

Travel well, road warriors: Assessing business travelers' stressors



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ABSTRACT

The purpose of this research is to identify stressors related to business traveling. Business travel stress embraces situational, emotional, and physical conditions that restrain personal needs and work expectations. The findings from this study recognize six factors of travel stress: travel arrangements, hotel/airline preferences, travel inconvenience, difficulty maintaining a healthy lifestyle, destination concerns, and work/personal life. This study investigates how personal stress, work stress, and health behavior influence business travelers differently in terms of various travel stressors.

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1. Introduction

Continuous work demand, constant packing, sleeping on planes, and waiting for lost luggage: business travelers are often confronted with challenging conditions on the road, which in turn, increase their stress level. According to the Global Business Travel Association, the definition of a business trip is “travel for a business purpose that includes an overnight stay or where you traveled 50 miles or more” (Global Business Travel Association, 2016). On average, international business travelers are away 12 nights per trip, while domestic business travelers are away four nights per trip (Bureau of Labor Statistics, 2015). Frequent business travelers and those who have longer stays at travel destinations often feel traveling is a hassle and less enjoyable than not traveling (Business Travel News, 2011). As such, business travelers' stress and exhaustion may cause a variety of psychological and physical reactions (Burkholder, Joines, Cunningham-Hill, & Xu, 2010; DeFrank, Konopaske, & Ivancevich, 2000). Previous research indicated that frequent business travelers reported several red flags regarding their health issues such as sleep deprivation, jet-lag, deep vein thrombosis, frequent alcohol consumption during traveling, high blood pressure, back pain, migraine headache, high risk of cardiovascular disease, anxiety, and feelings of detachment from family or friends (Cohen & Gössling, 2015; Richards & Rundle, 2011). Further, recent terrorist attacks during transit and at destinations raise concerns of security and safety for travelers, which may increase travelers' anxiety and stress level (Naples, 2016). To be sure, travel stress has a tremendous negative impact on business travelers' well-being and mental health, causes

several chronic diseases, and decreases productivity and job satisfaction in the long term (Burkholder et al., 2010).

Few studies in the field of work environment and mobility have proposed possible stressors related to business travel. To that extent, the factors involved in business travelers' stress still lack a conclusive viewpoint. Thus, the purpose of this research note is to identify stressors related to business traveling and how these stressors are related to personal stress, work stress, and their health behavior. Ultimately, this research could spark discussions that address business travelers' health issues and enrich the literature of corporate travel management.

2. Literature review

2.1. Travel-related stress

Past stress-related theories have scrutinized a transactional process between an individual and the environment, and extensively investigated how people handle stress when they confront various demanding situations, challenges, or threatening occurrences (Cohen, Kamarck, & Mermelstein, 1983; Lazarus, 1990; Lazarus & Folkman, 1984). Lazarus (1990) stated personal attributes (e.g., values, beliefs, and personality) and environmental factors (e.g., recourses, life events, and constraints) are two major antecedents that elicit a series of appraisal and coping process, as well as generate psychological and physical responses. Thus, stress can be viewed as a post-appraisal state and a subjective reaction that counters stress stimuli (Lazarus, 1990; Miller & McCool, 2003). The theory of stress has been widely used to measure personal perceived stress, work stress, work-family conflict, and vacation stress (Cohen et al., 1983; Jensen, 2014; Westman, 2004; Zehrer & Crotts, 2012). Several studies in the field of leisure and recreation travel have developed a conceptual framework based upon transactional stress

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theory in addition to discussing different leisure activities and situations that may increase travelers' level of stress (Iwasaki & Mannell, 2000; Miller & McCool, 2003; Schuster, Hammit & Moore, 2006; Zehrer & Crofts, 2012). In a recreational setting, travelers may experience irritating and frustrating situations that cause unpleasant travel experiences and unexpected hassles. For instance, traffic jams, crowds, sickness during the trip, tedious travel arrangements, or unanticipated changes in travel plans, can all potentially increase travelers' emotional and physical challenges and produce stress (Miller & McCool, 2003; Schuster et al., 2006). Zehrer and Crofts (2012) developed a vacation stress model and indicated several travel stressors. In their study, they identified pre-trip stressors (seeking information, making travel arrangements, and developing an itinerary), travel stressors (logistics, commuting, weather, health, and safety issues), and destination stressors (experiences and issues occurred at the destination) as three main dimensions of vacation stress.

Similarly to leisure travelers' stress, business travelers may undergo various types of stress during different travel phases: pre-trip, during the trip, and post-trip (DeFrank et al., 2000; Ivancevich, Konopaske, & DeFrank, 2003). However, since leisure and business travelers have differing reasons for their travels, they may be confronted with dissimilar travel stressors. In a business travel setting, the stressors associated with the pre-trip phase mainly emphasize travel arrangements, such as planning the trip and delegating work (Carlson Wagonlit Travel, 2012; DeFrank et al., 2000; Ivancevich et al., 2003). When business travelers are on the road, unexpected incidents (e.g., flight delay or cancellation and lost luggage), health concerns, long working hours, and travel logistics become major stressors (Gustafson, 2014; Striker et al., 1999). Moreover, business travelers still retain stress even when they return from the trip; they may have a more demanding workload, deal with paperwork and reports, or resume family responsibilities (DeFrank et al., 2000; Ivancevich et al., 2003; Striker et al., 1999; Westman, Etzion, & Gattenio, 2008). In summary, business travel stress embraces situational, emotional, and physical conditions that restrain personal needs and work expectations.

Additionally, travel-related stressors are also associated with individuals' travel frequency and intensity of stressful encounters (Schuster et al., 2006). Compared to leisure travelers, business travelers experience a higher intensity of travel activities, as well as a combination of personal and work stress. However, since traveling is a part of work, business travelers' stress levels may be offset by rationalizing and adjusting their behavior, which leads to business travel normalization (Gustafson, 2014). In short, business travelers may experience different stressful encounters than leisure travelers and know how to develop their own strategies to normalize travel-related stress. This indicates that business travelers may reveal a different facet of handling travel-related stressors. Therefore, although previous studies have addressed leisure travelers' stress, it is necessary to identify various dimensions of business travelers' stressors.

2.2. Business travelers' health condition and behavior

Previous research in the field of occupational health and travel medicine has investigated travelers' health condition, disease risk factors, and travelers' well-being (Burkholder et al., 2010; Hahn, Binnewies, Sonnentag, & Mojza, 2011; Richards & Rundle, 2011; Rogers & Reilly, 2002; Smith & Leggat, 2010; Striker et al., 1999). Business travelers often undergo both physical and psychological problems due to sleep disruption, a lack of nutritional intake, and illness from climatic changes (Rogers & Reilly, 2002). Additionally, jet lag, diarrhea, weight loss or gain, backaches, and headaches are common physical symptoms that interact with travelers' exhaustion and stress, which deteriorate travelers' wellness (Burkholder et al., 2010). Aside from the physical issues, business travelers also hold job strains and work demands during their trips. Research indicates that intensive work demands are associated with people's poor health behavior such as eating unhealthy food, less

exercise, increased cigarette smoking, and increased alcohol consumption (Ng & Jeffery, 2003; Siegrist & Rödel, 2006). Therefore, business travelers may expose themselves with considerable health risks.

Since business trips often consist of inflexible itineraries and intensive meeting schedules, it is difficult for business travelers to maintain a regular exercise routine, choose a healthy diet, and get enough rest. Business travelers may have different ways that intend to reduce the health risks and retain healthy behavior on the road. For instance, some business travelers have medical examination, take immunizations, or seek medical advice before the trip (Richards & Rundle, 2011; Rogers & Reilly, 2002). Some travelers may try to limit high carbohydrate and sugar intake, take supplements or vitamins, and use gymnasium or spa facilities at the travel destination (Burkholder et al., 2010). As such, pre-trip arrangement, choices of hotel facilities, and activities at the destination could be associated with travelers' health concerns and their health conscientiousness on the road.

3. Methodology

The study employed a self-report questionnaire to obtain business travelers' perspectives of their stress related to business trips, work, and personal perceived stress. In addition, information regarding business travelers' health condition, health behavior, and demographic information was included in the questionnaire. In terms of measurement items, an assessment of Oldenburg Burnout Inventory (OBI) (Demerouti & Bakker, 2008) and Perceived Stress Scale (PSS) (Cohen et al., 1983) were utilized to measure business travelers' work and personal stress. There were 11 measurement items related to travelers' health conditions (HC) during business trips, such as how often the business travelers have experienced insomnia, migraine headaches, diarrhea, and other symptoms during their business trips. Moreover, a total of 7 measurement items was related to business travelers' health behavior (HB), such as "I exercise regularly" and "I limit my food intake such sugar, fat, carbohydrates". These items were adapted from Bruni and Steffen (1997), Burkholder et al. (2010), McIntosh, Swanson, Power, Raeside, and Dempster (1998), and Rogers and Reilly (2002). The mean scores of OBI, PSS, and HB were calculated to evaluate those relationships with participants' travel stress.

Since there were no generalized measures or a consensus of travel stress from previous studies, the current study synthesized 35 measurement items from the literature to assess participants' travel stress. These 35 measurements were characterized into five dimensions: travel arrangements (e.g., transportation reservations), travel incidents (e.g., flight delay or lost baggage), concerns of personal health (e.g., unable to maintain healthy lifestyle), workload (e.g., long working hours at destination), and personal life (unmet familial responsibility). Due to a lack of research that investigates the relationships among business travelers' travel-related stress, work stress, personal stress, and their health behavior, it is critical to evaluate the validity and reliability of the measurements in this study. Researchers suggest that an exploratory structural equation modeling (ESEM) approach, which integrates exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), is the preferable method in an exploratory research with a priori assumption of factor structure because it overcomes the limitations of a two-step approach (EFA followed by CFA, see the discussions in Asparouhov & Muthén, 2009; Marsh, Morin, Parker, & Kaur, 2014; Trépanier, Fernet, Austin, & Ménard, 2015). Thus, the current study applied ESEM in the data analysis to evaluate inter-relationships among the variables. Based upon the transactional theory of stress, travel-related stress served as an endogenous latent variable. Work stress, personal stress, and health behavior served as exogenous and observed variables in this study. The criteria of factor loading is to accept values larger than 0.3 (Asparouhov & Muthén, 2009).

The target population was travelers who have traveled for a business purpose in the past 30 days. Participants were recruited from Amazon Mechanical Turk, which is an online participant recruitment platform

that has been widely used in business, social science, and behavioral research (Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012). Participants who met the criteria (i.e., have traveled for a business purpose in the past 30 days and have stayed away from home at least 1 night) were asked to complete the questionnaire. The average time to answer the questionnaire was 12 min. To avoid straight-lining responses, a validating question “Please select ‘neither agree nor disagree’ here” was buried within the questionnaire. For this reason, only the responses that correctly answered the validating question were included in the data analysis.

4. Results

The data collection was conducted on June 2016, and a total of 284 questionnaires were collected through the Amazon Mechanical Turk website. After removing the questionnaires that were incomplete, failed the validating question, and the outliers, a total of 272 completed responses were included in the data analysis. There were 167 females and 105 males. The majority of the participants aged from 25 to 35. Fifty-four percent (54%) of participants had 5 or less trips in a year, and 63% had an average 3–4 days per trip. The demographic information is shown in Table 1.

Table 2 demonstrates the minimum, maximum, mean, and standard deviation score of travel stress (TS), work stress (WS), Perceived Stress Scale (PSS), and health behavior (HB). The score of TS was the average of all items multiplied by 10 (this method was adopted from Carlson Wagonlit Travel, 2012). TS was measured from 1 (very little stress) to 10 (very stressful). WS and HB were measured in a Likert scale from 1 (strongly disagree) to 5 (strongly agree). PSS and personal health conditions during business trips were measured in a Likert scale from 0

Table 1
Demographic profile of participants ($N = 272$).

Variable	Frequency	Percent
Gender		
Male	167	61%
Female	105	39%
Age		
Under 25	33	12%
25–35	163	60%
36–45	54	20%
46–55	28	5%
56 and older	8	3%
Marital status		
Single	111	41%
Married	122	45%
Divorced	8	3%
Separated	1	0.3%
Living with partner	30	11%
Number of children		
0	147	54%
1	72	26%
2	43	16%
3	5	2%
4 and more	4	1%
Travel frequency		
5 or less trips/year	148	54%
6–10 trips/year	82	30%
11–15 trips/year	27	10%
16–20 trips/year	7	3%
>20 trips/year	8	3%
Average duration of one trip		
1–2 days	67	25%
3–4 days	170	63%
5–6 days	26	9%
Longer than one week	9	3%
Job levels		
Staff/associate level	98	36%
Mid-management level	153	56%
Top-management level	16	6%
Others	5	2%

Table 2

Descriptive statistics of travel stress, work stress, personal perceived stress, and health behavior ($N = 272$).

	Minimum	Maximum	Mean	SD
Travel stress (TS)	26.29	92.00	62.40	12.55
Work stress (WS)	1.44	4.13	2.82	0.52
Perceived Stress Scale (PSS)	1.07	4.71	2.70	0.58
Health behavior (HB)	1.00	5.00	3.35	0.87

(never felt/had this feeling or condition) to 4 (often felt/had this feeling or condition).

While asking participants what health conditions they have experienced during business trips, participants answered that they had <8 h of sleep per night (43%), followed by muscular or back pain (19%), and insomnia (15%). Information regarding the business travelers' health conditions is shown in Fig. 1. A regression analysis was conducted to explore the relationships associated with travel stress, along with participants' health conditions, gender, age, job levels, trip frequency, and trip duration. However, no significant results were found among these factors ($p > 0.5$).

To identify the factors associated with travel stress and its relationships with WS, PSS, and HB, the next step was to conduct an ESEM analysis. The multivariate and homoscedasticity analyses were examined to ensure the assumptions for the measurement and structural model were not violated. The results of Kurtosis, skewness, and the scatter plots all indicated that the assumptions of linearity and homoscedasticity have been met (Field, 2009). Therefore, the ESEM was further conducted by using Mplus version 7 software. The analyses used Maximum Likelihood estimation, and Geomin rotation was performed by variance-covariance matrices (Asparouhov & Muthén, 2009). Based on previous studies, the current study concluded five possible factors related to travel stress: travel arrangements, travel incidents, concerns of personal health, workload, and personal life as a priori assumption. However, the results of ESEM indicated that a measurement model of six factors demonstrated a better fit than a proposed model of five factors, $\chi^2 (df = 476) = 775.489, p < 0.01, CFI = 0.93, RMSEA = 0.048$ (C.I. = 0.042–0.054), SRMR = 0.03 (Table 3). Therefore, the factor loadings from the measurement model of six factors were analyzed (Table 4). Note that three items (TS4–using restricted fares, TS6–using an on-line booking tool, and TS24–flying to a new destination) were deleted since the standardized path coefficients were not significant. In addition, since the results showed slightly different dimensions from the research assumption, the factors were renamed properly to *travel inconvenience* (F1), *hotel/airline preference* (F2), *travel arrangements* (F3), *work/personal life* (F4), *difficulty of maintaining healthy lifestyle* (F5), and *destination concerns* (F6).

The results of ESEM also showed that business travelers' work stress (WS) considerably influenced their work/personal life (F4), $\beta = 0.30, p < 0.01$, but not other factors in the model. However, business travelers' personal stress (PSS) significantly influenced the factor of travel inconvenience (F1), $\beta = 0.19, p < 0.05$, and travel arrangements (F3), $\beta = 0.30, p < 0.01$. Finally, business travelers' health behavior (HB) positively influenced their hotel/airline preference (F2), $\beta = 0.19, p < 0.05$, difficulty of maintaining health lifestyle (F5), $\beta = 0.27, p < 0.01$, and destination concerns (F6), $\beta = 0.21, p < 0.05$. The final factor structure also showed the relationships among TS, WS, PSS, and HB (Fig. 2).

5. Discussions and implications

This study aimed to identify business travelers' stressors and the relationships among these stressors. Previous studies proposed pre-trip arrangements, travel incidents during the trip, and work/family issues post-trip, to be major reasons that cause business travelers' stress. However, a comprehensive measurement of business travelers' stress has not been fully developed and tested. The findings from this study

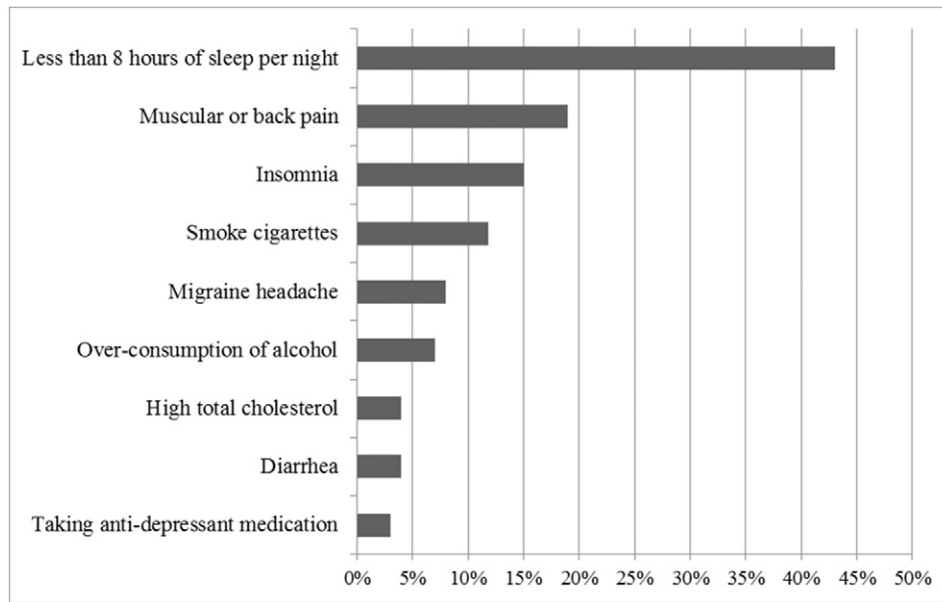


Fig. 1. The percentages of health conditions reported by the business travelers (often and always experience these health conditions, N = 272).

were in line with the literature of leisure travel stressors: pre-trip arrangements (travel arrangements and hotel/airline preferences), during the trip (travel inconvenience, difficulty of maintaining a healthy lifestyle, and destination concerns), and post-trip (work/personal life) (DeFrank et al., 2000; Ivancevich et al., 2003; Westman, 2004; Zehrer & Crofts, 2012). Nevertheless, this study revealed distinct dimensions of these travel stressors from leisure travelers. First, previous research did not specify that hotel/airline preferences and destination concerns were two important factors that would cause travelers' stress. Since business travelers may feel physical exhaustion due to long stay or flight, they demand preferable hotel and airline services, which can help them overcome travel discomfort and reduce travel stress. Second, compared to leisure travel stress, business travel stressors are mainly related to transportation and travel schedule arrangements, as well as the balance between work and family demands. It is no surprise that the measure of work stress was intensely related to the factor of work/personal issues. When work expectations and travel demands rise, more work/personal issues associated with travel will increase. Long stays not only affect travelers' home harmony with their families, but also induce feelings of loneliness and separation (Gustafson, 2014). As such, corporations should allow business travelers to have reasonable downtime for being with family and friends and recover from travel discomfort before returning to the office.

The results show that business travelers' personal perceived stress influences their concerns of travel inconvenience and travel arrangements. Although travel inconvenience seems inevitable and possibly often occurs during the trip, corporate travel managers may provide some advice and assistances to help business travelers overcome travel stress. Self-management, stress relaxation, trip preparation and educational workshops can be applied to better prepare and help business travelers cope with their stress. Corporate organizations should consider developing programs and policies that offer essential resources for travelers and reduce the negative aspects of travel (Ivancevich et al.,

Table 3
Goodness-of-fit indicators of ESEM-two models (N = 272).

Model	χ^2	df	χ^2/df	RMSEA (90% C.I.)	CFI	SRMR
Five factors	897.881*	509	1.76	0.053 (0.047–0.059)	0.90	0.04
Six factors	775.489*	476	1.63	0.048 (0.042–0.054)	0.93	0.03

* p < 0.001.

Table 4
Summary of exploratory structural equation (ESEM) results using maximum likelihood estimation (N = 272).

Codes	Items	Factor loading	ω
F1	Travel inconvenience		0.96
TS1	Trips with short notice	0.39	
TS8	Lost or delayed baggage	0.85	
TS9	Poor/no Internet connection	0.67	
TS11	Flight delays	0.64	
TS12	Inconvenient departure/arrival times	0.53	
TS16	Serious travel alerts during the trip	0.56	
F2	Hotel/airline preferences		0.94
TS5	Long stay (>3 nights)	0.32	
TS10	Flying economy on medium/long haul	0.32	
TS13	Staying in a non-preferred hotel brand	0.69	
TS15	Flying a non-preferred airline	0.60	
TS17	Poor hotel amenities/services	0.59	
TS18	Inconvenient hotel location	0.42	
TS20	Length of flying time scheduled by the airline	0.32	
F3	Travel arrangements		0.94
T2	Travel during weekends	0.43	
TS3	Travel that requires a visa/passport application	0.40	
TS7	Contacting a travel management supervisor/agent	0.66	
TS14	Getting to the airport/station	0.47	
TS27	Transportation arrangements	0.60	
F4	Work/personal life		0.96
TS22	Long working hours at destination	0.42	
TS28	Reimbursement after trips	0.45	
TS29	More demanding workload upon return the office	0.79	
TS30	Don't have reasonable downtime before returning to the office	0.77	
TS31	Making home arrangements	0.33	
TS32	Lack of sleep	0.43	
TS33	Sickness during or after traveling	0.45	
TS34	Unmet family responsibility	0.33	
TS35	Feeling isolated from family and friends	0.35	
F5	Difficulty of maintaining healthy lifestyle		0.86
TS19	Not able to eat healthily	0.34	
TS21	Not able to maintain workout routine	0.44	
TS23	Different time zone (suffering from jetlag)	0.52	
F6	Destination concerns		0.76
TS25	Cultural difference at destination	0.46	
TS26	Personal safety at destination	0.46	

Note: (1) All standardized path coefficients were significant at p < 0.01. (2) The scale reliability (ω) was computed by using McDonald's (1970).

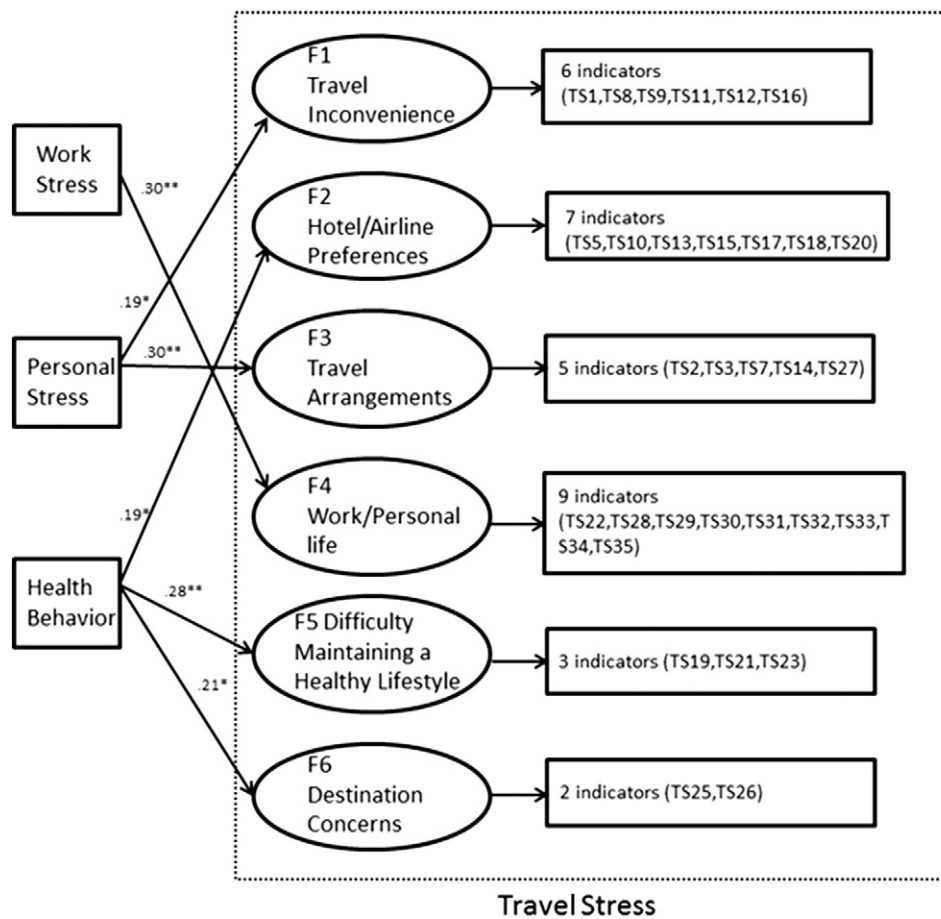


Fig. 2. The results of exploratory structural equation modeling (ESEM) (** $p < 0.01$; * $p < 0.05$).

2003). Thus, organizational support and coordination can not only help business travelers allay their personal stress, but also assist them to manage travel stressors.

In terms of the relationships among travelers' health behavior and travel stress, the results from this study indicate that travelers' health behavior positively influences their hotel/airline preferences, concerns of difficulty maintaining health lifestyle, and concerns of destination. Perhaps a long haul flight and poor hotel amenities and services will influence business travelers' sleep disruption if they are irritated by not getting a good rest. Also, it is difficult for business travelers to have healthy diets and exercise on the road. These reasons may explain why business travelers' health behavior is related to their hotel/airline preferences. Additionally, different culture experiences or concerns of personal safety at the destination may increase travelers' fear, anxiety, and other possible psychological reactions (Larsen, Brun, & Øgaard, 2009). These physical and psychological stressors indeed affect business travelers' well-being. Thus, for corporate travel management, business travelers' health concerns and behavior should be taken into account when conducting travel programs. More importantly, according to Carlson Wagonlit Travel (2012), a travel stress score from 60 to 70 indicates a business traveler perceives a medium to high level of stress. In this study, the average travel stress score is 62.4, pointing out that research into understanding travel stress and travelers' health concerns (e.g., sleeping problems) is imperative. Travel managers should recognize employees' health issues and needs when considering hotel selections as well as implement travel health and safety training before traveling. In this way, employees' travel stress could be potentially reduced and managed.

In conclusion, this study not only recognizes several aspects connected with travel stress, but also reveals that personal stress, work

stress, and health behavior influence business travelers differently in terms of various travel stressors. Furthermore, this study contributes to the current literature in tourist studies, travel policies, and tourism management. It is imperative that organizations understand and acknowledge employees' exhaustions and well-being during their business travel. Eventually, employees may experience burnout, illness, and tedium during business trips, which in turn, leads to loss in work productivity and efficiency, employees' complaints and turnover, and potential compensation costs to the organizations in a long term (Smith & Leggat, 2010). Consequently, companies need to implement well-prepared travel programs and policies that address employees' travel stressors and help them reduce physical and psychological strain.

6. Limitations and future research

There are several limitations in this study. First, the participants in this study were relatively young (60% were 25–35 years old), single (41%), and without children (54%). It is possible that business travelers who are married and have children would experience different levels of personal stress, work stress, and travel-related stress. Specifically, business travelers living with family may struggle to meet family obligations and job constraints. Thus, it could be useful to see how different family structures affect travelers' stress and the stress-level comparisons between different generations (e.g., Generation X or Baby Boomers). Future research could obtain information from business travelers across various age groups to examine the levels of travel stress among these groups. Additionally, since the sample size in this study was relatively small, researchers could obtain larger samples to minimize bias and improve the parametric estimation in an ESEM model. Second, this study did not include business travelers' coping strategies, which are used to

confront travel stress. Gustafson (2014) states that frequent business travelers often develop their own “travel competence,” which allows them to organize their work schedule and cope with travel hassles. It will be interesting to see how business travelers’ coping strategies influence their stress appraisals and reactions. For example, business travelers may conduct a problem-focused coping strategy that based upon their own experience and cognitive judgment to react to a certain stressful situation (Schuster et al., 2006). On the other hand, an emotionally-focused coping strategy, such as asking for emotional support from friends and family, can be adapted by travelers to deal with challenges associated with personal life (Gustafson, 2012). Therefore, future studies could examine how business travelers manage travel stress and their coping mechanisms. Finally, the constructs of work stress and personal stress were predetermined as exogenous variables that influenced travel-related stress. However, it is possible that travel-related stress causes increased work and personal levels of stress. Future studies could proceed to examine how the different stressors are intertwined and pertain to each other. In summary, this study calls for further investigation with respect to travel stress and improvement of travelers’ well-being. Future research could use the current study to investigate how business travelers deal with travel and work stress as well as their job commitment and organizational behavior. By evaluating organizations’ resources for business travelers, we could better understand how travel stress relates to employees’ perceived support and demand from the organization, and how travel stress transmits and intervenes between employees’ job commitment and satisfaction.

References

- Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), 397–438.
- Bruni, M., & Steffen, R. (1997). Impact of travel-related health impairments. *Journal of Travel Medicine*, 4(2), 61–64.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical Turk a new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5.
- Bureau of Labor Statistics (2015). Travel expenditures, 2005–2013: Domestic and international patterns in recession and recovery. Retrieved from <http://www.bls.gov/opub/mlr/2015/article/travel-expenditures-2005-2013-domestic-and-international-patterns-in-recession-and-recovery.htm>
- Burkholder, J. D., Joines, R., Cunningham-Hill, M., & Xu, B. (2010). Health and well-being factors associated with international business travel. *Journal of Travel Medicine*, 17(5), 329–333.
- Business Travel News (2011). Understanding your travel population. Retrieved from http://www.businesstravelnews.com/uploadedFiles/White_Papers/BTN_Concur_0412_FINAL.pdf
- Carlson Wagonlit Travel (2012). Stress triggers for business travelers. <http://www.cwt-solutions-group.com/cwtsg/publications-and-media-centre/research-and-view-points/stress-triggers-for-business-travelers.html>
- Cohen, S. A., & Gössling, S. (2015). A darker side of hypermobility. *Environment & Planning A* (0308518X15597124).
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 385–396.
- DeFrank, R. S., Konopaske, R., & Ivancevich, J. M. (2000). Executive travel stress: Perils of the road warrior. *The Academy of Management Executive*, 14(2), 58–71.
- Demerouti, E., & Bakker, A. B. (2008). The Oldenburg burnout inventory: A good alternative to measure burnout and engagement. *Handbook of stress and burnout in health care*. Hauppauge, NY: Nova Science.
- Field, A. (2009). *Discovering statistics using SPSS*. Sage publications.
- Global Business Travel Association (2016). GBTA business traveler sentiment index-at a glance. Retrieved from <https://business.americanexpress.com/us/business-trends-and-insights/business-traveler/gbta-business-traveler-sentiment-index-june-2016>
- Gustafson, P. (2012). Managing business travel: Developments and dilemmas in corporate travel management. *Tourism Management*, 33(2), 276–284.
- Gustafson, P. (2014). Business travel from the traveller's perspective: Stress, stimulation and normalization. *Mobilities*, 9(1), 63–83.
- Hahn, V. C., Binnewies, C., Sonntag, S., & Mojza, E. J. (2011). Learning how to recover from job stress: Effects of a recovery training program on recovery, recovery-related self-efficacy, and well-being. *Journal of Occupational Health Psychology*, 16(2), 202.
- Ivancevich, J. M., Konopaske, R., & Defrank, R. S. (2003). Business travel stress: A model, propositions and managerial implications. *Work and Stress*, 17(2), 138–157.
- Iwasaki, Y., & Mannell, R. C. (2000). Hierarchical dimensions of leisure stress coping. *Leisure Sciences*, 22(3), 163–181.
- Jensen, M. T. (2014). Exploring business travel with work–family conflict and the emotional exhaustion component of burnout as outcome variables: The job demands–resources perspective. *European Journal of Work and Organizational Psychology*, 23(4), 497–510.
- Larsen, S., Brun, W., & Øgaard, T. (2009). What tourists worry about—Construction of a scale measuring tourist worries. *Tourism Management*, 30(2), 260–265.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
- Lazarus, R. S. (1990). Theory-based stress measurement. *Psychological Inquiry*, 1(1), 3–13.
- Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, 10, 85–110.
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's mechanical Turk. *Behavior Research Methods*, 44(1), 1–23.
- McDonald, R. P. (1970). The theoretical foundations of principal factor analysis, canonical factor analysis, and alpha factor analysis. *British Journal of Mathematical and Statistical Psychology*, 23(1), 1–21.
- McIntosh, I. B., Swanson, V., Power, K. G., Raeside, F., & Dempster, C. (1998). Anxiety and health problems related to air travel. *Journal of Travel Medicine*, 5(4), 198–204.
- Miller, T. A., & McCool, S. F. (2003). Coping with stress in outdoor recreational settings: An application of transactional stress theory. *Leisure Sciences*, 25(2–3), 257–275.
- Naples, K. (2016). Terrorist attack raises concerns for many. Retrieved from <http://www.cbs46.com/story/31542517/terrorist-attack-raises-travel-concerns-for-many>
- Ng, D. M., & Jeffery, R. W. (2003). Relationships between perceived stress and health behaviors in a sample of working adults. *Health Psychology*, 22(6), 638–642. <http://dx.doi.org/10.1037/0278-6133.22.6.638>.
- Richards, C. A., & Rundle, A. G. (2011). Business travel and self-rated health, obesity, and cardiovascular disease risk factors. *Journal of Occupational and Environmental Medicine*, 53(4), 358–363.
- Rogers, H. L., & Reilly, S. M. (2002). A survey of the health experiences of international business travellers. *AAOHN Journal*, 50, 449–459.
- Siegrist, J., & Rödel, A. (2006). Work stress and health risk behavior. *Scandinavian Journal of Work, Environment & Health*, 32(6), 473–481.
- Schuster, R., Hammitt, W. E., & Moore, D. (2006). Stress appraisal and coping response to hassles experienced in outdoor recreation settings. *Leisure Sciences*, 28(2), 97–113.
- Smith, D. R., & Leggat, P. A. (2010). Occupational travel medicine: Protecting the health and safety of those who regularly travel overseas for work. *Annals of the ACTM: An International Journal of Tropical and Travel Medicine*, 11(1), 8.
- Striker, J., Luippold, R. S., Nagy, L., Liese, B., Bigelow, C., & Mundt, K. A. (1999). Risk factors for psychological stress among international business travellers. *Occupational and Environmental Medicine*, 56(4), 245–252.
- Trépanier, S. G., Fernet, C., Austin, S., & Ménard, J. (2015). Revisiting the interplay between burnout and work engagement: An exploratory structural equation modeling (ESEM) approach. *Burnout Research*, 2(2), 51–59.
- Westman, M. (2004). Strategies for coping with business trips: A qualitative exploratory study. *International Journal of Stress Management*, 11(2), 167–176.
- Westman, M., Etzion, D., & Gattenio, E. (2008). International business travels and the work–family interface: A longitudinal study. *Journal of Occupational and Organizational Psychology*, 81(3), 459–480.
- Zehrer, A., & Crofts, J. C. (2012). Vacation stress: The development of a vacation stress model among US vacation travelers. *Tourism Review*, 67(3), 41–55.



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