

The health and wellbeing of Aer Lingus Cabin Crew

Final report

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1 INTRODUCTION

1.1 BACKGROUND TO THE SURVEY

This survey has been commissioned by the IMPACT Trade Union to investigate the health and wellbeing of their Cabin Crew membership. The main aims of the survey were:

- To characterise the health and wellbeing of the Aer Lingus Cabin Crew cohort
- To compare the results of the survey to one which was carried out in the 1990's by WRC in collaboration with the Department of Psychology in Trinity College Dublin
- To compare the results to the international literature to the extent that it exists
- To draw conclusions about the impact of work on health for Aer Lingus Cabin Crew

Concerns had been expressed by Cabin Crew members about the possible impact of working conditions on health and in particular about ongoing changes in work procedures concerning a number of issues such as rostering, sick leave arrangements and occupational stress. These concerns led to the commissioning of the survey.

1.2 APPROACH TO THE SURVEY

The approach to the survey was governed by 2 main issues – the need for the survey to be independent and conducted to the highest standards possible, and the need to reflect the concerns of Cabin Crew about the possible impact of working conditions on health and wellbeing. In addition, it was agreed that there was a need to ensure comparability between the current survey and the previous one carried in 1995. One further requirement was that the survey should be as inclusive as possible, i.e. all Cabin Crew should have the chance to take part in the survey.

In practice these requirements meant:

- The questionnaire to be developed should be based on the questionnaire used in the previous survey
- A working group from the Cabin Crew Health and Safety Committee should be set up to oversee the project
- All Cabin Crew should be invited to take part in the survey

Other elements of the approach to the survey included:

- Literature reviewing – identifying and reviewing relevant scientific research in the area
- Ensuring that the questionnaire used standardised components as far as was possible (this enables comparisons with other surveys to be made)
- Undertaking a pilot study using a small sample of Cabin Crew to field trial the instruments for use in the main study

- Survey implementation using Survey Monkey to deliver the survey to Aer Lingus Cabin Crew¹

1.3 THE STRUCTURE OF THE QUESTIONNAIRE

The questionnaire that was used in the survey (following field testing) addressed of the following areas:

- Individual demography – this section asked questions on the respondents’ personal characteristics and experience of working.
- Work experience – This asked section questions on a range of features concerning where respondent’s worked, how long they have worked for Aer Lingus and the type of job contract they have.
- Sources of stress at work – based on the Work Positive Questionnaire, this section asked questions on all sources of stress at work. It include a number of questions that were specifically designed for this survey.
- Rostering – This section of the questionnaire was designed specifically for this survey and included 21 questions on various aspects of rostering
- Health and wellbeing – This part of the questionnaire asked a range of questions about physical symptomatology. It provides comparable data to the 1996 survey
- General Health Questionnaire (GHQ) – this part of the questionnaire asks about psychological symptoms and provides comparable data to the 1996 survey.
- Sleep patterns – this sections asks 6 questions on respondents’ sleep patterns
- Sick leave and attendance management – this section asks about patterns of sick leave and how it is managed within Aer Lingus
- The physical work environment - this section asked about respondent’s perception of problems with their physical work environment
- Social support – this section asked about how much social support respondent’s receive both within and outside of the workplace

Some parts of the questionnaire are capable of being compared legitimately to external sources of data and to the findings of the previous survey. In particular, the measures of health and wellbeing and the GHQ measures allow for easy comparison. Also, some of the demographic questions are comparable between the 1995 survey and the current one. Where comparisons are possible, these are made throughout the report. In addition, a broad comparison between the two surveys is provided in the conclusions Chapter.

1.4 THE SAMPLE

It was decided at the outset that all Cabin Crew (from the Dublin, Cork and Shannon bases) would have the chance to take part in the survey.

Information provided by IMPACT revealed that there were 1136 Cabin Crew members of the Union at the time that the survey took place. These were spread across all bases. It was decide to exclude Crew from the London and Belfast bases, as the conditions of work that they worked under differed considerably

¹ A small number were sent and responded to paper versions of the questionnaire

from those in the Dublin Shannon and Cork bases. This reduced the overall sample size by 44. In addition, a further 50 people were excluded from the sample as they had neither e-mail nor full postal addresses to where a physical copy of the questionnaire could be sent. This gives an overall sample who received the questionnaire (either by post or by e-mail) of 1040 Cabin Crew.

The survey took place in July 2014. A total of 470 people responded to the questionnaire, giving an overall response rate of 45.2%. This is quite a high response rate in comparison to comparable surveys. It is a more than sufficient response rate to allow for meaningful data analysis to take place.

It should be noted that not all questions were answered by every respondent. In some cases questions were judged not to be relevant by respondents and as a consequence, the N for each of the results quoted below varied somewhat.

The 1995 survey – response rates

The 1995 survey had 290 respondents from 834 permanent staff. This represented estimated response rates of 49% and 42% (there were two waves to the 1995 survey), which means that the current survey is comparable on this indicator to the 1995 data.

2 BACKGROUND – WHAT IS KNOWN ABOUT THE HEALTH AND WELLBEING OF CABIN CREW?

A literature search revealed that there has been very little research carried out on the issue of the general health status among Cabin Crew. Unlike airline pilots, with whom the working conditions of Cabin Crew share many characteristics (e.g. comparable physical environment, time zone travel, some common rostering arrangements), it is difficult to find research on the potential impacts on health and wellbeing of Cabin Crew. Though there are some valid reasons for this, e.g. the working conditions for pilots are more regulated, it perhaps reflects the relative status of Cabin Crew and pilots that so little research has been carried out on this group. Even within the field of shift work research (with which time zone travel shares many characteristics) there was no evidence of a concern with the effects of working conditions on the health and wellbeing of Cabin Crew.

2.1 CABIN CREW AND CANCER RISKS

There is one exception to this lack of research interest in cabin crew health. Some significant transnational studies into breast and other cancer risks has been carried out in the late 1990's and early 2000's in Europe and elsewhere. The results of these and other studies are summarised by a Health and Safety Executive report² (Slack et al, 2012) in 2012. These studies were undertaken for a number of reasons concerning possible excess risk factors for cancers in terms of exposure to radiation (exposure increases with distance from the ground), time zone travel (which shares characteristics with shift working which is a known risk factor for some cancers).

The results from these studies were generally quite consistent, and they found that there was little or no excess risk of contracting breast cancer (or other cancers) amongst female or male flight crew³. However, it was difficult to be conclusive about the issue as there were a number of confounding factors (reproductive history in the case of breast cancer, increased exposure to sunlight through sun tanning) which influenced the results and gave a very small excess risk in some of the studies.

In addition, some of the studies examined mortality rates of Cabin Crew in comparison to other occupational groups. However, these studies showed no effects of flight crew work on mortality. In some of them, it was found that flight crew lived longer than the general population. This was due to having a better health risk profile (not smoking in particular) and socio-economic status.

2.2 CABIN CREW WORK AND OCCUPATIONAL RISKS

The European Agency for Occupational Safety and Health has recently produced a report on health and safety risks in the transport sector. This study obtained the opinions of experts in each of the Member States of the EU on what were the main risks in the sector for a range of occupations (these opinions were based on research studies as well as other documentation published in each country). The risks to flight

² Slack, R., Cherrie, J., Van Tongeren, M., Fortunato, L., Hutchings, S. and Rushton, L. (2012). The burden of occupational cancer in Great Britain: Breast cancer. Health and Safety Executive, London.

³ Flight crew refers to both cabin crew and pilots

crew (including Cabin Crew) were noted on a number of occasions. However, it does not provide any data that are specific to them. Nevertheless, it points to the following issues and risks:

- Risks to flight attendants are largely unassessed
- Possible breast cancer risk has been noted, even though studies are equivocal in the area
- Multiple physical exposures⁴ may affect cognitive functioning and alertness
- Possible risks of violence and abuse exist
- Ergonomic risks and heavy lifting
- Biological agents
- Lower limb disorders due to prolonged standing

In conclusion, there is a marked lack of research into the health and wellbeing of Cabin Crew. The little work that has been published has tended to focus on single or a limited range of issues, and appears to be focused more on assessing the impacts of factors such as ionising radiation rather than on the health and wellbeing of Cabin Crew.

2.3 FDPs, FATIGUE AND ACCIDENT RISK

If there are few studies of general health and wellbeing among Cabin Crew, there is quite an extensive literature on the issue of fatigue (and associated accident risk) amongst Flight Crew. Perhaps the most convenient summary of this research is to be found in the Moebus Report in 2008. This report (Moebus, 2008)⁵, commissioned by EASA⁶ investigated the issue of flight time limitations from a scientific and medical perspective. It did so by convening a group of 10 experts in the area which provided expert, consensus based opinion on 18 issues related to scheduling. In doing so, it covered all flight crew, not just Pilots or Cabin Crew, though it draws distinctions between the two groups where scientific data allows. The authors point to areas where the strengths and weaknesses of the scientific evidence in making their conclusions. They also note that their recommendations do not apply to ultra-long range operations which are the subject of a different regulatory approach.

One of the main conclusions is that that a Fatigue Risk management System⁷ be used as the basis of Flight Time Limitations, rather than rigidly applying limits in relation to specific issues, i.e. that all risks are taken into account simultaneously, rather than singly. This is in part because not enough is known about some of the risks to fatigue from specific rostering patterns, but also because risks may interact with each other in unknown ways. Amongst the major findings from their review of the scientific literature are:

- Cabin Crew have generally higher levels of fatigue than cockpit crew at the end of a flight duty period
- The same duty and rest requirements should be applied for both cockpit and Cabin Crew

⁴ Exposure to more than one risk (unspecified)

⁵ Moebus, P. (2008). Final Report: Scientific and Medical Evaluation of Flight Time Limitations. Moebus Aviation, Zurich. Available at: https://www.eurocockpit.be/sites/default/files/FTL_MoebusAviation_Study_Final_Report_09_0122.pdf

⁶ European Aviation Safety Agency

⁷ ICAO (2012). Fatigue Risk Management Systems: Manual for Regulators First Edition. International Civil Aviation Organisation, Quebec. Available at:

<http://www.icao.int/safety/fatiguemanagement/FRMS%20Tools/Doc%209966%20-%20FRMS%20Manual%20for%20Regulators.pdf>

- There are problems attached to:
 - Working a large number of duty hours in a short time
 - Long duty hours (which are directly fatigue inducing and which may interfere with rest periods)
 - Split duties (which creates similar problems to those of long duty periods)
 - Night duty
 - Early starts (which negate the value of the prior rest period)
 - Rest periods given outside the window of circadian low which reduces recuperative value
 - Recovery time after time zone flights that have induced shifts in the circadian system
 - Standby duty (which often is as fatigue inducing as actual duty)

3 RESULTS FROM THE SURVEY

3.1 ANALYSIS STRATEGY

The main data analysis performed on the data was descriptive in nature – frequencies and means were described for all of the data collected. The details of these analyses are to be found in Appendix 1, but high level descriptions of these are found in the main body of the report.

In addition to these basic analyses, a small number of inferential⁸ analyses were performed. These concern the relationships between personal background and work experience variables with a range of health related and work environment related outcome variables. These are reported upon in the relevant sections on health and wellbeing below. The Table below details the main inferential analyses that have been carried out. This means that, for example, the different age groups are compared in relation to each of the outcome variables in order to see if one age group or another has more health problems than others. This type of analysis is done for all of the independent variables.

Table 3.1. Relationships explored between demography and health and wellbeing outcomes

Independent variables	Outcome variables
Personal background <ul style="list-style-type: none"> • Gender • Age • Marital status • Children • Caring responsibilities 	Work environment and work organisation <ul style="list-style-type: none"> • Stress at work • The physical work environment • Work rosters
Work experience <ul style="list-style-type: none"> • Cabin Crew experience Aer Lingus • Cabin Crew experience overall • Grade • Type of contract • Base 	Health and wellbeing <ul style="list-style-type: none"> • Physical symptoms • Psychological wellbeing • Sleep patterns • Social support

In addition, a number of analyses were carried out to investigate potential differences between full time and part time workers.

⁸ Inferential analysis refer to the analysis of relationships between sets of data. They enable statements about whether variables are associated with each other to a *statistically significant* extent.

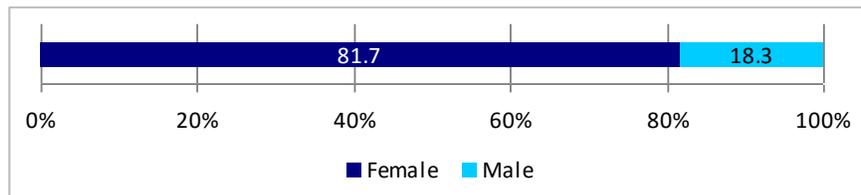
3.2 WHO WERE THE RESPONDENTS?

In this section, the findings on the personal demography and work experience of respondents is reported upon. These variables are important not only in their own right, but also in the context of the overall data analysis. They will be used to analyse patterns in relation to the main outcome variables in the study.

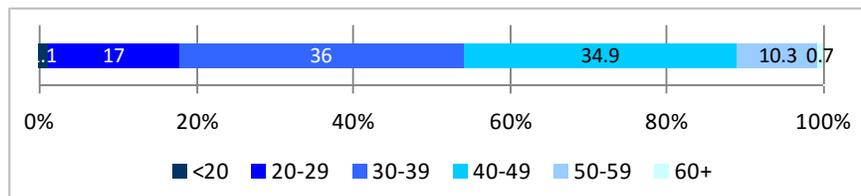
3.2.1 Personal background

Five aspects of the respondent’s personal demography were looked at – gender, age, marital status, children and whether or not they had a caring role with respect to younger children and older relatives. These factors are potentially important not only for their descriptions of the sample, but because it can be hypothesised that are related to health and wellbeing related outcomes in particular. The findings were, in summary:

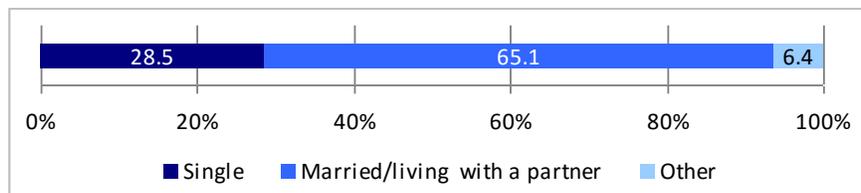
Gender: The large majority of Cabin Crew are female (81.7%)



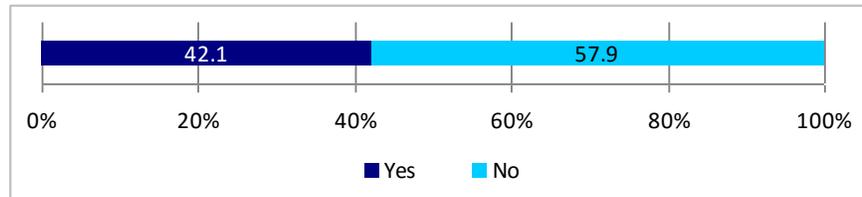
Age: The majority of Cabin Crew who responded are concentrated in the 30-49 years age group (70.9%)



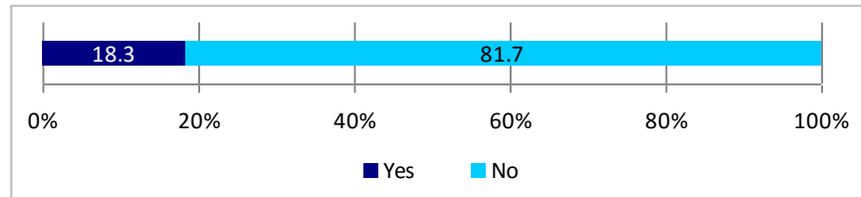
Marital status: Almost two-thirds of the sample of Cabin Crew are married or living with a partner (65.1%)



Children: Somewhat less than half of Cabin Crew have children under 18 (42.1%)



Carers: A little under one-quarter of Cabin Crew have caring responsibilities for elderly relatives (22.2%)



The findings on age indicate that this is a relatively old workforce, and that many have caring responsibilities for either children or older relatives, although anecdotal evidence would suggest that younger age groups within Cabin Crew are under-represented. A significant percentage of the sample (8.7%) have responsibilities for both and these are likely to be under a greater level of pressure than those without such responsibilities. This issue will be returned to later in the report.

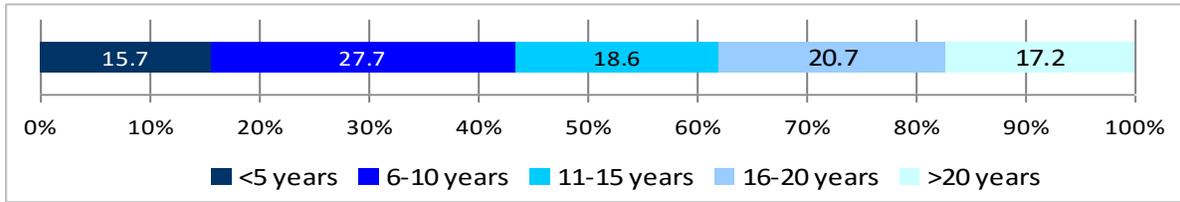
The 1995 survey - demography

In comparison to 1995, there were considerably more males in the current survey – 19.3% compared to 4.3%. The current sample of respondents is considerably older than that of 1995 – 45.9% of the 2014 respondents were aged more than 40 years, while only 25.2% were this age in 1995. The marital status of respondents also differed – in 1995 47.4% were single and 47.4% were married/cohabiting, while in the current sample, 28.5% were single and 65.1% were married or living with a partner. In 1995, 30.7% of that sample had children, while in the current sample this was 58.1% (children under 18 only).

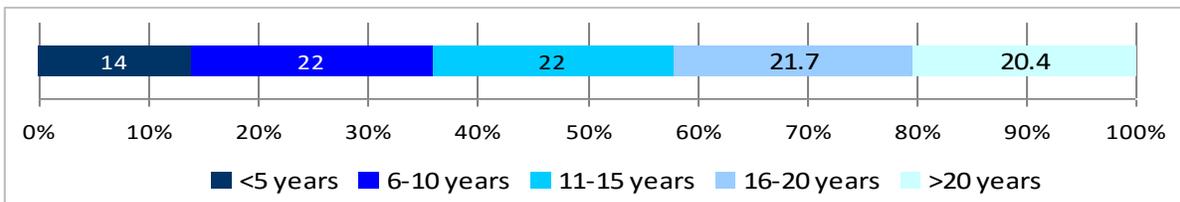
3.2.2 Work experience

Five aspects of the work experience of respondents were measured by the questionnaire. These related to Cabin Crew experience with Aer Lingus, experience working as Cabin Crew (overall), Grade in Aer Lingus, contract type and the base from which respondents worked. As with personal demography, these were examined both for being interesting on their own right as well as for their potential associations with the health related outcomes variables. The findings were, in summary:

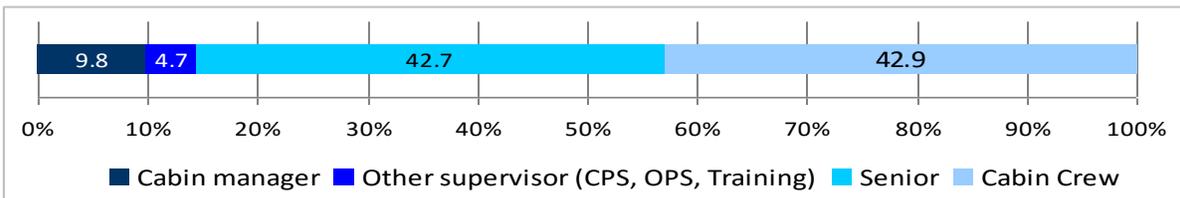
Cabin Crew experience (Aer Lingus): There was a fairly even distribution in terms of years of experience; the largest group are those with 6-10 years experience (27.7%). Anecdotal evidence would suggest that there are fewer respondents in the ‘less than 5 years’ group than is the case in the full Cabin Crew group.



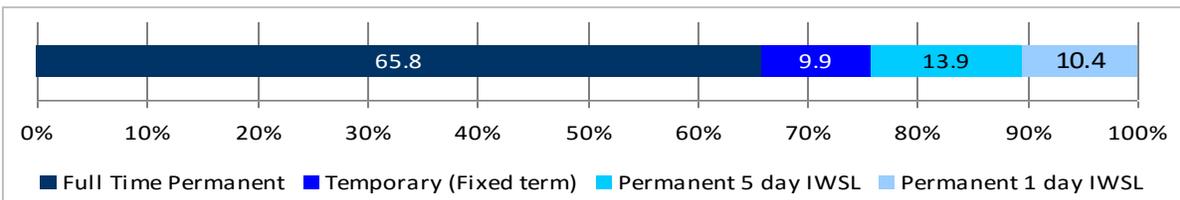
Cabin Crew experience (overall): There is a similar picture for cabin crew experience overall (including with other airlines); somewhat more have longer years of experience, indicating that a small proportion have cabin crew experience with other airlines as well.



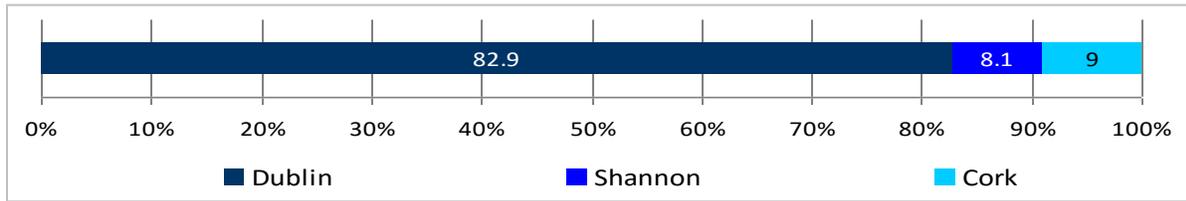
Grade: The large majority are either at Cabin Crew (42.9%) or Senior (42.7%) grades; others are at Cabin Manager (9.8%) and Other supervisor (4.7%) grades. Anecdotal evidence suggest that the Senior Grades are over-represented in the respondent group.



Contracts: Two-thirds of respondents have full-time permanent contracts (65.8%); others are temporary fixed term (9.9%), permanent 5 day IWSL (13.9%) or permanent 1 day IWSL (10.4%).



Base: A large majority are based in Dublin (82.9%); smaller numbers are based in Cork (9.0%) and Shannon (8.1%).



The 1995 survey – workplace demography

The current survey respondents are more experienced than the 1995 group – 41.1% of the 1995 group had 11 or more years of experience, while 64.1% of the current group had this level of experience. The groups in 1995 and 2014 were similar in terms of the base that they worked – 82.8% and 82.9% were Dublin based respectively. The 2014 group were more senior in grade than the 1995 group – 42.9% compared to 56.4% were Cabin Crew grade. Finally, fewer of the current sample had full time permanent jobs compared to 1995 – 65.8% compared to 88.4%.

3.3 THE WORK ENVIRONMENT AND WORK ORGANISATION

There are three main elements to the investigations of the work environment. These were:

- Sources of stress at work – this section of the questionnaire asked 31 questions about sources of stress at work. It was a heavily modified version of the Work Positive Questionnaire
- The Physical Work Environment – this questionnaire (modified for use with this sample) asked 20 questions about various aspects of the physical work environment. This section of the questionnaire was based on one developed and used by WRC in many studies
- Work rosters – this section of the questionnaire asked 24 questions about various aspects of the rostering system that the Cabin Crew worked. It was developed exclusively for this study.

3.3.1 Stress at work

Levels of stress at work were assessed using a modified version of the Work Positive Stress Audit Tool⁹. This Tool, developed by the Health and Safety Authority and the Health and Safety Executive Northern Ireland, is intended to be the Tool of choice for measuring stress in Irish workplaces. It measures sources of workplace stress along the following dimensions.

- Job demands

⁹ http://www.hsa.ie/eng/Workplace_Health/Workplace_Stress/Work_Positive/Work_Positive_Project_2005-2007/

- Control over job demands
- Support at work
- Relationships at work
- Job roles at work
- Organisational roles

The Audit Tool provides comparative statistics based on economic sector for users of the tool, but these cannot be used in the current situation, as many of the questions have been altered to make them more relevant and understandable for Cabin Crew, thereby rendering comparisons invalid. The full Work Positive Audit Tool provides the basis the development of stress prevention programmes, the methods for which are available through the HSA website. However, the methods used to develop stress prevention programmes can still apply.

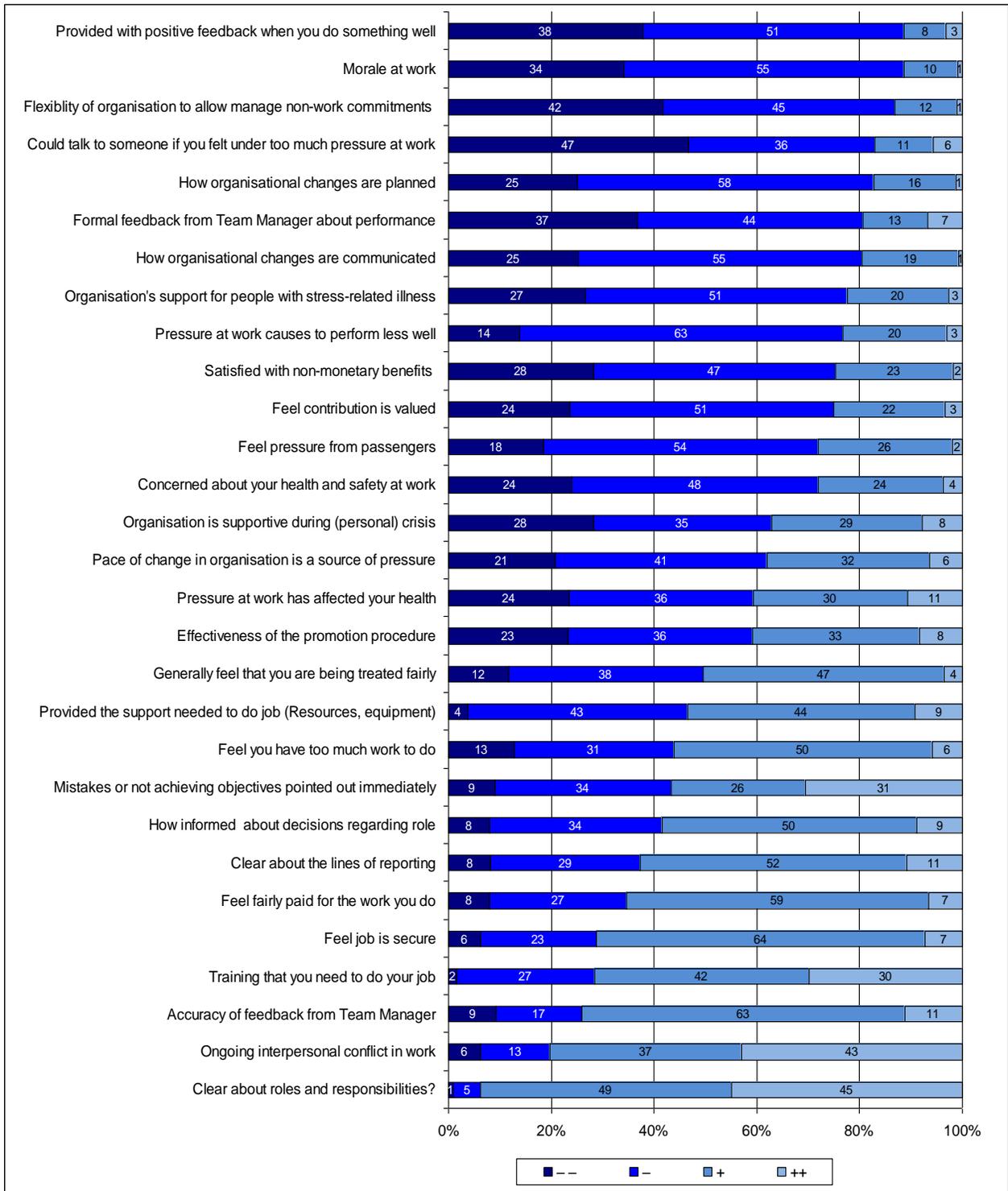
Many of the most negative elements related in one way or another to relationships and support at work. Particularly negative elements were concerned with the nature of feedback received, morale at work, having someone to support you, formal feedback on the job and communications at work.

The top 5 most frequently reported aspects rated at the level of the most negative reponse possible were:

- Never feel that you could talk to someone if you felt you were under too much pressure at work (46.7%)
- Organisation not at all flexible to allow you to manage any non-work commitments (family, dependents, etc.) (41.7%)
- Never provided with positive feedback when you do something well (37.8%)
- Never receive formal feedback from Team Manager regarding your performance (36.7%)
- Describe morale at work as being very low (34.0%)

It is notable that three of these five items are concerned with stress arising from communications between management and individuals. This finding is in line with many other studies of occupational stress, where communications is often the most significant source of stress.

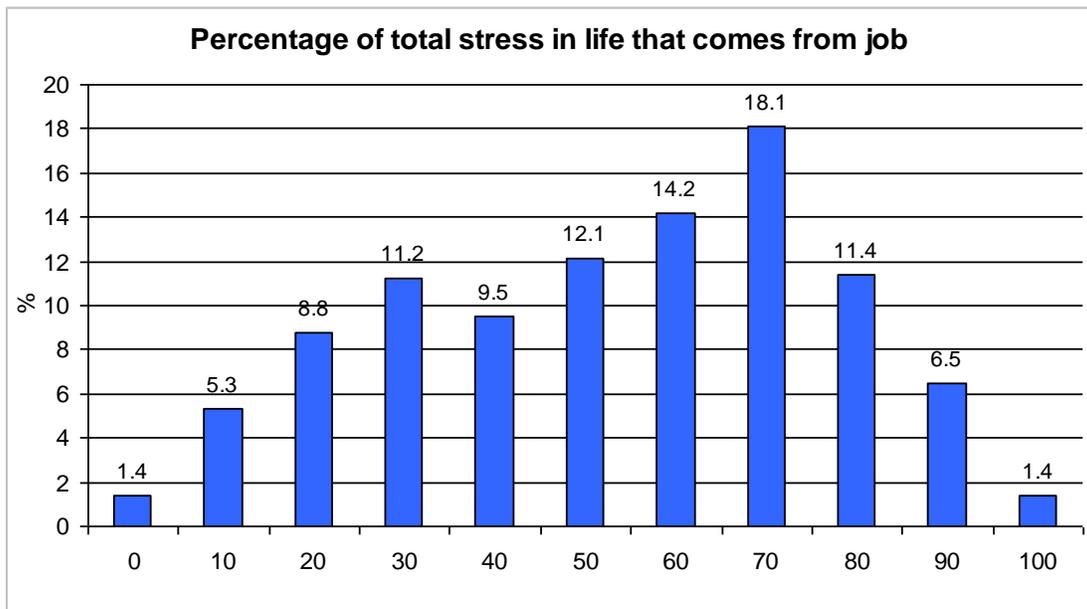
Figure 3.1. Sources of stress sorted by sum of the percentages for the two most 'negative' values



The Figure below present the findings from the 31 questions on occupational sources of stress in order of the most negative items to the most positive. (The results in order of how the questions appeared on the questionnaire are contained in the Appendix).

On the other hand, respondents were asked to state what percentage of the stress in their lives came from work. Figure 3.2 below shows the results from this question. More than one-half report that 60% or more of their total stress comes from their job (51.6%), while 63.7% reported that 50% or more of the stress in their lives came from work. In comparison, to other Irish samples, these results would indicate that somewhat more stress for Cabin Crew comes for the workplace than is the case for other workers.

Figure 3.2. Percentage stress coming from work sources



Finally it is worth noting that the three least stressful elements of working life for Cabin Crew related to:

- Having clarity about roles and responsibilities
- Ongoing conflict at work
- Accuracy of feedback from Team Managers¹⁰

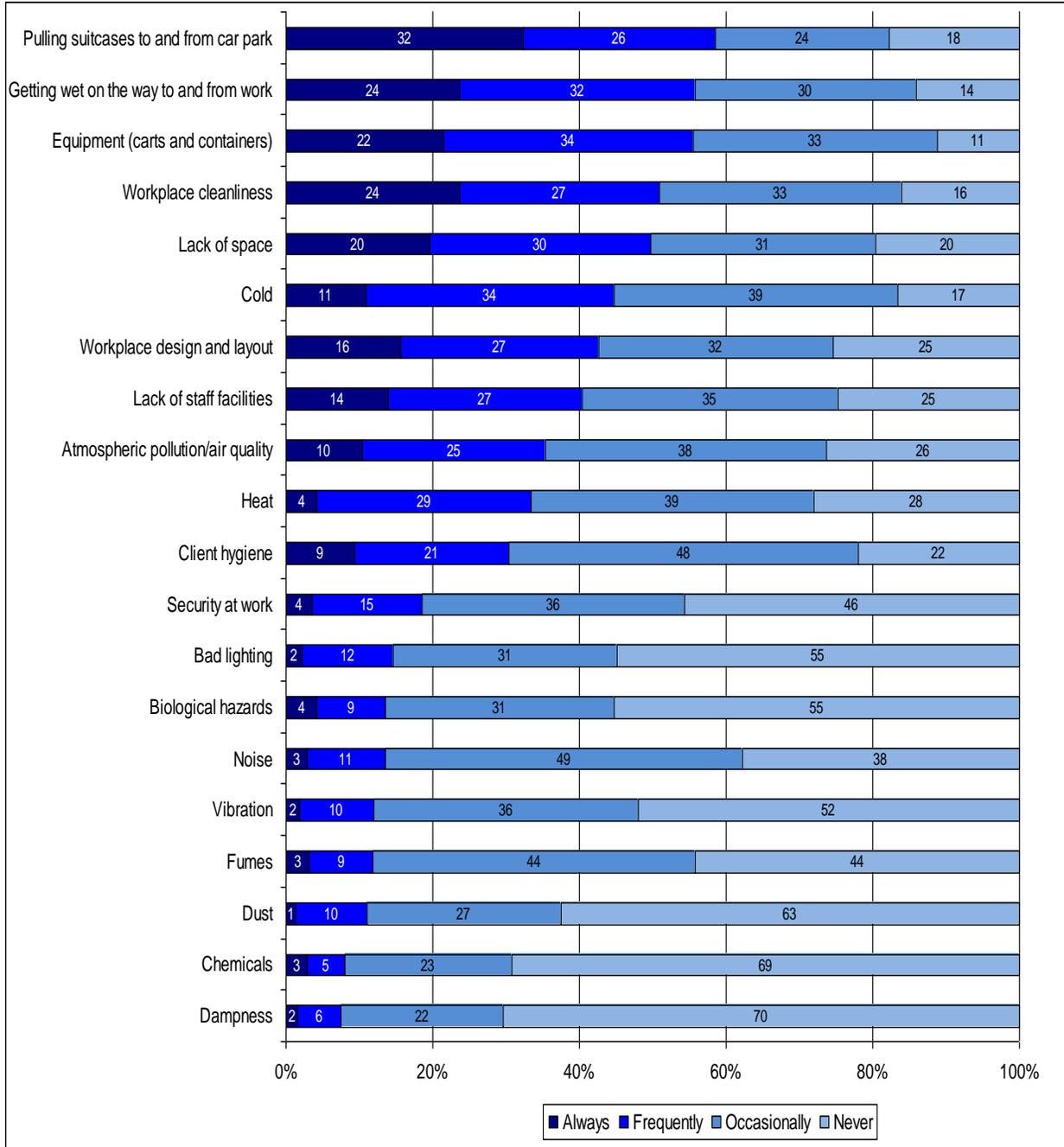
3.3.2 The physical work environment

Problems with the physical work environment was assessed using a scale that addressed 16 elements. This was a modified list of items that had been used previously by WRC in multiple studies.

¹⁰ It should be noted that much of the feedback from managers is based on pre-set forms and therefore is constrained with regard to how wide ranging it can be.

Figure 3.3 below ranks the 16 elements of the physical work environment in order of those which cause the most stress to respondents.

Figure 3.3 Levels of stress from the physical work environment



The three most frequent causes of stress are unique to Cabin Crew – having to pull heavy suitcases to and from the car park, getting wet on the way to and from work, and the equipment used at work (carts and containers). Following these three were stresses arising from workplace lack of space, cleanliness and

cold. Perhaps surprisingly, stress from noise or vibration were relatively low. The least stressful elements of the physical work environment came from chemicals or dampness - less than 10% of respondents reported higher levels of stress from these sources. Atmospheric pollution/air quality within planes and fumes in the general environment were not rated as being sources of stress by many respondents.

3.3.3 Work rosters

This section reports on a set of 24 questions that were developed specifically for this survey concerning the issues surrounding rostering for Cabin Crew. Since these questions were developed exclusively for this survey, there are no other data to which the responses can be compared. Answering many of the questions required precise information which could only be obtained from roster records. Not all respondents had access to this information in an easily accessible format and as a consequence, there was quite a high level of missing data for questions requiring precise numerical answers.

Working hours: Duty and block hours

A set of 4 questions were asked concerning the number of hours worked by Cabin Crew over the past 28 days and the past year. These concerned the number of duty hours and the number of block hours worked. Table 3.1 outlines the responses to these questions. Overall, most respondents worked more than 80 duty hours in the past 28 days – 68.1% of respondents did so. In addition, a majority of respondents worked more than 60 block hours – 57.4% did so. It should be noted that 4.3% of respondents (11 people) reported exceeding the maximum allowable block hours during the 28 day period (between 117 and 158 hours).

Table 3.1. Number of hours worked in the past 28 days

Duty hours in the past 28 days		0-40	41-80	81-120	121-164
	%	13.8	18.1	35.1	33.0
Block hours in the past 28 days ¹¹		0-40	41-60	61-80	81-100
	%	22.8	19.9	32.4	25.0

57.1% of respondents had worked more than 90 block hours in a single roster period during the past year. This had occurred multiple times for many Cabin Crew – for 27% of them, this had occurred 3 times or more. The number of times this happened was related to contract type. Staff with permanent full time contracts or temporary fixed term contracts had worked more than 90 hours on at least 2 occasions in the past year, while those on the other 2 contract types almost never did so.

It might be expected that there were significant differences in working hours between staff with different contract types and this turned out to be the case (see Table 3.2). Respondents on temporary (fixed term) contracts had the longest working hours in terms of both duty and block hours, followed by permanent full time staff. The lowest number of hours were worked by permanent 5 day IWSL staff.

¹¹ The maximum allowed is 100 hours in a 28 day period

Table 3.2. Number of hours worked in the past 28 days broken down by contract type

	Permanent full time	Temporary (fixed term)	Permanent 5 day IWSL	Permanent 1 day IWSL	Total
Duty hours in the past 28 days	102.5	116.6	54.6	81.5	95.1
Block hours in the past 28 days	65.2	72.0	31.7	47.9	60.0

Table 3.3 reports the equivalent figures on an annual basis. With regard to duty hours, there was an even split between those who worked less than 1200 duty hours per year (49.8%) and those who worked more (50.2%). It should be noted that none of the respondents exceeded the maximum allowable duty hours (1800) during the 365 day period. For annual block hours just over half of respondents reported working 800 hours or less (52.8%), while 47.2% worked more than 800 block hours in the year. It should be noted that some the respondents reported exceeding the maximum allowable block hours during the past 365 day period – 21 people reported working between 905 and 1564 block hours during the past 365 days. It may be speculated that those reporting very low numbers of duty and block hours were on either medical or maternity leave, while others may have been on ground duties.

Table 3.3. Number of hours worked in the past year

Duty hours in the past 365 days? ¹²		1-400	401-800	801-1200	1201-1600	1600+
	%	9.1	16.9	24.6	46.8	3.0
Block hours in the past 365 days? ¹³		1-400	401-800	801-1200	1201-1600	1600+
	%	16.1	36.7	43.5	3.7	0

There were significant differences in working hours between staff with different contract types (see Table 3.4). Respondents on permanent contracts had the longest working hours in terms of both duty and block hours, with respondents on permanent 5 day IWSL contracts working least. The other contract types were roughly equal in terms of duty hours, but not in terms of block hours.

Table 3.4. Number of hours worked in the past year broken down by contract type

	Permanent full time	Temporary (fixed term)	Permanent 5 day IWSL	Permanent 1 day IWSL	Total
Duty hours in the past 365 days	1188.7	1004.0	645.1	1005	1093.7
Block hours in the past 365 days	708.0	504.1	358.0	579.6	639.0

¹² The maximum allowed is 1800 hours in a 365 day period

¹³ The maximum allowed is 900 hours in a 365 day period

FDPs:

Table 3.5 reports on the number of times that respondents’ FDP exceeded 9 hours or 13 hours in the past 28 days. FDPs in excess of 9 hours occurred frequently, with only 17.6% of Cabin Crew reporting that this did not happen. On average, this happened 4.1 times to respondents, with more than one third reporting that it happened more than 5 times. Almost one third of respondents reported that they had worked FDPs in excess of 13 hours in the 28 day period. 22.8% reported that this happened once or twice, while as many as 8.4% reported doing so 3 times or more. No differences between staff on different contracts were seen in relation to either FDP measure.

Table 3.5. Longer than schedule FDPs in the past 28 days

In the past 28 days, how many times did your flight duty period (FDP) ¹⁴ exceed 9 hours?		0	1-2	3-4	5-7	8+
	%	17.6	19.8	25.3	19.8	17.6
In the past 28 days, how many times did your FDP exceed 13 hours?		0	1-2	3-4	5-7	8+
	%	68.8	22.8	5.5	1.8	1.1

Flight delays

Respondents were asked how often they were affected by flight delays in the past 28 days that caused them to exceed rostered finish times. 67% reported that this happened at least once, with on average this happening 2.8 times. As many as 40.7% of respondents reported that this happened 3 or more times during the period. There were some differences between staff on different contracts on this measure – staff with either 1 day or 5 day IWSL contracts had the fewest flight delays. Interestingly, the highest level of flight delays was experienced by staff on temporary contracts.

Meal breaks:

81.1% of respondents reported that they had not had the opportunity for a meal break while working and that this had occurred on average 4.2 times during the past 28 days. More than half (54.4%) of respondents reported that this had occurred 3 or more times during the period. This was not related to the type of contract that respondents had.

It might have been expected that meal breaks would be negatively related to the number of time zones crossed by Cabin Crew. However, this did not seem to be the case, as a non-significant relationship was seen between these two variables.

Roster swaps:

Swap systems are often used as a means of coping with rigidities in roster systems and are a necessary part of enabling a roster system to function smoothly. However, where there is a high level of usage of

¹⁴ Flight duty period (FDP) refers to the period from check in to chocs on

swap systems, and especially where requests for roster swaps are hard to achieve, it may indicate the need for improving the design of the roster system. The issue of obtaining swaps for rostered duties was also investigated. Here just over half of respondents (54.4%) had requested swaps (as many as 15.2% had requested a swap 4 or more times). On average 1.5 swaps per respondent was requested. However, swaps were achieved only 1.0 times on average. Nevertheless of the 15.2% who had requested a swap 4 or more times, 6.7% had achieved them. This was not related to the type of contract that respondents had.

Onerous duties:

During the past 28 days, respondents had worked onerous duties (more than 10 hours per day) on average 1.5 times. 53.3% had not done so at all, but as many as 21.7% had done so on 3 occasions or more. This was not related to the type of contract that respondents had.

It might be expected that Cabin Crew with higher frequencies of onerous duties would report more symptoms (physical and psychological) and that this might lead to increases in sickness absence. To some degree, this turned out to be the case, as is shown in the Table below.

Table 3.6. Onerous duties and health indicators¹⁵

Health indicator (symptoms)	None	Low	Moderate	High	Probability
Total	1.58	1.59	1.66	1.84	0.001
Digestive	1.72	1.69	1.74	1.92	NS
Musculoskeletal	1.80	1.82	1.85	2.06	0.041
Psychosomatic	1.64	1.64	1.72	1.86	0.033
Respiratory	1.52	1.58	1.64	1.75	0.011
Cardiovascular	1.15	1.04	1.05	1.26	0.009
Other	1.41	1.52	1.47	1.64	0.000
Psychological wellbeing	13.3	14.2	13.1	15.4	NS

These findings indicate that those who had worked the highest frequency of onerous duties during the previous 28 days tended to report the highest levels of symptomatology. This was true for 5 of the 7 indicators of physical symptoms, but was not true for psychological wellbeing.

However, these higher levels of physical symptoms did not translate into higher levels of sickness absence during the 28 day periods (in terms of number of days, number of spells, number of certified sick leaves, percentage of sick leaves due to work reasons, work related injuries or absences due to work injuries).

¹⁵ Lower probability figures indicate higher levels of certainty that the differences between the groups are statistically significant.

Split days off:

Split days off were a common feature of the roster system – 42% of people had split days off (an average of 0.7 times in the past 28 days) with 19.8% having split days off rostered twice or more during the period. Type of contract was related to the number of split days off – the main reason for this was that people with permanent 5 day IWSL contracts did not report having any split days off in the past 28 days.

There was also an interaction seen between the number of split days off reported and the number of minimum rest periods reported. Cabin Crew with the highest numbers of split days off tended to report lower numbers of minimum rest periods.

Finally, there was not a statistically significant relationship between the number of split days off and feelings of being too tired to enjoy time off work. However, there was a tendency for those who had worked more split days off to having higher levels of being too tired to enjoy time off.

Time Zones crossed:

Respondents were asked how many time zones they had crossed while working transatlantic routes in the past 28 days. This question provides an indicator of how much circadian disruption¹⁶ Cabin Crew may have undergone during the period. Almost 80% had worked TA flights in the period and overall, the respondents had crossed an average of 18.3 time zones. 46.8% of respondents had crossed 20 or more time zones, indicating that they had at least 2 return trips during the period. The number of time zones crossed was related to the type of contract that respondents had. On average, respondents had crossed 18.5 time zones during the previous 28 days.

People with permanent full time contracts were highest here (20.2), but staff with permanent 5 day IWSL contracts by far the lowest, with only 9.8 time zones crossed on average.

The grade of Cabin Crew was related to the number of time zones crossed – Cabin managers tended to cross more time zones than the other grades. The number of FDPs of >13 hours was also related to number of time zones crossed. As might be expected, the higher the number of time zones crossed, the greater the number of long FDPs.

Number of weekends off:

A significant feature of good roster designs is that the number of weekends off is maximised. In the past 28 days (a single roster period), Cabin Crew had an average of 1.2 weekends off. 35.9% reported having no weekends off, while only 4.2% had 4 weekends off during the period. A further 24.4% had one weekend off during the period. While this finding would vary with time of year, it nevertheless indicates that the impact on social and family life for Cabin Crew is likely to be significant. The type of job contract was not significantly related to this indicator.

¹⁶ This is akin to assessing the amount of shiftwork a person may have done.

Minimum rest periods:

Under the Flight Time Limitations, crew must have a minimum of 12 hours off between shifts. In the Cabin Crew sample, it was reported that minimum rest was achieved an average of 1.1 times during the last roster period. 43.6% of respondents reported that this had occurred at least once, while 12.4% reported that this had occurred 3 times or more. People with permanent 1 day IWSL contracts had by far the lowest number of such rest times (0.6), while there was little difference between the other 3 contract types (1.1 to 1.4).

It might be expected that there would be a relationship between the number of minimum rest periods that a person worked and the frequency with which they reported feeling tired on their days off. However, there was little evidence to support this – there was a small positive correlation between these two variables. One interpretation of this finding is that all shifts tended to lead to similar levels of tiredness to that experienced following a minimum rest period.

Preferred roster options:

Most respondents reported that they had received their preferred options on the PBS system more than half of the time – 70.2% reported this to be the case, while 29.8% reported that they got their preference less than half of the time. On average, people received their preferred rosters 55% of the time, but this figure varied according to the type of contract that Cabin Crew had. Staff on permanent 5 day IWSL contracts got their preferences 68.7% of the time, while staff on permanent 1 day IWSL contracts received their preferences only 50% of the time.

Typicality of roster:

Respondents were asked how typical the roster that they had worked in the past month was typical for them. This question sought to assess the extent to which the answers concerning the roster system were representative of Cabin Crew experience. 78% reported that the previous month's roster was either somewhat or completely typical, while 22% said that it was not at all typical. The other responses concerning the roster provided by the sample should therefore have a high degree of reliability.

Satisfaction with roster system:

Finally, respondents were asked how satisfied they were with three aspects of the roster system – annual leave, parental leave and with shift patterns/roster arrangements. The findings from these questions are presented in Figure 3.4.

It is clear from the Figure that there is a very high level of dissatisfaction with most elements of the roster system. Satisfaction with both annual leave and parental leave arrangements are lowest – only 27% and 26.3% of respondents are satisfied ('satisfied' or 'very satisfied') with these elements. However, satisfaction levels with the overall system are somewhat more positive – 40.6% are satisfied while 59.4% are dissatisfied.

Figure 3.4. Satisfaction with elements of the roster system



Satisfaction with two of the three indicators varied with contract type. There was no relationship with annual leave satisfaction, but satisfaction with parental leave and with shift patterns did vary. Here, people on temporary fixed terms contracts were most satisfied with parental leave, while staff on 5 day IWSL and temporary fixed term contracts were more likely to be satisfied with the overall roster.

The 1995 survey – Rosters

Most of the questions on rosters in the 2014 survey were different to those asked in 1995. However, some comparisons can be made. In 1995, 85.4% of respondents were either moderately or very dissatisfied with the system for requesting leave. This compares to 73% stating that they were either dissatisfied or very dissatisfied with the system in 2014. In 1995, staff worked an average of 1.87 transatlantic round trips while in 2014, they worked an average of 18.7 time zones, which equates to between 1.5 and 2 round trips.

3.4 HEALTH AND WELLBEING

3.4.1 Physical symptoms

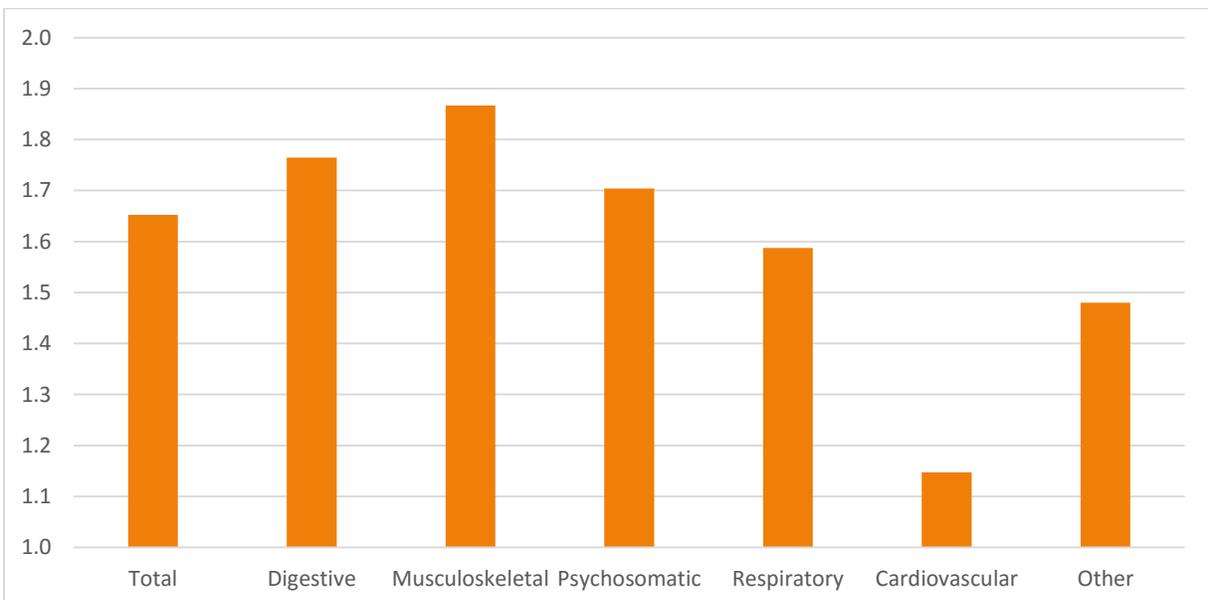
The questionnaire contained a set of questions that addressed the physical health of respondents. These questions asked about a range of physical symptoms which can be grouped into a number of dimensions that relate to different physical systems. These are:

- *Musculoskeletal symptoms, for example:* Back pain; Pain or stiffness in your arms or legs; Leg cramps; Periods of severe fatigue or exhaustion; Difficulty with your feet or legs when standing for long periods
- *Psychosomatic symptoms, for example:* Tearing or itching of the eyes; Persistent numbness or tingling in any part of your body; Ringing or buzzing in your ears; Fainting spells or dizziness; Nervous or anxious; Times when you feel sweaty or trembly; Increased urination
- *Digestive symptoms, for example:* Acid indigestion, heartburn or acid stomach; Diarrhoea for more than a few days; Wind or wind pains; Nausea or vomiting; Blood in your bowel movement; Constipation; Tight feeling in stomach; Bloating or full feeling
- *Respiratory symptoms:* Shortness of breath or trouble breathing; Frequent colds or sore throats; Persistent cough, coughing up sputum; Coughing up blood; Fever, chills and aching all over; Hay fever or sinus trouble; Wheezing in your chest
- *Cardiovascular symptoms, for example:* Alarming pain or pressure in your chest; Pain down your arms
- *Total symptoms* – the sum of all 44 symptoms

In Figure 3.4 below, the mean scores that are shown are comparable to each other – each dimension uses the same scale (1 = ‘Never’, 2 = ‘Sometimes’, 3 = ‘Frequently’, 4 = ‘Constantly’). It should be noted that these dimensions refer to symptoms, not to diagnosed disease.

It is clear that the most common symptoms are musculoskeletal ones (e.g. pains in muscles and joints), followed by digestive and psychosomatic symptoms. Respiratory and especially cardiovascular symptoms were relatively uncommon.

Figure 3.4. Mean scores on physical symptoms



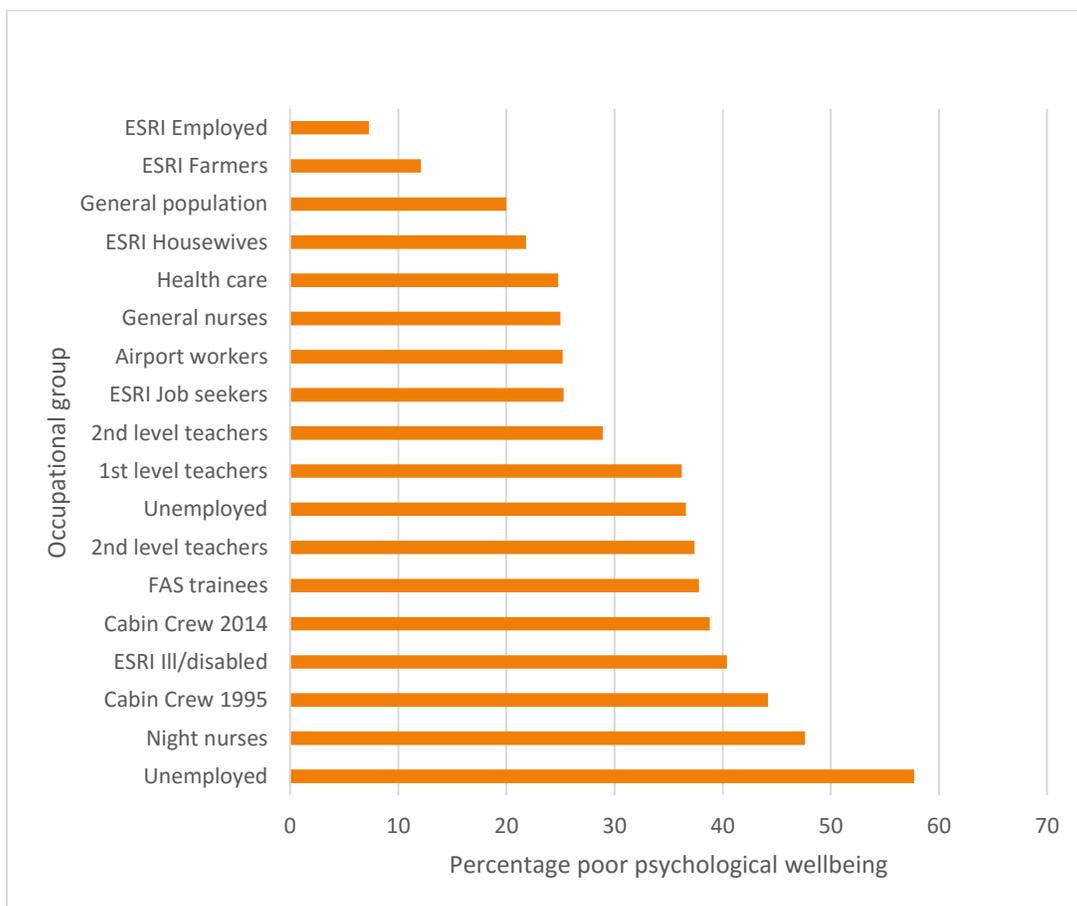
The 1995 survey – Physical symptoms

In 1995 the mean scores were on Digestive, Psychosomatic and Musculoskeletal symptoms were 1.91, 1.73 and 1.86 respectively. In 2014, they were 1.77, 1.71 and 1.83, indicating that there was little difference, except in relation to digestive symptoms, even though it is an older population in 2014.

3.4.2 Psychological wellbeing

Levels of psychological wellbeing were measured using an instrument that gives a standard score (this allowing comparability with other populations) which indicates whether a person would benefit from a psychological intervention or not (poor psychological wellbeing). It should be noted that this measure is a point in time measure – it may change in line with many environmental and personal factors. It should not be viewed as a permanent measure. Nevertheless this measure has been validated against psychiatric interviews and is thus a widely accepted and valid measure of a person’s state of psychological wellbeing.

Figure 3.5. Psychological wellbeing amongst Irish working groups



Overall, approximately 38% of Cabin Crew reported poor wellbeing. This can be compared to other Irish working groups (see Figure 3.5 below), from which the WRC and the ERSI have collected data over the years. This compares with 44.2% of the 1995 group.

Cabin Crew report amongst the highest levels of psychological distress of all of the occupational groups. They are higher (sometimes by a large margin) than groups such as primary school teachers, health care workers, some second level teachers and general nurses and airport workers, all of which have been examined by the WRC. In addition, they are higher than samples of farmers, unemployed and employed people addressed by the ESRI. Only a group of night nurses, a group of unemployed people and a group of ill/disabled people had higher levels of psychological distress.

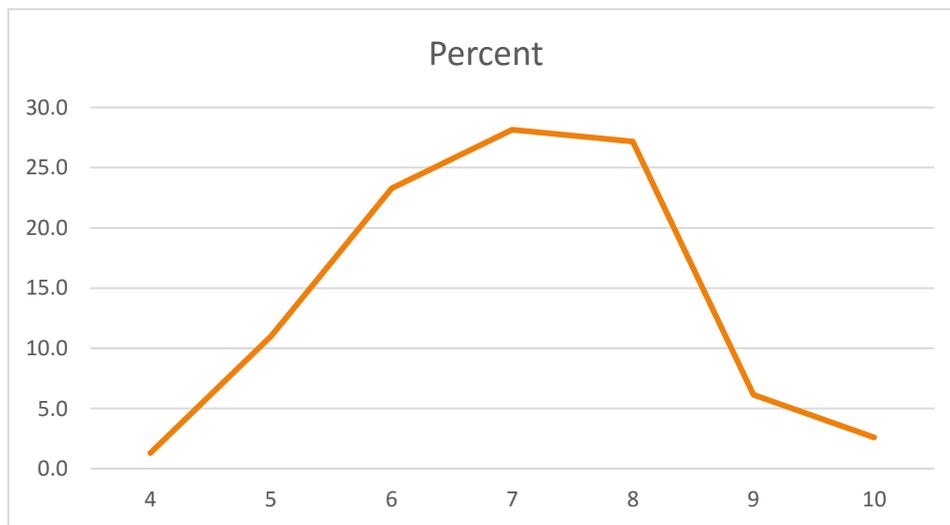
3.4.3 Sleep patterns

The survey asked a set of questions about sleep quality and quantity in an attempt to profile the type of sleep patterns that might be typical of Cabin Crew. The first question asked concerned the amount of sleep obtained by respondents – see Figure 3.6 for details.

Sleep quality and disruption:

A large majority of people (78.7%) averaged between 6 and 8 hours sleep per night, which is within accepted norms, with an average of 6.72 hours per sleep period. This compares to 7.0 hours for the 1995 groups. However, 12.3% of respondents got less than 6 hours, while a further 2.6% got 10 hours or more. Both of these groups probably exhibit some sleep disruption.

Figure 3.6. Amount of sleep (hours) obtained by respondents



A range of other questions were asked about sleep patterns. Most respondents reported that they had trouble sleeping once a week or more often (89.9%). An identical proportion reported feeling tired on

their days off. However, 33.8% of respondents reported taking sleep medication once a week or more often.

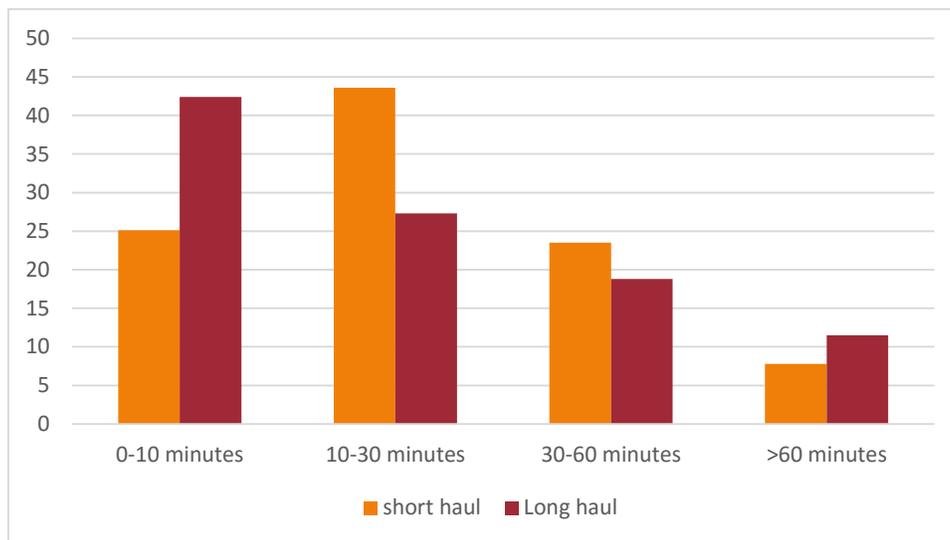
Sleep interruption was also a feature for Cabin Crew. Most reported waking up during sleep at least once (90.6%), but less often following a transatlantic flight – 20.3% reported no interruptions to sleep after such flights, perhaps indicating a greater level of fatigue after transatlantic flights.

Time taken to get to sleep:

There was wide variation in the time respondents took to get to sleep – 25% reported taking 10 minutes or less, 43.6% took between 10 and 30 minutes, while 31.3% reported taking longer than 30 minutes. This group includes 7.8% who took longer than 1 hour to get to sleep. The time taken to get to sleep following transatlantic sleep at least partly bears out the theory that fatigue was greater after such flights. 42.4% took less than 10 minutes to get to sleep, 27.3% while a further took between 10 and 30 minutes, but 30.3% took more than 30 minutes, including 11.5% who took longer than 60 minutes.

The comparison between sleep following short and long haul flights is interesting – it seems that the Cabin Crew have two different reactions following a long haul flight – most get to sleep much quicker, but there may also be a group who take much longer to sleep following such flights. Figure 3.7 illustrates this trend.

Figure 3.7. Time taken to get to sleep following short haul and long haul flights (minutes)



Another question addressed the issue of whether Cabin Crew were too fatigued (physically or mentally) to enjoy their time off. Only 10.1% reported that this was never the case, but 42.3% reported that this happened on average once over week, while 47.6% reported that this happened more than once per week.

Quality of sleep and absence from work:

A number of the sleep variables were related to the absence variables. Specifically, the following relationships were seen:

- *The number of days of sick leave absence* - This was not generally related to sleep variables with the exception of the time taken to get to sleep following a TA flight – there was a weak positive correlation here
- *The number of times that sick leave was taken* – this was related to the time taken to get to sleep following a TA flight and also to whether sleep medication was used (positive correlations)
- *The number of certified sick leaves* – this was related to the time taken to get to sleep following a TA flight and also to whether sleep medication was used and to the number of times Cabin Crew woke up during a sleep period (positive correlations).
- *Percentage of times that sick leave was taken for work related reasons* – this was related to the number of times Cabin Crew woke up during a sleep period and also to the time taken to get to sleep (positive correlations).

These findings were not very powerful when taken separately, but when taken together, they do indicate that higher levels of sleep disruption is related to some indicators of sickness absence.

3.4.4 Social support

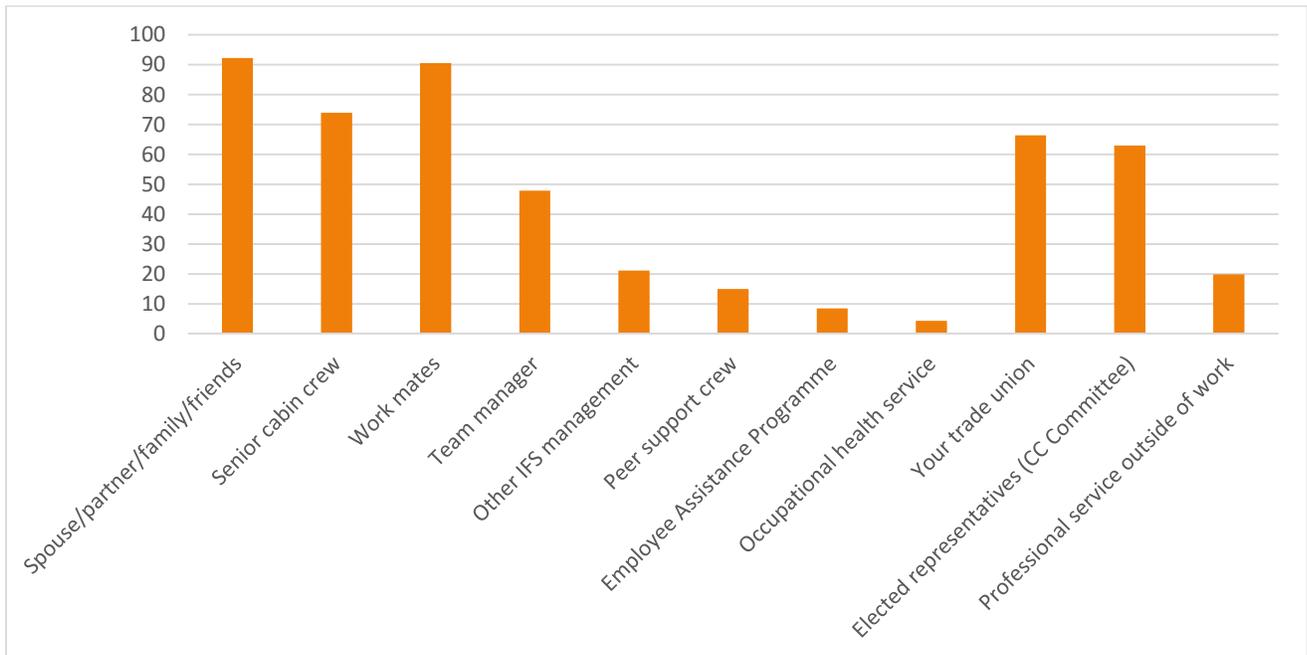
Social support is potentially a very important resource that people have in coping with demands or pressure on them. Having a range of support from both work and non-work sources as well as having adequate levels of support are an important buffer between stress and the emergence of health impacts. The survey asked a set of 12 questions on this issue.

Figure 3.8 summarises the findings on social support. It indicates that the most common sources of support came from family and friends, closely followed by workmates (about 90% reported that they got 'some' or 'a lot' of support from these sources). Significant support was also received from Senior Cabin Crew, the trade union and the Cabin Crew Committee (more than 60% reported at least some support from these sources).

By contrast, much lower levels of support were reported from the other sources - team managers, other IFS management, peer support crew, the employee assistance programme, and the occupational health service or from professional services outside of work. In the case of professional services inside or outside of the workplace, these low levels of support reflect the level of need – they are likely to be used only on an occasional basis. However, for the other in-work sources, management and other crew, levels of support received by respondents are generally low, though team managers provide support to almost half of the respondents.

It should be noted that only 32% of respondents stated that they actually seek support at work, clearly indicating that their main sources of support lie outside of the workplace.

Figure 3.8. Percentages of respondents reporting ‘some’ or ‘a lot’ of support from various sources



Finally in this section, respondents were asked to rate the adequacy of the support that they received (over all sources). There was a fairly even distribution of responses in this regard – 27.4% reported that the support they received was either ‘adequate’ or ‘very adequate’, 36.4% were neutral and 36.1% reported that it was ‘inadequate’ or ‘very inadequate’.

The 1995 survey – Social support

In 1995, the highest levels of support were obtained from Spouses/partners, relatives and friends and from colleagues. This is comparable to the findings in 2015. However, the percentages reporting at least some support did differ. At least some support was obtained from Unions by 64% of respondents in 1995, compared to 66% in 2014, Management support was 23% in 1995, while it was 20-48% in 2014. Support from supervisors was lower (55.9%) in 1995 compared to 71% in 2014.

3.5 SICK LEAVE AND ATTENDANCE MANAGEMENT

Sick leave frequency:

A set of 12 open ended and fixed response questions were asked about experiences of the sick leave system operated within Aer Lingus. The first question asked about the number of days absence respondents had taken within the past year – 37.5% had not taken any sick leave, 25% had taken between

1 and 5 days, 14.1% had taken between 6 and 10 days. A further 11.8% had taken between 11 and 30 days, while the remaining 11.5% had taken 31 or more days. The average number of sick leave spells per person was 1.5 per year. 77.4% of all sick leave spells were certified by a medical practitioner.

Cause of sick leave:

A number of questions were asked about the causes of sick leave. Firstly, most sick leave was due to what were perceived as non-work related reasons. Only 35.8% of respondents said that more than half of their sick leave was due to work related reasons, while 34.4% said that none of their sick leave was due to work.

Work injuries played a relatively small role in sick leave – 55 people reported work having 102 injuries at work, which accounted for a total of 1423 days absence (913 days of which were accounted for by 3 people). In all, this amounted to 31.7% of all absence reported by respondents.

Presenteeism:

The issue of presenteeism was also investigated in the survey. Respondents were asked ‘On how many days have you gone to work while sick in the past 28 days?’ Almost half of respondents reported that they had worked while sick, which includes 25.5% reporting that they had done so 3 or more times during that period. While comparative statistics are not available in relation to this indicator, it seems that there could be an underestimation of the levels of illness amongst Cabin Crew. The reasons for people going to work while ill were also investigated (see Table 3.6).

The most prevalent reason for going in to work while ill relates to wanting to avoid the disciplinary process (39.4%). A little more than a quarter of the time, people said that their illness wasn’t serious enough to go absent, while about a fifth of respondents stated that they didn’t want to let down colleagues (an indicator of relatively high levels of workplace support among peers). Fewer numbers cited financial reasons or wishing to maintain promotion prospects as a reason.

Table 3.6. Reasons for going to work while unwell

Reason	%
To avoid the disciplinary process	39.4
Illness wasn’t serious enough to go absent	28.6
Don’t want to let down colleagues	20.7
Financial reasons	17.9
To maintain promotion prospects	11.1
Other	3.8

The absence management system:

Respondents were also asked what their experience of the absence management system was, i.e. how far into the process they proceeded having gone absent (See Table 3.7).

Table 3.7. Experience of the absence management system.

Absence management action	%
Been referred to the Company Doctor while on certified SL	18.8
Received a letter from a TM advising you that you have had 3 occasions or 12 days SL in a 365 day period	16.6
Been called to an investigation meeting as a result of having had more than 3 occasions or 12 days of SL	8.1
Suffered financial hardship for more than one month	7.7
Been called to a disciplinary meeting as a result of your SL record	3.6
Had sanctions imposed on you as a result of your SL record e.g. loss of sick pay, loss of uncertified SL privileges, other	3.4
Used the services of the employee assistance programme	3.0
Been redeployed to non-flying duties as a result of illness/injury (other than pregnancy related illness)	2.3
Been offered the facility of having a managed roster to enable you to manage your illness or facilitate your recovery from an illness /injury	1.9

By far the most common actions following absence were referral to the Company Doctor and receiving a letter advising you that you have had 3 occasions or 12 days SL in a 365 day period. Less frequent action include being called to an investigation or suffering financial hardship as a result of absence. The other actions that were investigated were reported by less than 5% of respondents.

Respondents were asked about what day of their absence they were required to see the Company Doctor. As many as 41.4% were required to see the Company Doctor on the first day of absence, while 9.8% were required to see the Doctor by Day 5. As many as 47.8% were obliged to see the Doctor after some other period.

Respondents tended to be dissatisfied with the return to work meetings they had following a period of absence – 39.6% were either dissatisfied or very dissatisfied with these interview, compared to 19.3% being either satisfied or very satisfied. Overall, high levels of dissatisfaction with the Company Sickness absence procedures were expressed. 50.2% were wither dissatisfied or very dissatisfied with such interactions, while only 13.1% were either satisfied or very satisfied.

4 THE RELATIONSHIP BETWEEN PERSONAL FACTORS, WORK AND HEALTH

It might be expected that physical symptoms might be related to personal factors such as age and gender or work related factors such as job experience. A set of analyses were performed to see if any differences between emerged that were related to these factors. The findings from these analyses are reported on below.

It is to be expected that there are some differences in physical health scores associated with these factors, but only statistically significant differences¹⁷ are reported upon here.

4.1 PHYSICAL HEALTH AND PERSONAL DEMOGRAPHY

A number of personal demographic factors were analysed to see if they were related to any of the dimensions of physical health. These were age, gender, grade, contract type and others. The results from these analyses are presented in Table 4.1 below.

Table 4.1. Personal demography and physical health

Symptoms	Age	Gender	Marital Status	Children	Dependents
Total	NS	NS	NS	NS	NS
Digestive	NS	NS	NS	NS	NS
Musculoskeletal	NS	NS	NS	.025	NS
Psychosomatic	NS	NS	NS	.007	NS
Respiratory	NS	NS	NS	.008	NS
Cardiovascular	NS	NS	NS	NS	NS
Other	NS	NS	NS	NS	NS

Very few personal characteristics were related to the health status of Cabin Crew. Age, gender, marital status and whether or not the respondent had dependents were not related to symptomatology. On the other hand, having children was associated with symptomatology – Cabin Crew with children had lower levels of musculoskeletal, psychosomatic and respiratory symptoms. The reason for this finding is a matter of speculation.

¹⁷ For these analyses, statistical significance refers to differences at the 0.05 or lower probability level.

If personal demography was not often related to physical health, then work related demography mostly was. Four out of the five variables examined were related to symptomatology, the exception being operational base, which was not significantly associated with any of the 7 dimensions (see Table 4.2).

Table 4.2. Work demography and physical health

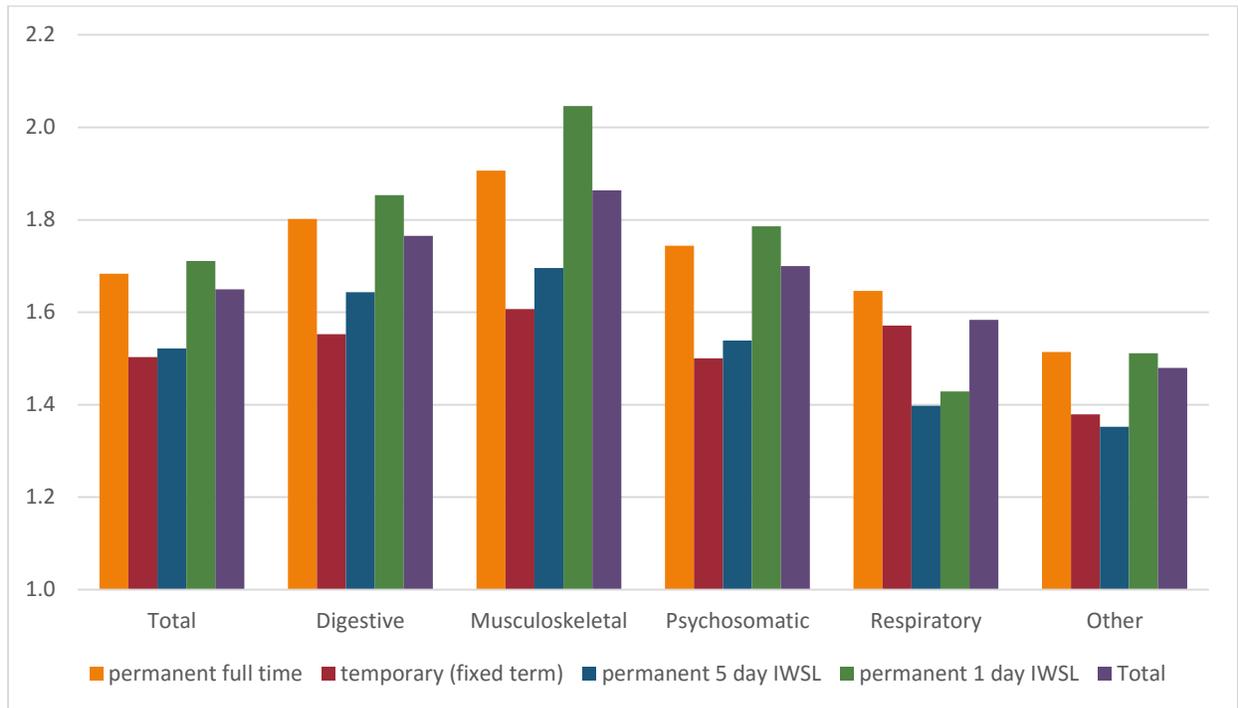
Symptoms	Grade	Contract type	Cabin Crew experience	Aer Lingus experience	Base
Total	NS	.039	NS	NS	NS
Digestive	NS	.046	NS	NS	NS
Musculoskeletal	NS	.007	NS	.039	NS
Psychosomatic	NS	.016	NS	NS	NS
Respiratory	NS	.003	NS	NS	NS
Cardiovascular	NS	NS	NS	NS	NS
Other	.032	.024	.023	NS	NS

The type of contract that people had was most often associated with symptoms (6/7 dimensions). In this case, respondents with temporary (fixed term) contracts tended to have the lowest levels of symptomatology, while those with permanent full time and permanent 1 day IWSL contract had the highest levels of symptoms (see Figure 4.1).

There was one significant difference in physical symptoms each associated with grade, level of Cabin Crew Experience and with length of time working with Aer Lingus. Here, Other supervisors had the highest level of ‘other’ symptoms, while senior cabin crew had the lowest; those with 6-10 years of Cabin Crew experience had the highest level of ‘other’ symptoms, while those with between 16 and 20 years had the lowest; and cabin crew with less than 5 years’ experience of working with Aer Lingus had the lowest level of musculoskeletal symptoms, while those with between 16 and 20 years had the highest.

These results do not form any consistent pattern that could be related work demography, though it is notable that longer periods of working may be associated with higher levels of some kinds of symptomatology.

Figure 4.1. Significant differences in physical symptoms by type of contract



4.2 MENTAL WELLBEING AND PERSONAL AND WORK DEMOGRAPHY

The potential relationships between mental wellbeing and personal and work demography was explored. The results from these analyses are outlined in Table 4.3.

It was notable that there were no elements of personal demography associated with higher or lower levels of mental wellbeing, but that 4 of the 5 work demographic variables were associated, and in the case of contract type strongly so (see Figure 4.2).

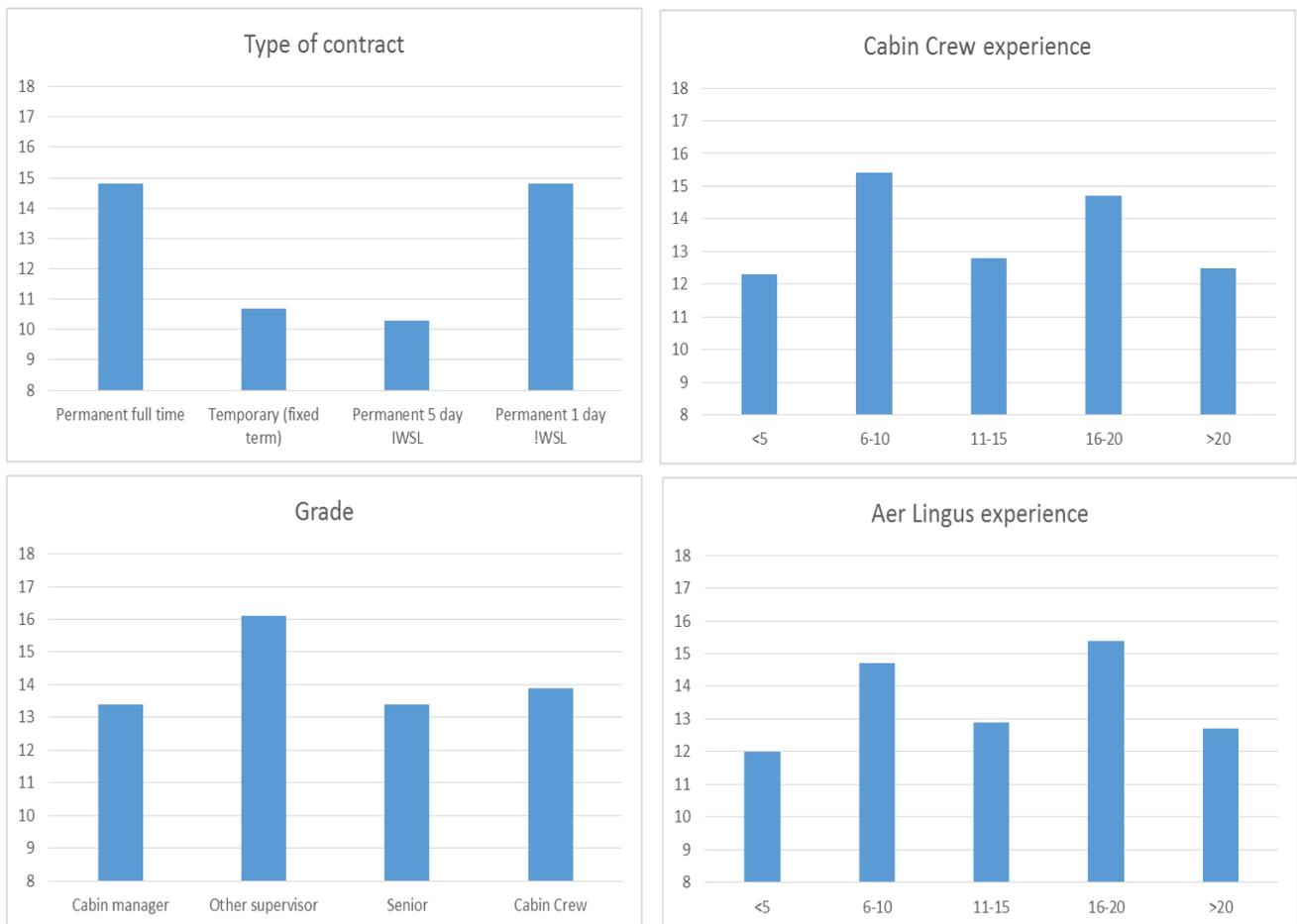
Table 4.3. Mental wellbeing and personal and work demography

Personal demography	Wellbeing	Work demography	Wellbeing
Age	NS	Grade	.032
Gender	NS	Contract type	.000
Marital status	NS	Cabin crew experience	.029
Children	NS	Aer Lingus experience	.033
Dependents	NS	Base	NS

This would appear to indicate that the differences in wellbeing that were seen were not due to the type of person they were or their life situation, but was more influenced by their work experiences. Specifically, people who had either permanent full time contracts or permanent 1 day IWSL contracts had lower levels of wellbeing¹⁸ than those with other types of contract. Grade was also associated with lower levels of psychological wellbeing – here people who were ‘other supervisors’ had the lowest levels of wellbeing.

Respondents were also asked how many years’ experience they had of working as a cabin crew member and how many years they worked with Aer Lingus (these variables are strongly related to on another). Similar patterns were seen here – people with between 6 and 10 years’ experience and between 16 and 21 years’ experience tended to have the lowest psychological wellbeing. This is a non-intuitive finding and the reasons for this pattern are not clear.

Figure 4.2. Significant differences in wellbeing by work demography



¹⁸ Higher scores correspond to lower levels of wellbeing.

4.3 OCCUPATIONAL STRESS, THE PHYSICAL WORK ENVIRONMENT AND HEALTH AND WELLBEING

It is well known that stress at work, coming from either psychosocial or physical sources, can have an impact on employee health and wellbeing. A set of analyses were run to investigate whether this was the case with the current sample of Cabin Crew. In these analyses, two new variables were created – psychosocial stress and physical work environment stress from the set of questions asked in the general questionnaire. For each of these indicators, total score was calculated and the respondents were then spilt up into three groups – low, moderate and high levels of stress. These were then related to the various health and wellbeing variables to see if any differences between these groups existed.

These analyses revealed that both psychosocial stress and stress from the physical work environment were strongly related to all of the physical symptoms and also to psychological wellbeing. The graphs presented below illustrate the relationships that were found. In all cases, the groups who reported the highest levels of psychosocial stress also reported the highest levels of symptomatology in terms of physical and psychological wellbeing.

Figure 4.3. Significant differences in physical health and psychological wellbeing by psychosocial stress



Figure 4.4. Significant differences in physical health and psychological wellbeing by work environment stress



The graphs from the analysis of physical symptoms showed similar patterns – in all cases people reporting the lowest levels of stress from this source also reported the lowest levels of symptomatology, while those with the highest levels of physical environment stress also reported the highest levels of physical and psychological symptomatology.

These findings provide powerful evidence for the influence of working conditions on self-reported health and wellbeing. It is notable that the findings on work demography and health and wellbeing support this interpretation – workplace factors appear to be more strongly associated with health and wellbeing than non-workplace factors.

4.4 OTHER RELATIONSHIPS BETWEEN WORK AND HEALTH AND WELLBEING

A number of other analyses were carried out to investigate relationships between some of the key variables. A limited number of variables were used for these analyses, as performing all possible analyses would lead to the report being extremely long as well as being technically incorrect approach to statistical analyses. The variables selected for these analyses were representative of the main sections of the questionnaire and the analyses enabled key questions about the relationships between self-reported working conditions and health and wellbeing to be explored. The variables included in these analyses were:

- Occupational stress
- Work Environment stress
- Roster satisfaction
- Support adequacy
- Hours' sleep
- Trouble sleeping
- Days absence
- Number of sick leaves
- Physical health variables (x7)
- GHQ

4.4.1 Stress and rosters, support adequacy, sleep quality and absence

Was occupational stress related to satisfaction with rosters, sleep quality, social support and sickness absence? Table 4.4 shows the findings in this regard and it is clear that there are some significant relationships, though perhaps not all of the expected relationships were present.

Levels of psychosocial stress were related to satisfaction with the roster system, the number of hours' sleep the respondent had, and the difficulty they had getting to sleep and how adequate the social support they received was. It was not related to either the number of days off or to the number of absence spells reported by respondents.

Stress from the physical work environment showed a somewhat different set of relationships. Like psychosocial stress, it was related to satisfaction with the roster, the adequacy of social support and trouble sleeping, but it was also related to the number of days of sickness absence.

In all cases, the relationships between these variables are in the expected direction, i.e. higher levels of stress from whatever source is related to lower levels of roster satisfaction, less adequate social support, fewer hours of sleep, more trouble sleeping and a higher number of days absent. However, it was noteworthy that psychosocial stress was not related to the number of days absent, while stress from the physical work environment was. The reasons for this difference are not clear.

Table 4.4 Relationship between stress, roster satisfaction, support adequacy, sleep quality and sickness absence

Source of stress	Roster satisfaction	Support adequacy	Hours of sleep	Trouble sleeping	Days absence	Number of sick leaves
Psychosocial factors	.000	.000	.063	.006	NS	NS
Physical work environment	.000	.000	NS	.003	.027	NS

4.4.2 Rosters, support adequacy, sleep quality and absence with health and wellbeing

There were also a number of relationships evident between the sleep, roster, support and absence variables and physical and mental wellbeing. Table 4.5 presents these findings.

Table 4.5 Relationship between roster satisfaction, support adequacy, sleep quality and absence with physical and psychological wellbeing

	Total symptoms	Digestive	Musculo-skeletal	Psycho-somatic	Respiratory	Cardio-vascular	Other symptoms	Psycho-logical wellbeing
Roster satisfaction	.000	.000	.000	.000	.000	.002	.000	.000
Support adequacy	.000	.001	.000	.000	.000	.002	.000	.000
Hours of sleep	.000	.000	.000	.000	.000	NS	.000	.000
Trouble sleeping	.000	.000	.000	.000	.001	.021	.000	.000
Days of absence	NS	NS	NS	NS	NS	.004	NS	.011
Sick leaves	NS	NS	NS	NS	.026	NS	NS	.000

There were clear and relatively strong relationships between the health outcome variables (physical symptoms and psychological wellbeing) and the other variables included in this analysis. High levels of dissatisfaction with rosters were associated with high levels of symptomatology on all of the 8 health related variables. The adequacy of social support was also associated with all of the 8 health related variables. Sleep quality was generally associated with all 8 of the health related outcomes such that poorer quality sleep was associated with elevated symptomatology. The exception here were cardiovascular symptoms, which was not associated with length of sleep.

Absence from work was only moderately related to symptomatology, which may indicate that other factors come are more important than health symptoms in explaining absence from work. Nevertheless, respiratory symptoms were associated with the number of absences as was poor psychological wellbeing, while psychological wellbeing and cardiovascular symptoms were associated with number of days absent.

It was notable that psychological wellbeing was associated with all of the factors examined – the only one of the health and wellbeing outcomes to be so associated.

5 CONCLUSIONS

5.1 THE MAIN FINDINGS

This section of the report summarises the main findings and presents the conclusions from the survey. These have been drawn up with reference to the literature and the 1995 survey, so that a comparative analysis is made when possible and appropriate.

There are relatively few studies of Cabin Crew's health and wellbeing in the literature, through there are some studies that look at specific issues. Most studies deal with flight crew or specifically with cockpit crew, though there are exceptions to this. The main findings from the literature with regard to Cabin Crew have found:

From the scientific literature:

- There is little or no evidence that working as Cabin Crew is related to contracting breast cancer or other cancers, though it is difficult to reach a definitive conclusion without further research
- There are no discernible effects of flight crew work on mortality
- There are concerns that there may be increased health and safety risk for flight crew in relation to multiple physical exposures, violence or verbal abuse, ergonomic risks and heavy lifting, biological agents and lower limb disorders
- There are known impacts of cabin crew work on fatigue and accident risk. Among the most important issues in rostering that contribute to problems in this regard are working long hours on consecutive days, long duty hours, split duties¹⁹, night duty, early starts, rest periods outside of circadian low points, recovery time following certain time zone shifts and standby duty of certain types.

From the survey:

- Demography – Cabin Crew were predominantly female, between 30 and 49 years old, married or living with a partner, without children under 18 years old and without responsibilities for elderly relatives. Few Cabin Crew have less than 5 years' experience, most are at Cabin Crew or senior grades, most have permanent work contracts and a large majority are based in Dublin.
- Stress at work – The main psychosocial sources of stress were not being provided with positive feedback, low morale, lack of flexibility of the organisation to handle non-work commitments, not having someone to talk to when under too much pressure and how organisational changes are planned.
- The physical work environment – the most stressful elements related to Cabin Crew specific issues such as pulling suitcases, and getting wet. In addition, other issues that were stressful concerned faulty equipment, lack of cleanliness and lack of space on board aircraft.
- Rosters – One third of Cabin Crew worked more than 120 duty hours in the past 28 days while 25% worked more than 80 block hours in the same period. The type of contract that people had

¹⁹ These are not operated in Aer Lingus

was related to both block and duty hours – permanent full time and temporary fixed term staff worked 102.5 and 116.6 duty hours respectively, while permanent 5 day IWSL staff worked 54.6 hours and permanent 1 day IWSL staff worked 81.5 block hours.

- They worked more than 800 duty hours but fewer than 800 block hours during the previous year. A large majority has worked FDPs of more than 9 hours in the past 28 days, while almost a third had worked at least one FDP of more than 13 hours. Most had experienced flight delays in the previous 28 days and most had experienced difficulties in taking meal breaks. Duty swaps were difficult to achieve, while about half of Cabin Crew had worked onerous duties during the period. The majority had worked transatlantic flights during the period. Most Cabin Crew reported obtaining the Minimum Rest Period at least once in the period. Overall, levels of satisfaction with the roster system were low.
- Physical symptoms – Musculoskeletal symptoms were the most common class of symptoms reported by Cabin Crew. These were followed by digestive and psychosomatic symptoms. Cardiovascular symptoms were the least common.
- Psychological wellbeing – more than one third of Cabin Crew reported low levels of psychological wellbeing and amongst the highest levels of distress compared to other Irish occupational groups such as teachers and nurses. However, levels of psychological distress were somewhat lower than in 1995.
- Sleep quality – there was considerable evidence of sleep disruption reported by Cabin Crew. Though the length of sleep was not generally outside norms, there was evidence of sleep disruption in terms of getting to sleep, staying asleep, taking sleep medication, and the restorative powers of sleep. These sleep quality indices are influenced by the times at which sleep takes place – the best sleep is obtained when it takes place at the naturally occurring circadian low period.
- Social support – levels of social support were highest from family and friends, while they tended to be lowest from potential work related sources – support was lowest from management, but somewhat higher from senior Cabin Crew and workmates. About one third of Cabin Crew reported that the amount of support they received was inadequate for their needs.
- Sick Leave and attendance management - The issue of Cabin Crew experiences of sick leave and the attendance management process was also examined. More than half of Cabin Crew had taken less than 5 days sick leave in the past year, while the average number of sick leave spells was 1.5 during that period. Most sick leave was caused by non-work factors while only 55 people reported work injuries as a cause of sick leave. On the other hand, almost half of Cabin Crew reported that they had come to work while sick – this was mainly to avoid the disciplinary process or because the illness wasn't serious enough to prevent them coming to work. Overall, high levels of dissatisfaction with the absence management process and related policies were reported.

Further analyses revealed many relationships between personal factors, work and many of the measures of health and wellbeing. In addition, some relationships were seen between these contract type and working conditions. Some specific relationships concerned:

- Personal demography and physical health – perhaps surprisingly, personal factors were not generally related to physical symptomatology. The only exception to this concerned having children under 18 – this was associated with lower levels of symptoms for reasons that are not clear.

- Work demography and physical health – a number of strong relationships were seen here. Contract type was especially strongly related, but so also were grade and experience. People with permanent contracts tended to have higher levels of symptoms.
- Demography and mental wellbeing – personal demography was not related here, but grade, contract type and experience were all related to mental wellbeing
- Occupational stress, the physical work environment and health and wellbeing – Strong relationships were seen between psychosocial and physical work environment stress and health and wellbeing measures. People with higher levels of stress reported higher levels of symptomatology in relation to all of the health measures.
- Occupational stress, the physical work environment and other outcomes – these were related to outcomes such as sleep quality, adequacy of support and in the case of the physical work environment, to numbers of sick days.
- Rosters and health and wellbeing – Levels of satisfaction with rosters was used as an indicator of problems with rostering for purposes of assessing associations with working conditions and health and wellbeing. Levels of satisfaction with rosters was low and was related to occupational stress, physical symptoms and psychological wellbeing. However, it was not directly related to absenteeism.
- Mental and physical wellbeing and absence from work – Most symptoms were not related to either number of days absent or to number of sick leaves taken. However, low psychological wellbeing was related to both absence measures, while cardiovascular and respiratory symptoms were related to one each of the absence markers.

Comparisons with 1995:

Finally, some comparisons were possible between the 1995 survey and the current one, as identical questions were asked in relation to some issues in both surveys.

The main findings from this comparison were:

- There were considerably more males in the current survey. The current group is considerably older than the 1995 group. Many more Cabin Crew are married or living with a partner compared to the 1995 group while many more of the current group had children.
- The current survey respondents are more experienced than the 1995 group. The 2014 group are more senior in grade than the 1995 group. Fewer of the current sample had full time permanent jobs compared to 1995.
- More of the current group are dissatisfied with roster arrangements. Similar levels of transatlantic flying were undertaken by participants in the surveys.
- The highest levels of support were obtained from Spouses/partners, relatives and friends in both surveys.
- There was little difference between the two surveys in terms of levels physical symptomatology reported.

Surveys such as these can often raise as many questions as they set out to answer, and this survey raises a number of these questions. However, there are still some solid conclusions that can be made on the basis of the data collected and the analyses undertaken for this report. These are:

- The levels of health and wellbeing of Cabin Crew show some significant relationships with working conditions. Wellbeing in particular, is strongly related to demographics, and stress from the psychosocial and physical work environments.
- The type of work contract that Cabin Crew have is related to a range of stress and wellbeing markers
- Rates of absence are probably underestimated, taking into account the findings of presenteeism

5.2 IMPLICATIONS FOR MANAGING HEALTH AND WELLBEING

There are a number of ways in which the results from the survey can be viewed, but in this section their implications for 4 key areas are discussed:

- Rosters and working conditions
- Health and safety practice
- Health promotion
- Return to work

These are important organisers of the study results and recommendations since they have a practical focus and they reflect current structures for health and safety within Aer Lingus. Using this structure will enable the response to the study to be targeted at areas which are feasible to address using current structures within the organisation.

It should be noted that workplace demography was often a significant differentiating factor in relation to the results of the survey. Specifically, the grade of Cabin Crew, the type of contract they had and their job experience were important. These factors need to be taken into account when considering the recommendations and when implementing interventions in the workplace.

In making these recommendations, there are a number of principles underlying them which are important to acknowledge. These are:

- A joint approach – implementation of these recommendations will require a joint approach by management and unions. Only a joint approach can effectively address the issues raised by the survey.
- Conformance with scientific data – The data from the survey and from the literature review provide a sound basis to begin to address the issues raised in the study. Though the data cannot answer all of the questions that might arise, it provides a better basis for addressing them than any alternatives.
- An integrated approach to workplace wellbeing – the recommendations below have been made within the framework of an integrated approach to managing health and wellbeing issues in the workplace. This means that prevention and health promotion are important as are issues of treatment and return to work following illness. Health and safety practice is a significant element of this integrated approach also.
- Attendance management system – Aer Lingus currently has an attendance management system which focuses mainly on certification of illness and on taking a bureaucratic approach to returning

people to work. This emphasis is not in line with best practice in return to work, and the recommendations below provide an alternative approach that can be more effective in achieving safe and timely return to work.

5.2.1 Rosters and working conditions

The following recommendations are made in relation to rosters and working conditions:

1. The relationship between rosters impacting on sleep disruption and on accident risk (as evidenced by the Moebus report) requires that systems be established that monitor the impact of current rosters and any changes that may take place. This should be done within the context of health and safety practice.
2. There is a limited scientific literature on the impacts of roster systems specifically on the health and wellbeing of Cabin Crew, though there is a wider literature on the impacts on Flight Crew. This literature should be monitored to identify new research of relevance to promoting health and wellbeing of Cabin Crew and also to identify potential safety risks.
3. Satisfaction with roster systems are currently low and are related to indicators of health and wellbeing as well as to measures of stress. These could be monitored on a continuous basis in order to track possible impacts of rosters and roster changes. A useful way of doing this would be to re-establish the Roster Management Group which was in operation in Aer Lingus in the past. Such a group would have the function of identifying potential difficulties with the roster, facilitating flexibility and with building up experience of what work and doesn't work. It would also have the ancillary effect of defusing much of strong feeling that attaches itself to the current system.
4. Physical work environment – the survey points to the stressful nature of a number of aspects of the physical work environment. However, there is also evidence that Cabin Crew are not necessarily aware of potential hazards in this area, for example, cabin air quality. An awareness programme for these hazards should be implemented.
5. Occupational stress – occupational stress is an issue for many Cabin Crew. Much of this is attributed to issues related to feedback to staff, lack of social support and to lack of organisational flexibility. These are matters of management style to a considerable extent and need to be addressed, especially if morale is to improve and a more positive working atmosphere is to be brought about.

Health and safety practice

The potential hazards of Cabin Crew work are to some degree well known, but there is also evidence pointing to the emergence/identification of potential new hazards, especially in on-board environments. These include increasing psychosocial risks, for example, verbal abuse and physical threat/violence, as well as possible airborne contaminants (biological, chemical). Levels of awareness amongst Cabin Crew

of some of these potential risks may not be high, given their emergent nature. In this context, it is recommended that:

6. Hazard identification procedures and risk assessment procedures be updated to reflect emergent hazards and risks.
7. Roster features such as maximum FDPs, minimum rest times, numbers of block hours and duty hours and timing of rest periods should be incorporated into risk assessment procedures.
8. Awareness raising and training should be provided in relation to the monitoring of all hazards, but especially emergent ones.
9. Regular surveys of potential workplace hazards of all types (physical, psychosocial, work organisation) should be conducted in order to track trends as well as providing data on the impact of preventive measures.
10. A joint approach to health and safety practice is strongly recommended. This should routinely include providing easy access to risk assessment information and the kinds of health and safety interventions that are being implemented.
11. Health and wellbeing – There is clear evidence that working conditions affect health and especially psychological wellbeing. It is recommended that this issue be addressed in a number of ways. Firstly, the opportunities for and the levels of support from fellow employees and management should be increased. This may be done through raising awareness among all of the stress issues affecting Cabin Crew, team building or other initiatives designed to improve wellbeing. Secondly, it is recommended that levels of wellbeing be monitored on a periodic basis.

5.2.2 Health promotion

Workplace health promotion is concerned with the promotion of good health and wellbeing in the workplace. While it is often confined to improving individual health related behaviours in relation to such issues as exercise, diet and intoxicants, there are two more specific contexts which should be considered for action in the case of Cabin Crew. These are:

12. Improve possibilities for taking meals, especially in the context of long shifts and short turnarounds. Where meal breaks are difficult to extend, provisions to improve the quality of meals should be considered.
13. Provide guidance for improving sleep quality to Cabin Crew, especially in the context of time zone travel and early and late shifts. This might be done in the form of information and training provision.

5.2.3 Return to work

Good return to work practice from the perspective of ensuring safe and timely return to work involves many elements. These are concerned, *inter alia*, with early intervention, appropriate rehabilitation where needed, good record keeping, case management, workplace accommodations and a strong, agreed policy in the area. The current system of absence management seems to have as its main focus the return to work of absent workers by a combination of sickness certification and disciplinary action should the rules of the system be breached. Currently the system is unpopular, and it may not achieve its objectives of reducing sickness absence due to not focusing on best practice. An unpopular and inefficient return to work system is no nobody's interest and in this context it is recommended that:

14. A policy on return to work be agreed between management and unions. This should incorporate features such as case management, early intervention (in some cases it would seem that interventions may be too early), an information system on the causes, of absence, duration, number of spells, types of interventions, and effectiveness of interventions.
15. A grievance procedure in relation to absence management should be introduced

6 APPENDIX: THE QUESTIONNAIRE AND BASIC RESULTS

Personal background

1	Age		<20	20-29	30-39	40-49	50-59	60+
		%	1.1	17.0	36.0	34.9	10.3	0.7

2	Gender		Male	Female
		%	18.3	81.7

3	Marital status		Single	Married/living with a partner	Other
		%	28.5	65.1	6.4

4	Children under the age of 18?		Yes	No
		%	42.1	57.9

5	Caring for older relatives?		Yes	No
		%	22.2	77.8

Work experience

6	Cabin Crew experience with Aer Lingus		<5 years	6-10 years	11-15 years	16-20 years	>20 years
		%	15.7	27.7	18.6	20.7	17.2

7	Cabin Crew experience overall (including other airlines)		<5 years	6-10 years	11-15 years	16-20 years	>20 years
		%	14.0	22.0	22.0	21.7	20.4

8	Grade		Cabin manager	Other supervisor (CPS, OPS, Training)	Senior	Cabin Crew
		%	9.8	4.7	42.7	42.9

9	Contract		Full Time Permanent	Temporary (Fixed term)	Permanent 5 day IWSL	Permanent 1 day IWSL
			65.8	9.9	13.9	10.4

10	Base		Dublin	Shannon	Cork	
		%	82.9	8.1	9.0	

Stress at work

This part of the questionnaire aims to identify any sources of stress in your work. Please complete the answers based on your experience in the past 28 day roster period

1.	Do you feel that the pace of change in your organisation (whether fast or slow) is a source of pressure for you?		No Pressure	Some pressure	Moderate pressure	Extreme pressure
		%	6.4	31.5	41.2	20.8
2.	How are organisational changes planned?		Very well	Quite well	Not very well	Not at all well
		%	1.3	16.0	57.6	25.1
3.	How are organisational changes (e.g. roster systems, management issues) communicated?		Very well	Quite well	Not very well	Not at all well
		%	0.7	18.9	55.3	25.2
4.	Do you feel your job is secure?		Very secure	Quite secure	Not very secure	Not at all secure
		%	7.3	63.9	22.6	6.2
5.	Are you clear about the lines of reporting in your organisation?		Very clear	Quite clear	Not very clear	Not at all clear
		%	10.8	51.9	29.1	8.1
6.	How informed are you about decisions regarding to your role?		Very well informed	Quite well informed	Not very well informed	Not at all informed
		%	8.9	49.6	33.5	8.0
7.	How effective is the promotion procedure?		Very rigorous	Quite rigorous	Not very rigorous	Not at all rigorous
		%	8.3	32.6	35.9	23.2
8.	Do you receive the training that you need to do your job?		Always	Mostly	Sometimes	Never
		%	29.9	41.7	26.8	1.6
9.	Are you provided with the support you need to do your job (Resources, equipment)?		Always	Mostly	Sometimes	Never
		%	9.3	44.2	42.7	3.8
10.	Do you feel that you are fairly paid for the work you do?		Very fairly paid	Quite fairly paid	Not very fairly paid	Not at all fairly paid
		%	6.6	58.8	26.7	8.0

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11. How satisfied are you with your non-monetary benefits (e.g. annual leave, pensions, social events, etc.)?		Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
	%	1.8	22.9	47.1	28.3
12. Do you receive formal feedback from your Team Manager regarding your performance?		Always	Mostly	Sometimes	Never
	%	6.8	12.5	44.0	36.7
13. If applicable, how accurate is this feedback in your opinion?		Very accurate	Accurate	Inaccurate	Very inaccurate
	%	11.2	62.9	16.6	9.3
14. How flexible is the organisation to allow you to manage any non-work commitments (family, dependents, etc.)?		Very flexible	Quite flexible	Not very flexible	Not at all flexible
	%	1.1	12.1	45.1	41.7
15. Do you feel that the organisation is supportive during (personal) crisis (e.g. following bereavement, illness, or marriage break-up)?		Very supportive	Quite supportive	Not very supportive	Not at all supportive
	%	7.9	29.3	34.5	28.3
16. Is there any ongoing interpersonal conflict in work that results in you feeling unhappy?		None at all	A few	Quite a lot	Many
	%	42.9	37.4	13.4	6.3
17. Generally do you feel that you are being treated fairly?		Very fairly	Quite fairly	Not very fairly	Not at all fairly
	%	3.5	46.9	37.8	11.8
18. How often do you feel pressure from your passengers?		Never	Rarely	Sometimes	Most of the time
	%	1.9	26.1	53.6	18.4
19. Do you feel you have too much work to do?		Never	Sometimes	Often	Always
	%	5.8	50.3	31.0	12.8
20. How clear are you about your roles and responsibilities?		Very clear	Quite clear	Not very clear	Not at all clear
	%	44.9	48.8	5.3	0.9
21. Do you feel that your contribution is valued?		Very valued	Quite valued	Not very valued	Not at all valued
	%	3.4	21.6	51.3	23.7
22. Are you provided with positive feedback when you do something well?		Always	Often	Sometimes	Never
	%	3.2	8.1	50.9	37.8
23. If you make a mistake or did not achieve your objectives would these be pointed out immediately to allow corrective action?		Always	Often	Sometimes	Never
	%	30.5	26.2	34.3	9.0
24. Are you concerned about your health and safety at work?		Not at all concerned	Not very concerned	Quite concerned	Very concerned
	%	3.7	24.4	47.9	24.0

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25. Do you think that pressure at work causes you to perform less well?		Never	Rarely	Sometimes	Often
	%	3.0	20.3	62.9	13.8
26. Do you feel that pressure at work has affected your health while working in this organisation?		Not at all	A little	To some extent	A lot
	%	10.7	30.0	35.8	23.5
27. Generally do you feel that you could talk to someone if you felt you were under too much pressure at work?		Always	Mostly	Sometimes	Never
	%	5.7	11.3	36.3	46.7
28. How supportive is the organisation of people suffering from stress-related illness		Very supportive	Quite supportive	Not very supportive	Not at all supportive
	%	2.7	19.7	51.0	26.7
29. How would you describe morale at work?		Very low	Quite low	Quite high	Very high
	%	34.0	54.6	10.4	0.9
30. Have you been involved in disciplinary procedures at work?		Yes	No		
	%	21.4	78.6		
31. How much stress have you felt as a result of the disciplinary system?		None at all	A little	Some	A lot
	%	50.0	12.6	15.0	22.4

32. What percentage of the Total Stress in your life comes from your JOB?

Percentage of total stress	0	10	20	30	40	50	60	70	80	90	100
% of respondents	1.4	5.3	8.8	11.2	9.5	12.1	14.2	18.1	11.4	6.5	1.4

Rostering

This section asks questions about your duty roster over the past 28 days. You will need to have a copy of the portal page with your duty and block hours, and your roster for the past 28 days in order to answer these questions. You will also need a copy of your original planned roster for the past 28 days to hand.

1. How many duty hours have you worked in the past 28 days?		0-40	41-80	81-120	121-164	
	%	13.8	18.1	35.1	33.0	
2. How many block hours have you worked in the past 28 days?		0-40	41-60	61-80	81-100	
	%	22.8	19.9	32.4	25.0	
3. How many duty hours have you worked in the past 365 days?		x	x	x	x	x
	%	x	x	x	x	x
		x	x	x	x	x

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4. How many block hours have you worked in the past 365 days?	%	x	x	x	x	x	
5. In the past 28 days, how many times did your flight duty period (FDP) ²⁰ exceed 9 hours?		0	1-2	3-4	5-7	8+	
	%	17.6	19.8	25.3	19.8	17.6	
6. In the past 28 days, how many times did your FDP exceed 13 hours?		0	1-2	3-4	5-7	8+	
	%	68.8	22.8	5.5	1.8	1.1	
7. In the past 28 days, how many times were you affected by flight delays causing you to exceed rostered finish time?		0	1-2	3-4	5-7	8+	
	%	33.0	26.3	17.5	12.3	10.9	
8. How many times in the past 28 days, have you <u>not</u> had the opportunity for a meal break ²¹ ?		0	1-2	3-4	5-7	8+	
	%	18.9	26.7	20.7	17.2	16.5	
9. In the past 28 days, how many swaps have you sought?		0	1	2-3	4+		
	%	45.6	20.3	18.9	15.2		
10. In the past 28 days, how many swaps have you achieved?		0	1	2-3	4+		
	%	56.2	22.2	14.8	6.7		
11. During the past 28 days how many times have you had onerous ²² duties in succession?		0	1-2	3-4	5-7	8+	
	%	53.3	24.9	13.3	4.9	3.5	
12. During the past 28 days, how many times have you had split days off?		0	1	2	3+		
	%	58.0	22.2	13.2	6.6		
13. During the past year, in how many roster periods (28 days) did you work over 90 block hours?		0	1-2	3-4	5+		
	%	42.9	30.1	19.5	7.5		
14. In the past 28 days, how many time zones did you cross while working transatlantic duties? Please count return trips as well.		0	1-9	10-19	20-29	30-39	40+
	%	20.8	18.7	13.7	19.7	12.7	14.4
15. In the past month, how many weekends did you have off?		0	1	2	3	4	
	%	35.9	24.4	26.5	9.1	4.2	
16. In the past month, how many times did you have only the minimum of 12 hours rest between duties in your roster?		0	1	2	3-4	5+	
	%	56.4	19.1	12.1	7.1	5.3	
		0-24	25-49	50-74	75-100		

²⁰ Flight duty period (FDP) refers to the period from check in to chocs on

²¹ You are entitled to a meal break if your DFP exceeds 6 hours. A meal break should be 30 consecutive minutes clear of all duty

²² Over 10 hours per day

17. Roughly what percentage of the time do you get your preferred options in the PBS system?	%	15.3	14.5	42.2	28.0		
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18. How satisfied are you with the annual leave system?		Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
	%	2.2	24.8	34.2	38.9
19. How satisfied are you with the parental leave system?		Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
	%	1.9	24.4	30.0	43.7
20. Are you satisfied with your shift patterns/roster arrangements?		Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
	%	6.4	34.2	34.2	25.2

21. How typical was the roster that you worked in the past month?		Not at all	Some what	Completely
	%	22.0	58.3	19.7

Health and wellbeing

The following questions concern physical symptoms. Answer each question by ticking the box that indicates how often you have experiences each of the symptoms WITHIN THE PAST MONTH. Please note that we are interested in any experience of the symptoms that you may have had, whether you usually experience the symptom or not.

Symptom	%			
	Never	Occasionally	Frequently	Constantly
1. Shortness of breath or trouble breathing	58.5	31.4	8.5	1.6
2. Frequent colds or sore throats	32.8	41.9	20.3	5.0
3. Persistent cough, coughing up sputum	60.5	24.8	9.7	5.0
4. Coughing up blood	99.4	0.6	0.0	0
5. Fever, chills and aching all over	56.3	31.4	9.4	2.8
6. Hay fever or sinus trouble	38.1	28.6	22.3	11.0
7. Wheezing in your chest	71.3	21.6	4.7	2.5

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Symptom	%			
	Never	Occasionally	Frequently	Constantly
8. Jaundice, yellow eyes or skin	94.0	4.1	1.3	0.6
9. Itching skin, skin rash, allergic skin reactions	62.1	25.7	8.5	3.8
10. Swollen or painful muscles and joints	37.8	37.8	17.2	7.2
11. Back pain	18.8	41.1	27.6	12.5
12. Pain or stiffness in your arms or legs	32.3	38.6	21.9	7.2
13. Tearing or itching of the eyes	42.9	32.2	18.3	6.6
14. Persistent numbness or tingling in any part of your body	72.3	16.2	8.0	3.5
15. Ringing or buzzing in your ears	48.9	38.8	9.1	3.2
16. Pain in your ears	49.7	41.2	8.5	0.6
17. Severe headaches	50.5	35.2	11.4	2.9
18. Fainting spells or dizziness	67.2	24.0	7.9	0.9
19. Nervous or anxious	45.0	37.1	12.3	5.7
20. Times when you feel sweaty or trembly	59.3	27.4	10.1	3.2
21. Increased urination	53.5	29.1	13.3	4.1
22. Painful urination	89.2	8.9	1.6	0.3
23. Blood in urine	97.1	2.5	0.3	0.0
24. Alarming pain or pressure in your chest	90.8	7.0	2.2	0.0
25. Pain down your arms	86.1	10.8	2.5	0.6
26. Racing or pounding heart	68.2	23.6	7.5	0.6
27. Leg cramps	40.8	42.4	13.3	3.5
28. Periods of severe fatigue or exhaustion	20.4	40.3	27.0	12.3
29. Acid indigestion, heartburn or acid stomach	47.8	30.8	12.9	8.5

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Symptom	%			
	Never	Occasionally	Frequently	Constantly
30. Diarrhoea for more than a few days	74.1	19.6	4.7	1.6
31. Wind or wind pains	16.7	42.8	28.3	12.3
32. Nausea or vomiting	71.6	23.3	4.4	0.6
33. Blood in your bowel movement	89.9	7.6	1.9	0.6
34. Constipation	42.8	37.4	13.2	6.6
35. Tight feeling in stomach	53.9	30.0	12.3	3.8
36. Bloating or full feeling	13.3	35.4	34.5	16.8
37. Feeling of pressure in the neck	49.4	29.1	14.9	6.6
38. Haemorrhoids or piles	72.3	16.4	8.2	3.1
39. Trouble digesting food	46.8	30.4	18.7	4.1
40. Blurred vision	75.6	17.7	5.7	0.9
41. Dryness in the mouth	49.8	37.5	10.8	1.9
42. Stomach pains	46.1	34.4	15.1	4.4
43. Belching	51.9	31.2	12.7	4.1
44. Difficulty with your feet or legs when standing for long periods	28.8	37.3	22.2	11.7

We would like to know how your GENERAL HEALTH has been in the PAST FEW WEEKS. Please circle the response that best describes how you have recently been feeling in relation to each of the questions asked:

HAVE YOU RECENTLY:

	%			
	Better than usual	Same as usual	Less than usual	Much less than usual
1. Been able to concentrate on what you're doing?	1.9	67.7	24.0	6.4
2. Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
	14.9	54.2	25.0	5.8

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3. Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less than usual	Much less than usual
	4.2	75.3	15.4	5.1
4. Felt capable of making decisions about things?	More so than usual	Same as usual	Less than usual	Much less than usual
	3.2	77.0	15.2	4.5
5. Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
	9.9	59.2	25.2	5.7
6. Felt that you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
	22.1	60.3	14.2	3.5
7. Been able to enjoy your day to day activities?	More so than usual	Same as usual	Less than usual	Much less than usual
	2.5	59.6	30.3	7.6
8. Been able to face up to your problems?	More so than usual	Same as usual	Less than usual	Much less than usual
	2.9	74.8	18.5	3.8
9. Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
	27.1	44.5	22.1	6.3
10. Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
	32.0	41.5	19.6	7.0
11. Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
	54.1	30.7	12.0	3.2
12. Been feeling reasonably happy, all things considered?	More than usual	About the same as usual	Less so than usual	Much less than usual
	4.4	74.3	17.1	4.1

In your opinion, would you say your health is (please tick one)		Excellent	Very Good	Good	Fair	Poor
	%	7.9	27.0	39.9	23.3	1.9

Sleep patterns

1. How many hours do you usually sleep every night?		4-5	6	7	8	9-10
	%	12.3	23.4	28.2	27.3	8.8
2. How often do you have trouble sleeping?		Never		Once a week	More than once a week	
	%	15.5		32.3	52.2	
3. In general, how often are you too physically or mentally tired to enjoy your time off?		Never	Once a week		More than once a week	
	%	10.1	42.3		47.6	
4. In the past 28 days, have you taken any medication to help you sleep?		Never		Once a week	More than once a week	
	%	66.1		15.3	18.5	
5. On average, how many times do you wake up per night?		0	1	2	3	4+
	%	9.4	22.6	35.7	21.3	11.0
6. On average, how many times do you wake up following a transatlantic flight?		0	1	2	3	4+
	%	20.3	11.5	25.6	21.3	21.3
7. How long does it take you usually take you to get to sleep? [Minutes]		0-15	16-30	31-60	61-120	121-180
	%	34.2	34.8	23.5	7.2	0.3
8. How long does it take you usually to get to sleep following a transatlantic flight? [Minutes]		0-15	16-30	31-60	61-120	121-180
	%	51.0	18.8	18.8	9.9	1.6

Mean: 31.7 (Median: 15.0); Range: 0-180

Sick leave and attendance management

1. How many whole days have you been off work because of a health problem (disease or health care or for examination) during the last year (12 months)?		0	1-5	6-10	11-30	31+
	%	37.5	25.0	14.1	11.8	11.5
2. How many times have you taken sick leave during the past 12 months?		0	1	2	3	4+
	%	30.5	32.1	19.5	10.7	7.1
3. In the past 12 months, how many of your sick leave absences were certified?	77.4%	?	?	?	?	?
		?	?	?	?	?
4. Roughly what percentage of your sick leave was due to work related reasons?		0	1-24	25-49	50-74	75+
	%	34.4	24.8	5.0	10.6	25.2

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5. How many times have you been injured at work during the past 12 months?		0	1	2	3	4+
	%	80.4	13.9	2.1	1.8	1.8
6. In the past 12 months, on how many days were you absent from work as a result of an injury at work?		0	1-5	6-10	11-15	16+
	%	87.9	5.5	1.5	.4	4.8
7. On how many days have you gone to work while sick in the past 28 days?		0	1-2	3-5	6+	
	%	51.7	22.7	18.2	7.3	
8. If you go to work while unwell, please tick any of the following reasons you did so?						% (of entire sample)
• To avoid the disciplinary process						39.4
• To maintain promotion prospects						11.1
• Don't want to let down colleagues						20.7
• Illness wasn't serious enough to go absent						28.6
• Financial reasons						17.9
• Other						3.8
9. As a result of illness or injury have you (please tick all that apply)						% (of entire sample)
• Received a letter from a TM advising you that you have had 3 occasions or 12 days SL in a 365 day period?						16.6
• Been called to an investigation meeting as a result of having had more than 3 occasions or 12 days of SL?						8.1
• Been called to a disciplinary meeting as a result of your SL record?						3.6
• Had sanctions imposed on you as a result of your SL record e.g. loss of sick pay, loss of uncertified SL privileges, other (please specify)? _____						3.4
• Been redeployed to non-flying duties as a result of illness/injury (other than pregnancy related illness)?						2.3
• Been offered the facility of having a managed roster to enable you to manage your illness or facilitate your recovery from an illness /injury?						1.9
• Used the services of the employee assistance programme?						3.0
• Suffered financial hardship for more than one month?						7.7
• Been referred to the Company Doctor while on certified SL.						18.8
10. On what day of your absence have you been required to see the Company Doctor?						
		Day 1	Day 2	Day 5	Other	
	%	41.4	8.9	1.9	47.8	

11. How satisfied have you been with Return to Work Meetings?						
	Very satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	
%	4.3	15.0	41.1	19.3	20.3	
12. How satisfied have you been with your interaction with the Company sick procedures?						
	Very satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	
%	3.3	9.8	36.7	19.5	30.7	

The Physical work environment

How frequently do the following aspects of your physical work environment cause you stress in your present job? *Please tick each item*

Source	%			
	Never	Occasionally	Frequently	Always
Noise	37.7	48.7	10.6	2.9
Dust	62.6	26.5	9.7	1.3
Fumes	44.2	43.9	8.7	3.2
Vibration	51.9	36.1	10.0	1.9
Heat	28.0	38.6	29.3	4.2
Cold	16.6	38.7	33.9	10.9
Dampness	70.4	22.1	5.9	1.6
Bad lighting	54.9	30.5	12.3	2.3
Atmospheric pollution/air quality	26.3	38.3	25.0	10.4
Chemicals	69.3	22.7	5.2	2.9
Biological hazards	55.2	31.2	9.4	4.2
Workplace cleanliness	16.0	33.0	27.2	23.7
Workplace design and layout	25.4	31.9	27.0	15.6
Equipment (carts and containers)	11.2	33.3	34.0	21.5
Client hygiene	22.0	47.6	21.0	9.4
Security at work	45.6	35.9	14.9	3.6
Lack of staff facilities	24.8	34.8	26.5	13.9

Source	%			
	Never	Occasionally	Frequently	Always
Lack of space	19.6	30.7	30.1	19.6
Getting wet on the way to and from work	14.1	30.1	32.1	23.7
Pulling suitcases to and from car park	17.8	23.6	26.2	32.4

Social support

This section of the questionnaire asks you about your relationship with others, both inside and outside of the workplace. The answers you give will help in assessing the kind of support available to you from others. By support we mean having people to provide you with information, people who can give you practical help, people to whom you can turn to when you are under stress.

Do you seek support in relation to work issues in work?		Yes	No
	%	32.0	68.0

How much support in relation to work or personal issues do you usually receive from the following sources? (Please tick one box per person/service)

	None	Some	A lot	No need for support	Not applicable
Your spouse/partner/family/friends	2.2	32.4	59.9	1.9	3.5
Senior cabin crew	12.2	51.0	23.0	5.3	8.6
Your work mates	4.8	46.9	43.7	2.9	1.6
Your team manager	43.7	40.1	7.8	4.5	3.9
Other IFS management	65.6	18.5	2.6	6.2	7.1
Peer support crew	51.1	9.8	5.2	11.8	22.0
Employee Assistance Programme	55.4	5.9	2.6	12.1	23.9
Occupational health service	60.9	3.3	1.0	9.6	25.2
Your trade union	22.8	46.9	19.5	3.3	7.6
Elected representatives (Cabin Crew Committee)	23.4	38.9	24.1	5.3	8.3
Professional service outside of work	46.7	13.6	6.3	8.3	25.2

In general, how adequate is the amount of support you receive?		Not at all adequate	In-adequate	Neutral	Adequate	Very adequate
	%	11.6	24.5	36.4	23.8	3.6