worry about contracting COVID-19.	0.933			
My heart races or palpitates when I think about contracting COVID-19.	0.936			
Attitude		0.873	0.954	0.927
I think traveling to Russia for vaccine tourism is a positive behavior.	0.944			
I think traveling to Russia for vaccine tourism is a valuable behavior.	0.948			
I think traveling to Russia for vaccine tourism is an enjoyable behavior.	0.910			
Subjective norms		0.921	0.979	0.971
Most people who are important to me agree that I travel to Russia for vaccine tourism.	0.956			
Most people who are important to me support that I travel to Russia for vaccine tourism.	0.971			
Most people who are important to me understand that I travel to Russia for vaccine tourism.	0.967			
Most people who are important to me recommend that I travel to Russia for vaccine tourism.	0.945			
Perceived behavioral control		0.739	0.919	0.882
I am confident that if I want to, I can travel to Russia for vaccine tourism.	0.854			
I am capable of traveling to Russia for vaccine tourism.	0.900			

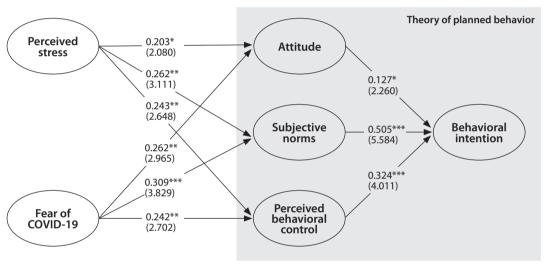
#### Table 1 (continued)

I have enough financial resources to travel to Russia for vaccine tourism.	0.839			
I have enough time to travel to Russia for vaccine tourism.	0.844			
Behavioral intention		0.882	0.968	0.955
I will make an effort to travel to Russia for vaccine tourism in the near future.	0.949			
I have an intention to travel to Russia for vaccine tourism in the near future.	0.949			
I am willing to travel to Russia for vaccine tourism.	0.933			
I am willing to spend time and money to travel to Russia for vaccine tourism.	0.926			

*Note:*  $\lambda$  = Factor loading, AVE = Average variance extracted, CR = Construct reliability and  $\alpha$  = Cronbach's alpha.

As shown in Figure 1, perceived stress significantly influenced attitude (0.203, p<.05), subjective norms (0.262, p<.01), and perceived behavioral control (0.243, p<.01). Fear of COVID-19 significantly influenced attitude (0.262, p<.01), subjective norms (0.309, p<.001), and perceived behavioral control (0.242, p<.01). Attitude (0.127, p<.05), subjective norms (0.505, p<.001), and perceived behavioral intention (0.324, p<.001) also positively influenced behavioral intention.

Figure 1 Results of path analysis



\*p<.05, \*\* p<.01, \*\*\*p<.001. The figures in parenthese are t-values.

## 4. Conclusions and implications

This study addresses whether vaccine tourism is a feasible option to jump-start in the present COVID-19 pandemic. The result of this study encourages that countries with amenities might launch vaccine tourism in a full-fledged manner. They may specifically target tourists from countries where the progression of CO-VID-19 vaccination is extremely slow. Results show that psychological factors, such as perceived stress and fear of COVID-19, act as the provoking factors to opt from vaccine tourism, positively influencing attitude, subjective norms, and perceived behavioral control. These results are in accordance with the outcome of previous studies (Ammar et al., 2020; Yahaghi et al., 2021). Meanwhile, subjective norms are found to be the dominant factor, followed by perceived behavioral control and attitude, which positively influence behavioral intention. The outcome of these relationships supports the findings of Han et al. (2017).

The findings of this study reveal that Indian citizens favor vaccine tourism. Because of its huge population, it was anticipated that India needs considerable time to inoculate its whole population. Vaccine tourism might be promoted in India to reduce the burden on the government. Moreover, it is an opportunity for people who

can afford to visit abroad. They may consider vaccine tourism because they can fulfil the dual purpose, such as vaccination and sightseeing. Indians show a keen interest in visiting Russia for vaccine tourism because of the not so cumbersome visa procedures and relatively affordable expenses. Theoretically, this study clearly highlights that psychological factors act as a trigger to search for viable options to protect themselves and shape their future behavior. Practically, vaccine tourism might be considered an opportunity to visit a foreign country, with the prime thought of receiving the vaccine shots. The government of India can frame policies to provide vaccine tourism opportunities to citizens. Russia may frame guidelines with the clarification on the role of a service provider. This sort of arrangement may benefit countries through visitors taking advantage of vaccine tourism opportunities whilst reviving tourism during the COVID-19 pandemic.

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Submitted: November 23, 2021 Revised: December 01, 2021 Accepted: December 02, 2021