

ORIGINAL ARTICLE

International business travel: impact on families and travellers

C M Espino, S M Sundstrom, H L Frick, M Jacobs, M Peters

Occup Environ Med 2002;**59**:309–322

Objectives: Spouses and staff of the World Bank Group (WBG) were questioned about the impact of international business travel on families and travellers. Dependent variables were self reported stress, concern about the health of the traveller, and negative impact on the family. We hypothesised that several travel factors (independent variables) would be associated with these impacts. These travel factors had to do with the frequency, duration, and predictability of travel and its interference with family activities.

Methods: Survey forms were developed and distributed to all spouses of travelling staff as well as a small sample of operational staff. Kendall's tau b correlation coefficients of response frequencies were computed with the data from scaled items. Written responses to open ended questions were categorised.

Results: Response rates for spouses and staff were 24% and 36%, respectively. Half the spouse sample (n=533) and almost 75% of the staff sample (n=102) reported high or very high stress due to business travel. Self reported spouse stress was associated with six out of eight travel factors. Female spouses, those with children, and younger spouses reported greater stress. Self reported staff stress was significantly associated with four out of nine travel factors. Further insight into how business travel affects families and staff (including children's behavioural changes) and how families cope was gained through responses to written questions.

Conclusions: The findings support the notion that lengthy and frequent travel and frequent changes in travel dates which affect family plans, all characteristic of WBG missions, negatively affects many spouses and children (particularly young children) and that the strain on families contributes significantly to the stress staff feel about their travel. Policies or management practices that take into consideration family activities and give staff greater leeway in controlling and refusing travel may help relieve stress.

See end of article for authors' affiliations

Correspondence to:
Dr C M Espino, Human Resources, Latin America/Caribbean Region, The World Bank Group, 1818 H Street, Washington, DC 20433, USA;
cespino@worldbank.org

Accepted
8 November 2001

Today's global economy necessitates international business travel. Although such travel is interesting and rewarding, it is also demanding physically and psychologically. The hassles of travel, separation from family, adjustment to different time zones, exposure to infectious diseases, and changes in sleeping and eating habits can be counted among the many stressors involved in international business travel.

The study reported here explored the difficulties associated with business travel for the World Bank Group (WBG), where operational staff engage in frequent and extended travel from its headquarters in Washington, DC to developing countries in Asia, Latin America, Africa, and Eastern Europe. Travel often involves unpredictable schedules as circumstances change in unstable countries. Travel also involves continuous work that leaves staff exhausted and spouses concerned.

Two investigations by the health services department of the WBG provided the impetus for this study. Liese *et al* found that the number of health insurance claims submitted by staff who travel were significantly higher than the number of claims submitted by staff who do not travel—80% higher for male travellers and 18% higher for female travellers.¹ Several disease categories were more frequent among travellers, but claims for psychological disorders had the strongest association with amount of travel. This study raised questions about the psychological wellbeing of travelling staff, but included no direct evidence of psychological disorders, although such health insurance claims may carry a diagnosis by a qualified professional.

In a follow up to the study of Liese *et al*, Striker *et al* surveyed the WBG's staff to learn more about the factors contributing to the higher numbers of health insurance claims for psychologi-

cal disorders among travellers.² Travelling staff reported the greatest psychological and emotional stress from social concerns, including perceived negative impact on their family and a sense of isolation while away from home. Also contributing to psychological stress were worries about health and safety and the heavy workload upon return. It is important to note that the stress reported by participants in the study of Striker *et al* and also in our study does not imply the presence of clinical disorders or syndromes in study participants.

Scholarly literature on the psychological, emotional, and behavioural impact of business travel on travellers and their families is sparse. Authors of pertinent research reported that travellers feel guilty about leaving their spouse and children and that spouses feel anger and resentment at being left alone to manage the household. Also, the return home often entails an awkward readjustment period, and frequent trips of long duration can result in a gradual emotional distancing between spouses.^{3–5} A review of research on marital separation due to war or occupational requirements was conducted by Vormbrock (1993) using Bowlby's attachment theory as an explanatory framework.^{6–9} One interesting finding was that the anger and anxiety predicted by this theory to result from separation from an attachment figure was evident in the home based spouse (wives) and not in the traveller. Vormbrock proposed that the traveller is more like an explorer who has a secure base to which he can return as in Ainsworth's classic

Abbreviations: WBG, World Bank Group

studies on infant attachment.¹⁰ Vormbrock does not mention children of travellers in her review.

More extensive research literature is found on the topic of general occupational stress, and several theoretical models have been proposed as frameworks for research in this area. Vagg and Spielberger reviewed three of these models and cite relevant research.¹¹ (1) Person-environment fit theory focuses on the particular characteristics of individual people—such as personality traits—and aspects of the work environment and the interaction between the two. (2) Karasek's demand-control theory explains occupational stress as a result of too little decision latitude in a demanding job.¹² This theory emphasises the need for autonomy and control over work. (3) Siegrist proposed that occupational stress results from an imbalance of effort and reward. In other words people experience stress when they think that they will not be adequately rewarded in proportion to their effort.¹³ (4) Lazarus's transactional theory posits that distress occurs when sources of stress (stressors) are perceived as threatening because they may exceed the ability to cope. Stressors can be major crises or an accumulation of minor hassles.¹⁴ This theory has been applied in research for many years on stress in the context of work and personal life. Vagg and Spielberg pointed out that all these theories predict that significant stress can lead to emotional or physical disorders and that they are complementary and overlapping.¹¹

One more stress theory is worthy of note. Hobfoll presented his conservation of resources model to explain how people react to stress. He maintained that stress is the result of actual or perceived loss of resources and that people naturally behave in ways to minimise loss or gain resources. A sense of wellbeing is produced by a surplus of resources. Resources include tangible objects, mastery, self esteem, information, marriage, employment, and time.¹⁵

Previous research strongly suggests that the greater number of insurance claims for psychological disorders among travelling staff versus non-travelling staff of the WBG is influenced by negative effects of travel on the family which, in turn, affect staff. Therefore, this study primarily focused on the experiences of spouses (husbands, wives, partners, mates, significant others) and children. To accomplish this we surveyed all spouses of operational staff likely to travel as part of their job. We also asked a much smaller sample of staff to participate to gain a deeper understanding of their travel stress and concern for their families.

This article follows a presentation of the preliminary study results at the May, 2000 Travel Health Symposium, sponsored by the WBG and International Monetary Fund's Joint Health Services Departments and by the American College of Occupational and Environmental Medicine.

METHODS

Hypotheses

This was an exploratory survey study to determine the travel factors associated with the stress WBG families experience due to staff members' business trips (called "missions" at the WBG) and how they cope. We reasoned that the impact of business travel could be measured by spouses' perceptions of (a) their own stress associated with their partner's travel, (b) the staff member's stress, (c) threats to the traveller's health and safety, and (d) undesirable changes in children's behaviour resulting from a parent's travel.

We also assessed the stress of business travel on staff themselves as measured by their perceptions of (a) their overall stress associated with work travel, (b) concern about the effect of travel on their physical health, and (c) perceived negative impact of work travel on their family or personal life. These effects constituted the dependent variables or "impact" variables of the study.

We hypothesised that a number of aspects of work travel would be significantly associated with the impact variables. These predictors constituted the travel factors or independent variables for the study: (a) area of travel, (b) total amount of travel, (c) duration of travel, (d) frequency of travel, (e) predictability of travel, (f) leaving on or before the weekend, (g) rest and recuperation upon return, (h) effect on family plans of last minute changes in travel dates, (i) missed family celebrations (spouse questionnaire only), (j) perceived control over where and when one travels (staff questionnaire only), and (k) perceived ability to refuse missions without harming one's career (staff questionnaire only). More specifically, we hypothesised that stress levels, concerns about the traveller, and perceived negative impact on the family would increase as a function of travel far away from home in the least developed and most unstable countries, more time away from home, greater uncertainty and unpredictability of travel, greater perceived lack of control about where and when one travels, leaving on or before weekends, not taking time to rest after returning home, perceived inability to refuse missions, and interference of travel with family plans and celebrations.

We also wanted to assess sex differences and age differences across these dimensions and whether or not the number of years the staff member had been employed at the WBG would make a difference in participants' perceptions. Also we were interested in differences according to whether or not families included children under 18 living at home.

Our investigation was not designed to test a particular stress theory but rather to explore the experience of spouses and staff about work travel. However, several elements of the theories presented earlier influenced the construction of the questionnaires: control, coping, and separation. For example, consistent with Karasek's demand-control theory, which focuses on decision latitude, we asked questions about last minute changes in travel plans, control over the timing and duration of travel, and ability to refuse travel. Consistent with transactional theory, we asked questions about coping rituals and activities.

These theories offer explanatory concepts for stress beyond the amount and kind of stressor. In a similar vein, we wanted to assess not only the amount and frequency of travel, but also other factors that might have a bearing on travel stress—such as interference with family plans and perceived control over timing and duration of travel.

Participants

Questionnaires were posted to all spouses of operational staff most likely to travel. The spouses who were sent a questionnaire were asked to indicate whether or not their spouse had travelled during 1999. If the staff member had not travelled during 1999, his or her spouse was asked to return the questionnaire without answering the remainder of the questions.

A total of 2349 questionnaires were posted to spouses; 561 were returned providing a response rate of 24%. Twenty eight of the returned questionnaires were not included in our analyses because the respondents reported that their spouse (the WBG staff member) did not travel in 1999. The final sample consisted of 533 participants, 425 women and 100 men (eight respondents did not indicate their sex on the questionnaire).

Two hundred and eighty questionnaires were distributed to travelling staff by office managers in the operational units of the WBG. The overall response rate was 36% for a total sample of 102 staff (74 men and 28 women).

Table 1 shows demographic data on both samples (spouses and staff) and information from the WBG human resources database on all staff most likely to travel as part of their job (those at higher grades in the organisation). The data in this table provided a basis for comparison on how well the research

Table 1 Demographic data (n (%)) on study participants compared with staff of the World Bank Group (WBG) most likely to travel

Demographic category	Staff sample n=102	Spouse sample n=533	WBG staff likely to travel n=1335
Sex*	n=102	n=525	
Men	74 (72.5)	100 (19.0)	906 (68)
Women	27 (26.5)	425 (81.0)	428 (32)
Age*	n=70	n=528	
25–34	07 (10.0)	33 (6.2)	117 (09)
35–44	28 (40.0)	199 (37.7)	417 (31)
45–55	27 (38.6)	228 (43.2)	576 (43)
≥56	08 (11.4)	69 (12.8)	225 (17)
Years in WBG	n=100	n=526	
0–5	28 (28.0)	160 (30.4)	135 (12)
6–10	35 (35.0)	144 (27.4)	304 (27)
11–15	16 (16.0)	85 (16.2)	247 (22)
≥16	21 (21.0)	137 (26.0)	439 (39)
Children†	n=94	n=528	
Yes	65 (69.1)	335 (63.4)	Data not available
No	29 (30.9)	193 (36.6)	

*Staff and spouses reported their own sex and age; †children refers to children 18 and under living at home.

participants represented their respective populations across three dimensions: (a) sex, (b) age, and (c) years the staff member has been employed by the WBG. There was no information in the database on whether or not staff have children under 18 living at home, but table 1 shows how our samples compared with each other. Sixty three per cent of spouses and 69% of staff reported having children at home.

For the spouse sample we wanted to know how well both they and their partners (the staff members) represented their respective populations. Because there were no data in the human resources database on spouses, we made some inferences. Firstly, we inferred from the percentages of male and female staff likely to travel that women in the spouse sample were overrepresented by a factor of two. This inference is based on the assumption that most spouses in our sample are of the opposite sex to the staff member, and the facts that the spouse sample contained four times as many women as men and the comparison group of WBG staff contains twice as many men as women.

It can be seen that spouses' reports of how many years their partner had worked for the WBG closely resemble the database information except in the category 6–10 years where partners of spouse participants were underrepresented (27% of the spouse sample v 35% of the comparison group).

As also seen in table 1, the ages of spouses resemble the comparison group of staff. If we assume that spouses are fairly close in age to each other, we can infer that our sample of spouses resembles the population of spouses of staff most likely to travel.

Staff participants closely resembled the comparison group for sex, age, and years worked in the WBG. It should be noted, however, that 31% of staff did not report their age.

Questionnaires

Two questionnaires were used in this study, one for spouses and one for staff. The two had several items in common, and both contained scaled items as well as open ended questions asking for written responses. Most scaled items contained five point likert scales with end points for questions assessing the impact variables for staff labelled from very low to very high or not at all to very much and questions assessing the travel factors for staff and spouses as well as those assessing the impact variables for spouses labelled never and always or never and regular occurrence. One exception was a three point scale used by spouses to rate the staff member's stress due to working at the World Bank (low, medium, or high).

Other differences in the questionnaires were due to obvious differences in circumstances of respondents. Spouses were asked to elaborate on behavioural changes found in children and to offer advice to other spouses. Staff were asked to write down what they find hardest while on a mission and when they return.

Analyses

Quantitative analyses

We first computed response frequencies, separately for spouses and staff, for items assessing the impact variables and travel factors. We then computed Spearman's ρ and Kendall tau b correlation coefficients to determine how these sets of variables were intercorrelated and to assess the hypothesised relations among these variables. The two correlation tests showed similar relations among the study variables. The Kendall tau b test results are the more conservative and are reported in this paper.

Also, we computed principal component analyses on the travel factors for spouses and staff. We then computed Kendall's tau b correlation coefficients to find significant relations among the travel components and the impact variables.

Qualitative analyses

Written responses were read several times to determine themes in the material. These themes are listed below with a brief explanation. Coping strategies were listed and also categorised according to theme. Quotes attributed to children and spouses were read carefully. Samples representative of the content of all the quotes were chosen to present in this paper.

It is important to note that, although many participants answered all the open ended questions, many did not answer any of these questions. Others answered one or two questions. Therefore, the comments reported here cannot be generalised to all study participants nor to WBG spouses and staff who did not participate in the study. Rather, they provide information about possible sources of stress due to work travel and how people cope.

RESULTS

Response frequencies: items assessing impact variables

Table 2 presents the response frequencies and sample sizes for questions that assessed the dependent or impact variables: (a) personal stress, (b) concerns about the physical health and safety of the traveller, and (c) perceived negative impact of travel on the family.

Table 2 Response frequencies and sample sizes (n (%)) for questions assessing impact variables

	Response frequencies					n
	1 Low	2	3	4	5 High	
Spouse questions:						
In your opinion, what is the staff member's level of stress due to employment at the WBG?*	19 (4)		171 (33)		332 (64)	522
Do you feel stress when the staff member is on mission?	23 (4)	70 (13)	168 (32)	128 (24)	137 (26)	526
When the staff member is on mission, do you notice a change in your children's behaviour?†	17 (5)	61 (18)	88 (26)	89 (27)	81 (24)	336
Do you have concerns about the following? (regarding staff member's travel?)	Physical safety 104 (20)		Airline/airport security 136 (26)		Infectious diseases 150 (29)	518
Staff questions:						
What was your level of stress due to mission travel in 1999?	2 (2)	6 (6)	18 (18)	39 (39)	35 (35)	100
How much did the stress due to mission travel affect your physical health in 1999?	5 (5)	14 (14)	23 (23)	42 (42)	17 (17)	101
To what extent did your mission travel in 1999 have a negative impact on your family or your personal life?	3 (3)	8 (8)	23 (23)	40 (39)	28 (28)	102

Percentages are rounded to the nearest %.

*This question did not specifically ask about stress due to travel, but we have included it to provide a comparison with how staff rated their travel stress; †although this question does not specify either positive or negative behaviour changes, written comments about changes in children's behaviour indicate that spouses interpreted this to mean undesirable changes in behaviour.

Spouses

Staff member stress

Spouses were asked to rate the staff member's level of stress as a result of working at the WBG on a three point scale (low, medium, or high). Well over half the spouses who answered this question (332 (63%)) indicated that the staff member's level of stress is high. By contrast, low stress was endorsed by only 4% of the sample.

Impact on the family

To assess the impact of work travel on the family, we asked spouses to rate (a) their own stress, and (b) changes in their children's behaviour due to the staff member's work travel. Half the respondents (265 (50%)) rated their stress as four or five indicating that they usually or always feel stress when the staff member is on a mission.

Changes in children's behaviour were interpreted as undesirable changes by almost all respondents, as seen in the written comments asking for examples. Endorsements increased going up the scale, indicating that most spouses find changes in their children's behaviour occasionally, fairly often, or regularly when the other parent is on a mission. It should be noted that 336 spouses answered this question, a considerably smaller number than the total sample (533). This was expected, because almost 37% of spouses reported that they do not have children under 18 living at home (table 1).

Health and safety

Concerns about the staff member's health and safety were assessed with a checklist containing the items (a) physical safety, (b) airline or airport security, (c) exposure to infectious diseases. Counts for these concerns were 104 (20%), 136 (26%), and 150 (29%) respectively.

Staff

Work travel stress

Close to three quarters (74 (74%)) of the staff sample reported high or very high stress (four or five on the scale). This contrasts with about 8% who rated their stress as low or very low with a one or two.

Impact on physical health

Over half the respondents (59 (59%)) endorsed a four or five on this question, indicating much concern with how travel affects one's physical health, whereas 19 (19%) said that they have little concern for their physical health as a result of work travel by endorsing a one or two.

Impact on the family or personal life

Staff were also asked to rate the negative impact of work travel on their family or personal life. Most staff rated the negative impact at four or five (68 (67%)). A much smaller percentage endorsed the lower end of the scale (11 (11%)).

Response frequencies for items assessing travel factors

Table 3 contains the questions used to assess the travel factors hypothesised to predict ratings on the impact variables. Area of travel was not included because we were not able to use the data from spouses; the question was worded poorly and elicited multiple responses which were difficult to analyze. Area of travel for staff was not significantly associated with any impact variable and was also eliminated.

Responses to the items asking for number of days of travel in 1999 were averaged and also categorised into three groups (0–60, 61–90, ≥90 days) for further analysis. Numbers and percentages are presented for each category, and the mean number of travel days, as perceived by spouses and staff, are also presented in this table.

Response frequencies that were of particular interest

Mean number of days travelled by staff was 86.49 as estimated by spouses and 94.33 as estimated by staff. Thirty eight per cent of spouses said their partner travelled more than 90 days in 1999. Over half of the staff endorsed the ≥90. It seems from these reports that a significant number of staff travel in excess of 90 days, the official WBG recommended maximum number of days of travel per year.

Twenty eight per cent of spouses reported that the shortest time between missions was 14 days or less, but over 66% of staff reported that their shortest turn around time was 14 days or less.

Close to half of both spouses (276 (52%)) and staff (49 (48%)) said that the traveller never takes recuperative leave upon returning from missions. Only 2% of spouses and 4% of staff said that the traveller always takes recuperative leave upon return from a mission.

Sixty nine per cent of staff indicated that they never or rarely feel as if they can refuse a mission without jeopardising their career. By contrast, 11% said they can usually or always safely refuse work travel.

Correlations between study variables

Spouse responses

Impact variables

We found that spouses' ratings of staff members' stress due to working for the WBG were significantly positively

Table 3 Response frequencies and sample sizes (n (%)) for travel factors

Questions assessing travel factors	Response frequencies			Mean days of travel = 86.49		n
	1 0–60 days	2 61–90 days	3 ≥90 days			
Spouse questions (n=533):						
What was the total number of days the staff member travelled in 1999?	158 (36)	115 (26)	169 (38)			442
How long was your longest mission in 1999?	1 0–7 days	2 8–14 days	3 15–21 days	4 22–42 days	5 43–100 days	520
What was the shortest period the staff member was home between missions?	12 (2)	84 (16)	153 (29)	242 (47)	29 (6)	
	42 (8)	102 (20)	186 (36)	116 (22)	76 (15)	
Did the staff member leave for a mission on or just before a weekend in 1999?	1 Never	2 Rarely	3 Occasionally	4 Fairly often	5 Regular occurrence	527
When returning from a mission, did the staff member take time for rest and recuperation?	9 (2)	17 (3)	107 (20)	239 (45)	155 (29)	527
How often did mission dates change at the last minute?	276 (52)	131 (24)	83 (16)	26 (5)	12 (2)	528
How often did these changes affect family plans/celebrations/important dates?	33 (6)	135 (26)	200 (38)	102 (19)	57 (11)	527
How often did the staff member miss family celebrations/events/important dates due to mission travel?	34 (7)	118 (23)	197 (38)	109 (21)	56 (11)	514
	17 (3)	72 (14)	209 (40)	171 (32)	58 (11)	527
Staff questions (n=102):						
Total mean days of travel	1 0–60 days	2 61–90 days	3 ≥90 days	Mean days of travel = 94.33		
In total, how many nights were you away from home on mission travel in 1999?	20 (21)	23 (24)	52 (55)			95
How long was your longest mission in 1999?	1 0–7 days	2 8–14 days	3 15–21 days	4 22–42 days	5 43–100 days	100
What was the shortest period you were at home between missions in 1999?	8 (8)	11 (11)	20 (20)	51 (51)	10 (10)	94
	34 (36)	28 (30)	16 (17)	11 (12)	5 (5)	
Did you take recuperative leave upon returning?	1 Never	2 Rarely	3 Occasionally	4 Fairly often	5 Always	102
How often did you leave on or before a weekend?	49 (48)	18 (18)	17 (17)	14 (13)	4 (4)	102
How often did mission dates change at the last minute?	1 (1)	7 (7)	15 (15)	47 (46)	32 (31)	102
Did the changes in mission date affect your family plans and celebrations?	4 (4)	21 (21)	40 (39)	30 (29)	7 (7)	102
Do you feel that you have control over the timing, location, and duration of mission travel?	6 (6)	14 (14)	45 (46)	26 (27)	7 (7)	98
Do you feel that you can "safely" refuse a mission (that you can do so without jeopardizing your career prospects)?	8 (8)	22 (22)	41 (40)	30 (29)	1 (1)	102
	22 (22)	49 (49)	18 (18)	9 (9)	2 (2)	100

Percentages are rounded to the nearest %.

Table 4 Correlations (Kendall's tau b) between impact variables: spouse responses

Impact variables	Staff stress	Staff health	Family	
			Spouse stress	Children's behaviour
Staff stress	–	0.172*** n=512	0.247** n=518	0.075 n=331
Staff health		–	0.230** n=515	0.062 n=328
Family Spouse stress			–	0.375** n=332
Children's behaviour				–

Staff stress, spouses' ratings of the staff member's stress due to working in the WBG; staff health, spouses' concern about the health/safety of the traveller; spouse stress, spouses' ratings of their own stress due to their mates' mission travel; children's, behaviour changes in children resulting from the travel of a parent.
*Significant at $\alpha=0.05$; **Significant at $\alpha=0.01$; ***Significant at $\alpha=0.001$.

correlated with ratings of their own stress and their concern with travellers' health and safety but not with their children's behavioural changes. Spouses' perceptions of their own stress due to their partner's travel were also significantly positively correlated with children's behavioural changes due to a parent's travel. Children's behaviour was not associated with estimations of staff stress nor with concerns about the health and safety of the traveller (table 4).

Travel factors

There were numerous significant correlations among the spouse responses to questions assessing the travel factors in table 5. Most notably are the significant relations between interference with family plans of last minute schedule changes, and missed family celebrations with days away from home, longest mission, shortest time between trips, and last minute change in travel dates.

Table 5 Correlations (Kendall's tau b) between travel factors: spouse responses

Travel factors	1	2	3	4	5	6	7	8
1 Days away from home	–	0.438** n=435	–0.315** n=434	0.029 n=440	0.060 n=440	0.058 n=438	0.103* n=431	0.313** n=439
2 Longest mission		–	–0.011 n=512	0.110** n=517	0.091* n=518	0.068 n=516	0.090* n=506	0.304** n=516
3 Shortest time between trips			–	0.003 n=518	–0.018 n=519	–0.122** n=520	–0.111** n=507	–0.191** n=518
4 Recuperative leave upon return				–	–0.146** n=524	–0.053 n=523	–0.012 n=510	–0.063 n=522
5 Departure on or before weekends					–	0.068 n=523	0.086* n=510	0.165** n=523
6 Change in travel dates						–	0.588** n=514	0.238** n=523
7 Interference with family plans							–	0.382** n=511
8 Missed family celebrations								–

* $\alpha=0.05$; ** $\alpha=0.01$.

Table 6 Correlations (Kendall's tau b) between impact variables: staff responses

Impact variables	Stress	Health	Family
Stress	–	0.621** n=100	0.674** n=100
Health		–	0.549** n=100
Family			–

Stress, self reported ratings of stress level due to travel; health, perceived effect of travel stress on one's physical health; family, perceived negative impact of mission travel on family.
* $\alpha=0.05$; ** $\alpha=0.01$.

Correlations between study variables

Staff responses

Impact variables

As can be seen in table 6, the impact variables were highly intercorrelated (above 0.54; $p=0.01$ for all combinations).

Travel factors

Significant correlations among the travel factors (table 7) showed that total days away from home in 1999 was associated with staff's longest mission and shorter time between missions. Staff who reported the longest missions tended to take recuperative leave upon return.

Additional significant correlations were clustered in the last five items. Staff who were most likely to depart on or before weekends reported more interference with family plans, and less perceived ability to refuse missions without jeopardising their career. Staff who reported frequent changes in travel plans also reported more interference with family plans and less ability to control travel. Also staff who thought that they had less control over travel also perceived that they were unable to safely refuse travel. These correlations point to a common control factor.

Relations among study variables: impact variables and travel factors

We tested for significant associations ($\alpha \leq 0.05$) between the travel factors and the impact variables and between the

Table 7 Correlations (Kendall's tau b) between travel factors: staff responses

Travel factors	1	2	3	4	5	6	7	8	9
1 Days away from home	–	0.452** n=93	–0.245** n=89	0.124 n=95	0.072 n=95	–0.014 n=95	0.052 n=91	0.149 n=95	0.092 n=93
2 Longest mission		–	0.166 n=92	0.212* n=101	0.051 n=100	–0.061 n=100	0.006 n=96	0.034 n=100	0.082 n=98
3 Shortest time between trips			–	0.105 n=94	0.105 n=94	–0.008 n=94	0.022 n=92	0.153 n=94	0.063 n=92
4 Recuperative leave upon return				–	–0.051 n=102	–0.083 n=102	–0.058 n=98	–0.007 n=102	–0.083 n=100
5 Departure on or before weekends					–	0.130 n=102	0.179* n=98	0.154 n=102	0.281** n=100
6 Last minute changes						–	0.627** n=98	0.332** n=102	0.114 n=100
7 Interference with family plans							–	0.335** n=98	0.276** n=96
8 Control over travel								–	0.387** n=100
9 Ability to refuse a mission									–

Travel factors (independent variables) are numbered: 1, estimation of number of days away from home in 1999 due to mission travel; 2, estimation of longest mission; 3, estimation of the shortest time between trips; 4, estimation of how often one left just before or on weekends; 5, estimation of how often one took recuperative leave upon return from mission; 6, frequency of last minute changes in travel dates; 7, how often last minute changes in travel dates interfered with family plans; 8, perceived control over location, timing, and duration of travel; 9, perceived ability to refuse travel without harming career. * $\alpha=0.05$; ** $\alpha=0.01$.

demographic variables and the impact variables with Kendall's tau b correlation coefficients. These tests were meant to discover which travel factors predict perceptions of staff stress, concern about travellers' health and safety, and negative effects on travellers' families.

Spouses

Table 8 contains the results of these tests for spouse responses. There are several interesting findings. All the travel factors were significantly correlated with at least one of the impact variables.

Three travel factors (days away from home, change in travel dates affecting family plans, and missed family celebrations) were significantly associated with all the impact variables. We label these "family as a priority" factor.

Spouses' self reported stress was significantly associated with six out of eight predictors. The exceptions were time between trips and whether or not the staff member took recuperative leave upon return.

Children's behavioural changes due to work travel of a parent were predicted by more days away from home, longer missions, last minute changes in travel schedules, interference of last minute changes with family plans, and more times the traveller missed family celebrations or events.

Greater self reported stress was reported by female spouses, younger spouses, and those who had children under 18 living at home. Spouses who had children at home also estimated the staff member's stress to be higher than those who did not have children at home. Female spouses reported more concern with the traveller's health and safety than male spouses.

Staff

Table 9 contains the correlation coefficients for staff responses. Staff who reported more days away from home rated their stress level and the negative impact of their travel on their family more highly than those reporting fewer days away. Shortest time between trips was associated with greater negative impact on the family. Interestingly, last minute changes in travel dates were not significantly associated with any of the

impact variables, but interference of last minute changes of travel dates with family plans predicted all the impact variables. These findings parallel the spouse sample's "family as a priority" factor already noted. The control variables, "control over travel" and "ability to refuse travel" were also significantly associated with all the impact variables.

Among the demographic variables only "children" was significant. Staff who had children under 18 living at home reported greater negative impact of work travel on their family.

Principal component analyses on travel factors

Spouses

Factor analysis (unrotated factor solution) resulted in the reduction of travel factors for spouses to three components: (a) family disruption (changing travel dates affecting family plans and the traveller missing family celebrations); (b) amount of travel (longest mission and number of days away from home); and (c) rest and recuperation (not leaving on or before the weekend and taking time to rest and recuperate after returning home).

Staff

Factor analysis (unrotated factor solution) for staff resulted in the reduction of travel factors to four components: (a) family disruption or staff control (changing travel dates, interference with family plans of last minute changes in travel dates, lack of control over timing and duration of travel, and inability to refuse travel without jeopardising one's career); (b) Amount of travel (longest mission and days away from home); (c) Time between missions (turn around time); and (d) rest and recuperation (not leaving on or shortly before weekends and taking time to rest and recuperate after returning home).

Significant associations of the principal components with perceptions of stress

Spouses

Table 10 contains the Kendall's tau b correlation coefficients for associations between the principal components and spouses'

Table 8 Kendall's tau b correlation coefficients of impact (dependent variables) with travel factors (independent variables) and demographic variables: spouse responses

	Impact variables			
	Staff stress	Health/safety	Family	
			Spouse stress	Children's behaviour
Travel factors:				
Days away from home	$r=0.146^{**}$ n=435	$r=0.116^{**}$ n=430	$r=0.138^{**}$ n=437	$r=0.121^*$ n=271
Longest mission	$r=0.064$ n=509	$r=0.135^{**}$ n=505	$r=0.162^{**}$ n=513	$r=0.155^{**}$ n=328
Shortest time between trips	$r=-0.137^{**}$ n=512	$r=-0.041$ n=509	$r=-0.071$ n=515	$r=-0.064$ n=329
Departure on or before weekends	$r=0.052$ n=516	$r=0.071$ n=512	$r=0.111^{**}$ n=520	$r=0.050$ n=333
Recuperative leave on return	$r=-0.127^{**}$ n=517	$r=-0.189^*$ n=513	$r=-0.071$ n=513	$r=0.084$ n=333
Last minute change in travel dates	$r=0.151^{**}$ n=517	$r=0.066$ n=513	$r=0.152^{**}$ n=521	$r=0.154^{**}$ n=334
Change in dates affects family plans	$r=0.158^{**}$ n=506	$r=0.098^{**}$ n=501	$r=0.213^{***}$ n=509	$r=0.217^{**}$ n=327
Missed family celebrations	$r=0.234^{**}$ n=519	$r=0.215^{**}$ n=514	$r=0.264^{**}$ n=522	$r=0.161^{**}$ n=335
Demographic variables:				
Sex	$r=-0.077$ n=517	$r=0.089^*$ n=513	$r=0.93^*$ n=521	$r=-0.025$ n=331
Age	$r=0.022$ n=519	$r=-0.047$ n=515	$r=-0.137^{**}$ n=523	$r=-0.078$ n=335
Children	$r=-0.086^*$ n=519	$r=0.023$ n=515	$r=-0.218^{**}$ n=523	Spouses with no children did not answer this question
Years staff member in WBG	$r=0.053$ n=518	$r=0.064$ n=513	$r=-0.007$ n=521	$r=0.018$ n=334

* $\alpha=0.05$; ** $\alpha=0.01$.

perceptions of stress in themselves, their children (behavioural changes), and their spouse. Significant associations were found between the family disruption component and all the measures of stress (self reported spouse stress, spouses' perceptions of staff stress, and spouses' perceptions of children's behavioural changes). Correlations between the other two principal components and the stress measures were not significant.

Staff

Table 11 contains the correlation coefficients showing the associations between the principal components for the travel factors and the measures of stress for staff. As with spouse responses, the family disruption component is significantly associated with all measures of stress. The amount of travel component and the turnaround component are significantly associated only with perceived negative impact on the family. The rest and recuperation component was not significantly associated with staffs' perceptions of stress.

Perceived impact of work travel: written responses: spouses

Spouses were asked to write about the effect of work travel on their children. Although many participants who have children did not respond to these questions, many did, and their messages are listed and briefly elaborated.

Children's behavioural changes

Most written responses described negative behavioural changes in young children. These included (a) crying, (b)

nervousness, (c) "clinging," (d) trouble sleeping, (e) arguing with parent or peers, (f) defying rules at home or at school, (g) difficulty concentrating on school work, (h) asking many questions about why the parent had to go away and when the parent is coming home, and (i) comments indicating fear that the parent will not return.

Responses about older children usually centred around their adaptation to their parent's work travel with no behavioural changes. However, some spouses said that their older children worry about airplane crashes and the traveller's safety in troubled countries.

A few responses indicated that children's behaviour improved while the staff member was on a mission or that children were calmer when the staff member was away.

What children find hardest about a parent's work travel

Almost all responses to this question fell into six themes. These are listed and briefly discussed below.

Lack of daily contact

By far the most frequent responses had to do with children missing the ordinary, everyday involvement with their parent—assistance with homework, bedtime stories, family dinners, rides to school and activities, talking, and playing. Bedtime and weekends were cited as times when some children miss the travelling parent the most.

Table 9 Kendall's tau b correlation coefficients showing correlations of impact (dependent) variables with travel factors (independent variables) and demographic variables: staff responses

	Impact variables		
	Stress	Health	Family
Travel factors:			
Days away from home	r=0.261** n=94	r=0.159 n=95	r=0.218* n=95
Longest mission	r=0.085 n=98	r=0.024 n=99	r=0.044 n=100
Shortest time between trips	r=-0.146 n=93	r=-0.101 n=94	r=-0.258** n=94
Departure on or before weekends	r=0.040 n=100	r=0.099 n=101	r=0.065 n=102
Recuperative leave on return	r=0.014 n=100	r=-0.033 n=101	r=-0.043 n=102
Last minute change in travel dates	r=0.058 n=100	r=0.099 n=101	r=0.114 n=102
Change in dates affects family plans	r=0.311** n=97	r=0.271** n=97	r=0.341** n=98
Control over travel	r=0.249** n=100	r=0.251** n=101	r=0.211* n=102
Ability to "safely" refuse a mission	r=0.200* n=98	r=0.245** n=99	r=0.243** n=100
Demographic variables:			
Sex	r=-0.033 n=100	r=0.020 n=101	r=-0.018 n=102
Age	r=-0.119 n=68	r=-0.162 n=69	r=-0.105 n=70
Children	r=-0.115 n=92	r=-0.097 n=93	r=-0.271** n=94
Years in World Bank Group	r=0.058 n=98	r=-0.004 n=99	r=0.099 n=100

*α=0.05; **α=0.01.

Missing special events

Numerous responses had to do with children finding it difficult when their parent misses birthdays, school performances, sporting events, and holidays.

The parent's return

The readjustment after the parent's return was difficult for children according to many spouses. Reasons for this included

(a) irritability and fatigue of the traveller, (b) attention shifted to the traveller, (c) uncertainty about who is in charge, (d) resentment or confusion about having to consult or include the traveller when making plans.

Long absences

This was mentioned fairly often as difficult for children to handle.

Table 10 Kendall's tau b correlation coefficients showing relations between the principal components of the travel factors and the measures of stress: spouses

Principal components of travel factors	Measures of stress		
	Spouse's responses n=414	Spouse n=413	Children n=256
Family disruption	0.253****	0.228****	0.215****
Amount of travel	-0.026	-0.052	0.017
Rest and recuperation	-0.052	-0.052	0.081

****α=0.0001.

Self, self reported stress due to the staff member's mission travel; spouse, estimated stress experienced by staff member due to working at the WBG; children, spouses' ratings of their children's behavioural changes due to a parent's work travel; family, staff's ratings of the negative impact of their travel on their family.

Table 11 Kendall's tau b correlation coefficients showing relations between the principal components of the travel factors and the measures of stress: staff

Staff responses	Self n=83	Health n=83	Family n=83
Family disruption/staff control	0.334****	0.325****	0.324****
Amount of travel	0.161	0.123	0.170*
Time between missions (turn around time)	-0.105	-0.065	-0.174*
Rest and recuperation	0.141	0.140	0.049

*α=0.05; ****α=0.0001.

Self, self reported stress due to mission travel; health, estimated impact of travel stress on health; family, ratings of the negative impact of mission travel on the family.

Unpredictability of travel schedule

A few spouses wrote that this was the hardest aspect of work travel for their children.

Confusion and fear

Responses in this category had to do with young children not understanding why their parent is absent or feeling unsafe without the presence of a parent, usually the father. As already mentioned, older children worry about their parent's safety.

Perceived impact of work travel: written responses: staff

The stress of work travel

WBG travel practices

Many staff cited the unpredictability of travel schedules, frequent or "back to back" trips, and long trips to be difficult aspects of travel.

Household chores before or after travel

Making arrangements for children's activities, paying bills, cleaning the house, shopping for food, doing laundry, etc were mentioned by many staff as part of the burden of travel.

Separation from loved ones

Many staff wrote that separation from their spouse and their children was the most difficult aspect of work travel. There were numerous comments about missing their family, worrying about them, feeling guilty about leaving them, missing family celebrations, and not being available when there is a crisis.

Lifestyle of the traveller

Complaints included living in hotels, lack of nutritious or appealing food, difficulty sleeping, and not being able to exercise regularly.

Workload

The most common complaint about workload was having to monitor and respond to emails from headquarters while working long hours, including weekends in the field. As a result many staff felt as if they were doing double duty while they were on a mission.

Workload issues were also very salient in what staff wrote about returning to their office after a trip. The substance and tone of responses showed that many staff were overwhelmed just contemplating the backlog of work and administrative tasks that awaited them upon return.

Returning home

Two issues were included in the stress of returning home. The first was the backlog of work. The second was the reintegration back into the family. Many staff wrote that there was an awkward period of readjustment when they returned. A few respondents said that their spouse seemed to resent their presence in the family or that they felt like an outsider. Several staff wrote that they want to be available to their family when they return, but that they are often too exhausted or too sick.

Concerns about physical health

Staff responses to the questions already cited showed some specific information about health issues. Many staff mentioned worrying about getting sick or having experienced being sick while on a mission. Parasites were mentioned several times as problematic. Exhaustion due to difficulty sleeping, long work hours, or jet lag was an issue included by numerous staff in their written comments.

Impact on the family

Children

The following points were made by staff about what their children found difficult about a parent's work travel: (a) miss-

ing the parent and feeling vulnerable, (b) disappointment when their parent was unable to attend special celebrations and activities, (c) missing routine activities with the travelling parent: reading at bedtime, help with homework, going to movies or the park, advice about school or friends, rides to activities, and (d) the unpredictability and uncertainty of the travel schedule.

Spouse

Staff reported that their work travel negatively affected their spouse in the following ways: (a) loneliness, especially evenings and weekends, (b) missing the traveller and having to go for long periods of time without contact, (c) the burden of managing the household and making decisions alone, (d) lack of support during crises, and (e) worry about the traveller's safety.

Emotional impact of travel and coping strategies

Emotional impact

Box 1 provides comments made by children, reported by spouses and staff, that highlight the strain and emotional impact of separation, long absences, and the return of the parent. Box 2 contains comments by both spouses and staff, that show the strain of work travel.

Coping strategies

Participants were asked questions meant to help us understand how they cope with work travel in terms of managing family relations and the home. These are listed in box 3. Keeping the traveller and family "psychologically present" seems to be a strong theme in the list of activities offered by spouses as useful to children and by staff as ways of coping (maintaining contact, following the traveller on the globe and calendar, talking about the traveller and praying for him or her, consulting the traveller about family matters, keeping a picture of the traveller in view, making tape recordings of stories and songs and writing letters before departure, and sending pictures from the field).

Ineffective coping

Difficulty coping is apparent in a few of the spouses' comments in box 2 (establishing family roles that do not include the traveller, pretending the traveller does not exist, use of alcohol and tranquilisers).

DISCUSSION

The primary purpose of this study was to assess the impact of work travel on families and staff of the WBG to delve deeper into the findings by researchers in the WBG medical department that significantly greater numbers of travelling staff seek help for psychological disorders than non-travelling staff and the strong association between staff's self reported stress due to travel and their perceptions of how their travel impacts their family.^{1,2} Because there are bidirectional influences between the workplace and home, we focused on families by questioning spouses about their experiences of staff members' business travel. We also asked a small sample of staff about the impact of their travel on their family and themselves.

Stress levels

We assumed from studies conducted by the medical unit of the WBG that a significant number of study participants would report high levels of stress, concerns about physical health and safety of the traveller, and perceived negative impact on the family as a result of work travel. This assumption was supported by responses from our samples.

Spouses

Fifty per cent of spouses reported that they feel high or very high stress because of their partner's work travel. Sixty four

Box 1 Children's comments reported by spouses and staff

Separation

"I feel sad" (8 year old).
 "Papa no?" (toddler standing at the window awaiting his father's return).
 "Will he be safe?" (10 year old).
 "Do you think Mom took the baby in her tummy and left because I was a bad girl and didn't clean up?" (3 year old).
 "I've gotten used to him never being here" (12 year old's response when asked if he misses his dad).
 "Today is my birthday. Dad doesn't know how old I am" (6 year old).
 "Is my dad coming home one day? Is he really my dad?"
 "I miss my mama" (8 year old).
 "I miss Dad every day" (11 year old).
 "I'm the only one with only my mother in the audience . . . and I'm the one who has the best part (in the school play)".
 "I want Papa to take me to the bathroom and bathe me" (2 year old).
 "It's the pits that he's away. It sucks that he's away" (13 year old).
 "It's a lot harder for everybody when Dad's not here" (9 year old).
 "I just get used to being with one parent, following her instructions, then Dad returns, and it's like getting to know him and starting over" (16 year old).
 "I forgot what it was like when Daddy comes home. All he does is say, 'no, no, no.' He's so mean" (7 year old).

Difficulty with long absences

"Does Dad have another family and house in Country X?" (3 year old).
 "I feel like I have only one parent" (16 year old).
 "You are always gone when something special happens."
 "Dad is always in the sky" (5 year old).
 "I forget what he looks like when he's gone so long" (7 year old).
 "By now, after so many long trips, don't you think the poor in Country X don't need you anymore?"
 "Why should I put my life on hold because you are not able to decide about your travel plans?" (15 year old).
 "That's where Daddy works" (3 year old looking at the airport).
 "You're never here anyway" (8 year old responding when a travelling parent said "no" to something).
 "Why does the Bank make you travel so much? Can't you tell them to send someone else?" (8 year old).
 "Are you sure Mom will . . . come home again?" (3 year old).
 "My mom doesn't let me talk to strangers" (9 year old "joking" when opening door for returning father).
 "Sometimes it's like he's gone forever, like he died or something" (16 year old).
 "Why can't Daddy have a normal job and be around the family like my friends' dads" (7 year old).
 "If dad loves us so much, why doesn't he quit his job?" (13 year old).

per cent estimated that the stress of the staff member was high because of working at the WBG. Fifty three per cent reported frequent changes in their children's behaviour (our measure of children's stress) while the staff member was on a mission, and 75% reported concern about the health and safety of their partner when he or she was travelling.

Staff

Staff endorsements for a four or five on the scale for these impacts were 74% (personal stress), 59% (effect of travel stress on physical health), and 67% (negative effect on the family). It is interesting to note that the percentage of staff reporting high or very high levels of stress due to work travel was much higher than the percentage of staff reporting high or very high levels of stress in the study of Striker *et al* (36%).² Striker *et al*

Box 2 Comments by spouses and staff indicating difficulty with work travel

Spouses comments

"Sadly, we have found that keeping his role at home to a minimum helps make the transition from home time to mission time easier. This puts a lot of stress on me."
 "My husband missed our son's high school graduation due to business travel. None of us has ever forgotten."
 "It is so often that he is not with us that it has become a norm. We have to adapt to the times that he is around!"
 "Frankly, I don't care any more. I feel like a single woman and mother."
 "I merely pretend that he does not exist."
 "I consume a lot of alcohol and take tranquilisers."
 "I spend inordinate amounts of time in a zacuzzi and focus on flying my love back home to me."
 "Life goes on for the family here, but when my husband returns, he can't seem to cope with family life and the noise and chaos. The children resent the demands made on them when he returns."

Spouses' comments reported by staff

"Are you married to me or to the bank?"
 "What's the point of having a husband if he is gone at crucial moments?"
 "I need your help, but you are not here."
 "Not again. Don't be sick this time. Is it possible to find jobs in the bank where you don't need to travel?"
 "Again? So fast? How long?"
 "You travel too much."

Staffs' comments

"The travel is just a constant background pain, sort of like a cold sore in your mouth. It hurts, but there is not really anything you can do about it."
 "I miss my kids the most and worry about their welfare."
 "Nothing prepares the children or me for separation."
 "I feel that I am not supporting my family the way I should because of being away."
 "I miss a lot of important events with our children at school, extra-curricular activities, etc."
 "Missions greater than 3 weeks are psychologically debilitating."
 "I usually return as a basket case: working during the day and falling asleep soon after I get home."

reported on a random sample of travelling staff, whereas our sample may be biased toward staff (and spouses) who felt greater stress. However, our intent was to gain insight into the travel factors affecting travel stress of family and staff, and our samples may have served that purpose well.

It is also interesting to compare the reported stress levels of WBG staff and spouses with those of business travellers with Hyatt Hotels. In the Hyatt travel futures project report on business travellers, it was reported that 37% of business travellers found overnight travel somewhat stressful and 40% found it only a little stressful. Only 5% found it very stressful. Differences in travel practices with those of the WBG staff may explain why Hyatt business travellers felt less stress. Hyatt business travellers spent an average of 3 nights away from home compared with several weeks for many WBG travellers. Hyatt travellers spent an average of 57 days away from home each year, whereas WBG travellers spent over 90 days. Also, 88% of Hyatt staff who engaged in international travel went to developed countries, whereas most WBG travelled to developing countries.¹⁶

Predictors of travel stress

Spouses

Spouses' self reported stress was significantly associated with all but one of the travel factors we tested. Female spouses, younger spouses, and those with children reported greater

Box 3 Coping with travel

Rituals and activities helpful to children reported by spouses

- Keep in frequent contact with the traveller (email is especially useful).
- Sneak cards or small gifts made by the children into the traveller's suitcase.
- Follow the traveller's activities on the calendar and the map.
- Maintain the normal routine.
- Assign additional responsibilities to the children.
- Add special activities (sleep overs, dinner in front of the TV, movies).
- Keep children busy at weekends.
- Keep a picture of the traveller so it is easily seen by young children; kiss the picture good night.
- Talk about the absent parent to "include" him or her in the daily routine.
- Pray for the traveller.
- Consult the traveller about family matters.
- Bring the family together for a special meal before or after a mission or both.
- Make a welcome home sign.

Spouses recommendations to other spouses

- Maintain frequent contact with the traveller.
- Keep busy—see friends, visit extended family, do household projects, garden, read, go to movies.
- Be independent—take charge of the household, make decisions, go to school, get a job.
- Accept the lifestyle associated with the WBG.
- Focus on the children—give them special attention, keep them busy.

Staff responses

- Attend to practical matters—paying bills, buying groceries, schedule children's activities, distribute travel itinerary.
- Have a special meal with the family.
- Talk to the children, explain where going and why, show dates on the calendar and countries on the globe.
- Tape stories or songs for young children, and write letters to children before the trip.
- Maintain contact with significant others while away.
- Send pictures of oneself in the country visited through the internet.
- Return at the beginning of the weekend.
- Bring back gifts for spouse and children from countries visited.
- Take a day off after returning home.

stress due to their partner's travel. Written comments by both spouses and staff highlighted the burden that many spouses felt when the staff member was on a mission. For the spouse and children left behind the focus was on managing without the other adult and then readjusting when he or she returned. Spouses must handle their own emotional angst and that of their children and also take care of the practical matters in running a household without the help of their partner. Thus frequent and long missions can take a toll, especially if the schedule is unpredictable and interferes with family plans and celebrations. This is most likely more difficult if the spouse works full time outside the home and if he or she travels as well.

Staff

Staff have many complaints about travel, but they seem to be particularly concerned about the negative impact on their family and lack of control over travel, including inability to refuse travel. Greater self reported stress, concern about physical health, and perceived negative impact on the family (all impact variables) were associated with interference of last minute changes of travel dates with family plans, lack of control over travel, and relative inability to refuse travel without

harming one's career. Staff with children under 18 living at home reported greater negative impact of their travel on the family than those who do not have children at home.

We were surprised that last minute changes of travel dates did not predict any of the impact variables for staff, except when tied to interference with family plans as seen in the Kendall's tau b correlations. However, the significant correlations between the impact variables and the travel factors for staff (table 5) and the significant correlation of the family disruption and staff control component which emerged from the factor analysis on the travel factors also suggest that control over travel is tied, to a great extent, to concern about the impact of travel on the family.

These findings and those already discussed add to research conclusions by many investigators¹⁷⁻¹⁹ that lack of control over the job is significantly associated with employee stress and also begs the question of how much of the variance in employee stress from lack of control is actually due to tension between work and personal life.

Balancing work and family

We suggest that, considered together, these significant correlations point to two important and interconnected concepts—personal control and family as priority—and that they bring to the forefront the conflict between work and family as competing priorities in a particularly salient way. These concepts may be helpful in pointing to policy interventions that could lead to reduction in travel stress. Institutional practices that allow for greater control of timing and duration of travel and an environment that condones refusal of work travel when it interferes with family plans may significantly reduce travel stress and its negative impact on family and personal life.

Too much travel

Reduction in the amount of travel a year may also alleviate some travel stress, particularly when staff travel over the number of days allowed in the official guidelines. Thirty eight per cent of spouses and 55% of staff reported travel in excess of 90 days, the official WBG limit on travel each year. Enforcing this policy could be helpful, given our finding that total days away from home predicted all impact variables for spouse responses and two out of three for staff responses. Written complaints by staff about long and frequent trips support this notion.

Emotions and family

Self reported stress in travellers may be arising from or exacerbated by the effect travel has on family relations, and this in turn may be a contributing factor in the previously reported higher rate of health insurance claims for psychological disorders made by travelling staff. This study made clearer the perceived disruption of family life associated with work travel, the stress of work travel on spouses and children, and the fact that staff are aware of the impact of their travel on their family. Written responses by staff indicating their emotional angst as a result of separation from family, hurtful comments about their absence from spouses and children (table 10), concern about the spouse left behind to manage the household, and findings that family members resent their return support this conclusion. Some comments from spouses contained an undercurrent of resentment or stoic endurance of their partner's absences. One worried about infidelity. Others indicated feelings of loneliness and longing. Given that partners are sensitive to each other's moods, all these emotions might contribute to the development of depression or anxiety for which some travelling staff seek medical help. It would be interesting in future research to compare spouses of travellers and non-travellers to determine whether the spouses of travellers seek help for psychological disorders more often than the spouses of non-travellers.

Stress from physical demands

Travel stress from purely physical demands is clearly evident in written comments by staff who reported jet lag, long hours, lack of sleep, lack of exercise, and illnesses—for example parasites—as part of work travel. Spouses may also experience added physical stress when their partner is away if we consider comments about the burden of managing the household alone (relayed by staff), sleep disturbances in young children, and the need to add special activities to compensate for the absent staff person. More research is needed to determine the amount of variance in total stress accounted for by physical demands on the body related to work travel and how these physical stressors relate to psychological stress.

Positive aspects of work travel

Although most of our data point to the high stress and burden of work travel on staff and their families, some of the data are more positive. Some spouses and staff rated their level of stress associated with work travel as low or moderate and the impact on the family as minimal. There were written responses indicating that spouses and children had adjusted to a lifestyle that includes work travel. Some spouses said that the absence of the traveller was relaxing and provided an opportunity to engage in special activities. A few spouses said that their children's behaviour improved when the staff member is away and several older children said that there was no change in the children's behaviour.

Given the results of our quantitative analyses, the fact that very few staff complained about the specific work involved with missions, some positive comments about work travel on staff questionnaires, and our experience working with staff, we think that most operational staff enjoy working in the field and would not be in development work if they did not. Undoubtedly, staff feel a sense of purpose and accomplishment associated with work in developing countries. Staff of the WBG are dedicated to the institution and its mandate to eliminate world poverty, and work travel facilitates this work. Research investigating the positive aspects and effects of work travel on staff and spouses could prove interesting and helpful.

Theoretical considerations

Our results cannot be explained by a single theory of occupational stress presented in the introduction. However, some support for several of the theories was found.

Demand-control theory

All but one of the “lack of control over travel” items were significantly associated with spouse and staff stress (tables 8 and 9). This lack of control seems to have more to do with disruption to the family than with the job requirements themselves, especially for staff. This is an important finding and one worthy of further investigation.

Effort-reward theory

Our results do not support this theory, but we think that the concepts could be useful for future research, especially if spousal pairs are assessed. It would be interesting to study the effort and rewards involved in work travel in staff, because we know from past surveys at the WBG that operational staff prefer work in the field over that at headquarters. We hypothesise that business travellers reap satisfying rewards from their efforts in the field, but that home based spouses do not experience rewards commensurate with their effort when their partner is absent.

Transactional theory

Our quantitative results do not consider the transactional theory. However, cognitive appraisal seems to underlie spouses' written responses to do with coping. Some spouses reported their partner's absence in positive terms such as an

opportunity to see family and friends, spend more time with their children, become more independent, etc, whereas others seem to have appraised the absence of their partner in negative terms.

Transactional theory may also apply to staff whose written responses indicated that travel stress may result from the perception that they “can't get everything done,” including the “hassles” involved in preparing for a trip, answering emails while in the field, and managing the work load upon return. A heavy accumulation of minor hassles can be very stressful and lead to the perception that one cannot cope successfully. This theory may be helpful in conceptualising future research and also in providing clinical interventions such as cognitive therapy.

Conservation of resources

Some written responses by study participants seem to support this theory. Some travelling staff reported that separation from the family was the most difficult aspect of work travel, and also reported loss of ability to exercise, loss of good health when one becomes ill, loss of safety when in an unstable country, and loss of energy from long hours of work and jet lag. Comments from study participants indicate that when a parent is travelling, children lose a storyteller, chauffeur, companion, and supporter. Future research could more carefully test the relation of these concepts to the stress of business travel.

Attachment theory

Because of the relatively long and frequent separations involved in WBG travel, attachment theory may be the most useful in conceptualising how spouses, children, and staff react to business travel. This theory seems to underlie both our quantitative and qualitative findings and would be a worthwhile framework for future research. Our strong findings supporting a “family disruption” factor, comments from staff about the separation from family, quotes from children, and comments from both spouses and staff about the awkward or difficult readjustment of the family when the traveller returns (reattachment) all seem to support this theory. Assessment of attachment styles and attachment histories and a more precise look at the emotional reactions of travellers, home based spouses, and children would be important for this research. The intriguing suggestion by Vrombeck that travellers are like securely attached infants who explore the world and then return to a secure base would also be interesting to explore.⁶

Limitations of the study

There were many weaknesses in the study that must be taken into consideration when interpreting the results. Firstly our samples were not randomly selected, nor were they entirely representative of WBG travelling staff and spouses. It is possible that both samples were biased toward participants who find work travel more stressful than the populations as a whole and who have more trouble coping. Secondly, demand characteristics were high—that is, the items on the questionnaires may have primed participants to answer in a particular way (complaints) to meet the expectations of the researchers. Thirdly, our scales were not consistent across items, making the interpretation of quantitative analyses more difficult. Fourthly, the item on the spouse questionnaire asking for an estimation of staff stress due to working in the WBG did not specifically consider travel stress. If the item had been worded due to work travel, responses may have been different. Fifthly, many participants did not respond to the items calling for written responses and their issues may not be represented here. Sixthly, we used a design between people which provided some insight, but is limited in its usefulness to study stress. As suggested by researchers in a recent article, a longitudinal,

Main messages

- International business travel is stressful for staff and their families.
- Spouse stress is particularly associated with the disruption of family plans and celebrations.
- Children's stress due to a parent's business travel is apparent in undesirable behavioural changes and comments that indicate feelings of fear, sadness, frustration, or anger.
- Staff stress is associated with perceived lack of control over travel, especially when the lack of control is associated with perceived negative effects on the family.

design within people combined with a design between people could help us better understand work travel stress and coping.²⁰

Future research

More research is needed to further understand the stress of work travel on staff and families. Testing a theoretical framework could prove to be very helpful in terms of understanding the underlying causes of travel stress and designing appropriate interventions to help relieve unnecessarily high stress. Given our study results and thoughtful consideration of research literature,⁴⁻⁶ we recommend the attachment theory.

Enlisting spousal pairs and following them in a longitudinal design would greatly strengthen research on the effects of business travel. Asking more directly about emotional responses, marital difficulties, and infidelity might provide more insight, although questions such as these are more personally and politically sensitive and must be asked with care in a multicultural environment like the WBG.

Responses to our open ended questions about children's reactions to travel—parents' recollections of undesirable behavioural changes and comments about a parent's business travel—are an important addition to the literature on the stress of international business travel, providing a rich area for future research. As we have shown in this study, family interactions are highly important, and children must not be left out of future research.

Additional objective data such as medical claims for spouses, staff turnover (travellers v non-travellers), and absentee rates could be helpful. Also determining the relation between subjective ratings of stress and clinical outcomes (diagnosis and treatment) would provide further insight.

Investigating management practices associated with travel could also be helpful. Difficult to undertake but potentially useful from an organisational standpoint would be comparing work units where management practices have changed to consider family concerns and units where they have not.

ACKNOWLEDGEMENTS

We thank all the spouses and staff who responded to the survey and whose thoughtful input allowed us to do this work. We also thank World Bank Volunteer Service (WBVS) Officer Joanne Garrity, Work-Life Services Coordinator Hada Zaidan, and Human Resources Counselors Nedra Hartzel, Stephanie Kay, and Judy Merrill for their valuable suggestions during the development of the survey. Special thanks are extended to Barry Isaac who, as president of the Spouses Association, provided the necessary sponsorship that allowed us to seek

Policy implications

- Practices which allow for greater control over travel.
- Consideration of family events and celebrations when choosing staff for travel.
- Support for couples and families—such as information about the effects of travel on family relations.

input from the members of WBVS. Many thanks to Lennart Dimberg and Sandra Sulsky for their helpful comments on earlier drafts of this paper. Thanks also to Uma Venkatachala for her administrative support for the project.

Authors' affiliations

C M Espino, H L Frick, Staff Services Unit, World Bank Group, Washington, DC, USA

S M Sundstrom, Private Practice, Chevy Chase, Maryland, USA

M Jacobs, M Peters, World Bank Volunteer Services, Washington, DC, USA

REFERENCES

- 1 **Liese B**, Mundt K, Dell L, et al. Medical insurance claims associated with international business travel. *Occup Environ Med* 1997;**54**:499-503.
- 2 **Striker J**, Luippold R, Nagy L, et al. Risk factors for psychological stress among international business travellers. *Occup Environ Med* 1999;**56**:245-52.
- 3 **Borg V**, Kristensen R. Psychosocial work environment and mental health among travelling salespeople. *Work Stress* 1999;**19**:132-43.
- 4 **Rigg RC**, Cosgrove MP. Air crew wives and the intermittent husband syndrome. *Aviat Space Environ Med*. 1994;**5**:654-0.
- 5 **Morrice JK**, Taylor RC, Clark D, et al. Oil wives and intermittent husbands. *Br J Psychiatry* 1985;**147**:479-83.
- 6 **Vormbrock JK**. Attachment theory as applied to wartime and job-related marital separation. *Psychol Bull* 1993;**114**:122-44.
- 7 **Bowlby J**. *Attachment and loss*. Vol 1. *Attachment*. New York: Basic Books, 1969.
- 8 **Bowlby J**. *Attachment and loss*. Vol 2. *Separation: anxiety and anger*. New York: Basic Books, 1973.
- 9 **Bowlby J**. *Attachment and loss*. Vol 3. *Loss: sadness and depression*. New York: Basic Books, 1980.
- 10 **Ainsworth MDS**. Infant-mother attachment. *Am Psychol* 1979;**34**:932-7.
- 11 **Vagg PR**, Spielberger CD. Occupational stress: measuring job pressure and organizational support in the workplace. *Occupational Health Psychology* 1998;**3**:294-305.
- 12 **Karasek RA**. Job demands, job decision latitude and mental strain: implications for job redesign. *Administration and Science Quarterly* 1979;**24**:285-308.
- 13 **Siegrist J**. Adverse health effects of high-effort/low-reward conditions. *Occupational Health Psychology* 1996;**1**:27-41.
- 14 **Lazarus RS**. Psychological stress in the workplace. In: Perrewe PL, ed. *Handbook on job stress*. Corte Madera, CA: Select Press, 1991:1-13.
- 15 **Hobfoll SE**. Conservation of resources: a new attempt at conceptualizing stress. *Am Psychol* 1989;**44**:513-24.
- 16 **Hyatt Hotels Corporation**. *The Hyatt futures project report on business travelers*. Chicago: Hyatt Corporate Public Relations, 1997:3-5.
- 17 **Landy FJ**. Work design and stress. In: Keita GP, Sauter SL, eds. *Work and well-being: an agenda for the nineties*. Washington, DC: American Psychological Association, 1992:119-58.
- 18 **Maslach C**, Leiter, MP. *The truth about burnout: how organizations cause personal stress and what to do about it*. San Francisco: Jossey-Bass, 1997.
- 19 **Meijman TF**, Van Dormolen M, Herber RFM, et al. In: Sauter SL, Murphy LR, Ees. *Organizational risk factors for job stress*. Washington, DC: American Psychological Association, 1995:113-28.
- 20 **Tennen H**, Affleck G, Armeli S, et al. A daily process approach to coping. *Am Psychol* 2000;**55**:626-36.