Sources of Stress and Coping Strategies among Flight Crew

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Abstract

The study represents an initial assessment of psychological stress levels associated with work and their sources among aircrew members. The study also looks at the strategies used by aircrew members to deal with stress and examines results based on various variables. The study sample consisted of 226 aircrew members including: (73 Pilot-66 male, 7 female) with an average age of (45) years and average work experience of (20 years); and (153 cabin crew- 53 male and 100 female) with an average age of (26) years and average practical experience of (4) years working at Royal Jordanian Airlines. There were two scales used to enhance this study: sources of work stress, and skills to deal with psychological stress. These scales were developed and found reliable for the purposes of this study in terms of face validity, construction validity, differential validity, and by ways of utilizing coefficient Cronbach – alpha's test.

The results indicated that (74.33%) of aircrew members perception of work stress was medium, and (11.50%) considered work caused high pressure, while (14.15%) did not feel any work-related pressures. Interestingly, males suffer from the stress of work more often than females, and less experienced aircrew members suffer from higher levels of stress. As for the methods of coping with psychological stress, the study showed that the most commonly used are ordered respectively as follows: cognitive skills, interpersonal skills and personal skills; note that the degree of use of these skills was below average while the avoiding skills was the least utilized.

Keywords: Occupational Stress; Coping Strategies; Levels of Stress; Flight Schedule Stress; Shift Work Stress.

Theoretical Framework of the Study

Work for an individual provides order and purpose in life and satisfies needs such as self-satisfaction and respect for a person. In addition, work provides financial advantage ensuring a decent quality lifestyle. However, work and workplace may be a major source of psychological stress that may outweigh the potential of an individual, making it a devastating source on a person's physical and psychological health and affecting one's social life.

Although psychological stress in life is inevitable, it is not always bad. On the contrary, moderate psychological stress levels in life may help increase interest in work and give an incentive and energy to accomplish duties and tasks required; it is confirmed by "Selye" study that psychological stress, if perceived as a form of challenge, leads to positive results such as motivation and excitement [1]. However, if these stressors exceed individual's potential, with no chance to confront them, and identify them and their causes, they may become a threat to the individual [2].

In some cases, psychological work-stress is not caused directly by work, the situation arising in itself does not cause psychological stress, but the way an individual reacts to the situation, beliefs and self-talk makes it a stressful one. Occasionally, some individuals may overreact to any event with negative thinking towards a situation; this can lead to severe tension, dissatisfaction and low self-confidence. Thus, may control the mind and affect the ability of an individual to pay attention and focus during work to accomplish the tasks required and make good decisions [3].

The reaction of individuals varies from person to person, depending on their attitude; what is stressful and exhausting to one person may not be successful and exhausting to others. In fact, it depends on the individual and their experience in responding to specific stressors, as well as on timing element for its importance in determining the severity of psychological stress. Moreover, some stressful events can take place in a short time, and the individual may deal with the situation appropriately without negative impact; or consider it minor and have little effect

without any significant damage. However, these low-intensity events often add up to the overall burden of stress [1].

In addition, researchers' level of interest in psychological stressors associated with work has increased in recent years; this concern is a result of changing conditions in the nature of work environment, as well as the drastic change in economic globalization, the use of information and modern communication technology and increased diversity of the workplace, thus increasing psychological burden on workers [4,5]. Consequently, there has been an increase of reports of mental health problems in the workforce. The European Working Conditions Survey [6] found that work stressors are the second most common problem at work, which affects overall health [6]. The first problem is back pain and has a direct correlation with long-term health problems, such as cardiovascular disease and musculoskeletal disorders [7]. Work stressors have become a major concern in recent years because of their potential impact on employee's health, productivity and performance. The negative consequences associated with work stressors may include physical disturbances, reduced productivity, and increased absence, which in turn overwhelms employers financially. Work-related stress comes in multiple forms and affects individuals in different ways [1].

Aircrew profession is one of the professional fields that attracted researchers' attention in recent years, Azharuddin (2009); because of recent changes especially in terms of safety and quality of service, flying has become a significant and essential means of transportation to many people. However, most people do not realize that aircrew members have a demanding job and distinct requirements, and aircrew members work hard and long hours to deliver high-quality service for passengers. In fact, the general idea society gives is that working in the field of aircrew is a fun career and in aircrew members are living their dream by traveling around the world; but for employees, this is their profession, a way of life, therefore, workers may face a lot of psychological stress they cannot escape [8]. NASA has declared that air transport is increasing and that flights are ongoing around the clock locally and globally. Therefore, the pressure faced by airline pilots is challenging, causing increased recognition of their professional and psychological stressors and the obvious impact this has on air transport safety [9]. The National Transportation Safety Board also stated that fatigue and exhaustion cause accidents in every form of transport. According to the National Transportation Safety Board, approximately 60% -70% of the cause of aircraft accidents is the result of human error, National Transportation Safety Board (2006).

The nature of aircrew as a profession is different from any other professions because of its nature and environment; for aircrew employees have to work in the sky more than on earth, even though human nature is terrestrial more than celestial; it may cause loss or weakness in adjusting with normal surroundings. They are also constantly travelling to countries with different time zones and multiple climatic conditions and dealing with people from different cultures around the globe, plus the continuous change in flights schedules. In addition to all these challenges, it is obligatory for aircrew to be organized, graceful, and smiling regardless of their psychological state [10].

Psychological issues related to stress in aircrew members are a major concern. A well-known study confirmed that as a result of the periodic medical evaluation (every six months) that aircrew members must undergo; they find it difficult to reach psychotherapists due to their hard work schedule or lack of time, or sometimes they are reluctant to receive psychological help for fear of believing that it will affect their assessment [11].

The sources of psychological stress experienced by aircrew may be the same sources in any other profession. Stressors can be either people, objects, or external/internal to an individual. Often, if these stressors persist for a long time, they may lead to occupational burnout resulting in exhaustion and fatigue. They can make an individual less content and unproductive at work, thus threatening their physical and psychological health and can affect their social life [11]. The literature and scientific studies mentioned above emphasize the need to consider psychological issues in the workplace and the importance of increasing awareness about them in order to maintain the health of employees, which reflects positively on work itself.

Sources of Stress

Generally, sources of stress might be internal sources that stem from individuals themselves; or exterior factors presented in daily lives like work nature and circumstances; and it may also develop from human interactions. Stressors, whether internally or externally developed, are responses to environmental changes [12] In order to identify the sources of stress in the working environment more precisely, Rice's classification of sources of psychological stress is adopted for preparing and designing for the purpose of this study, because of its comprehensiveness and categorization of stress in the work environment.

Stress Coping Skills

Stress at all levels is a source of threat to any individual. An individual facing these stressors on daily basis can results in negative effects. The inability to cope and adapt with these stressors may impair performance and makes a person incapable of performing daily tasks; thus, reducing motivation to work resulting in exhaustion and tiredness. This state pushes a person to develop a method to help better understand and deal with stressful situations, thus can solve problems through a personal psychological coping mechanism that suits one's personality. These methods can lower stress levels through Stress Coping Skills. Psychiatrists defined dealing with stress as Coping because individuals respond to stressful situations in a way to help them avoid, escape, or lower the intensity of a situation and reach an equilibrium that balances out the stress [13].

Stress Coping Skills are defined as way or means used by individuals dealing with stress. Spielberg defined them as a skill

with the purpose to lower or eliminate the stimulus one identifies as threatening. As for Cohen and Lazarus, they identified them as any effort exerted by a person to control stress [14]. There are a variety of skills and methods to cope with physiological, emotional, and cognitive responses caused by stressors. Keep in mind that these responses interact with each other; that is, when a person deals with the cognitive responses one will recover from some of the physiological reactions, and vice versa. Similarly, when a person deals with emotional responses, it might help reach a more balanced and clearer thinking, which in turn lowers the stress's intensity [15,16].

The researcher designed a *Stress Coping Skill* scale to evaluate the skills developed by aircrew when dealing with daily and work stressors. It includes a set of skills and methods used with physiological, emotional, and cognitive reactions to stressors. Some of these skills are [17].

i. Built-in Coping Mechanism

ii. Coping with Physiological Reactions to Stress

iii. Coping with Emotional Reactions to Stress

iv. Coping with Cognitive Reactions to Stress

Stress can trigger some emotional reactions as well as cognitive ones. Most cognitive skills offer a long-term solution to lower the intensity of stress. Some of these skills are learning techniques (or awareness) that can give an individual different perception and better understanding and evaluation of a situation and its causes, self-talk, problem solving skills, positive thinking, and time management.

Study Problem

Stress has become part of every individual's life, and part of society due to the large amount of increasing challenges and demands required of every person. In fact, stress is part of every social and professional society, making it harder to avoid. The effect of stress not only affects personal life, it also effects work environment; negative effects can be reflected on an individual's physiology, psychology, social, and professional life, it also affects relationships with people inside and outside work; and their ability to adapt with changing working conditions; especially if these conditions persist. In addition, some careers are more stressful and demanding than others due to their nature, like the aircrew profession, because of its unique requirements making it a health hazardous profession. Employees in an airline company faced by a large amount of stressors can affect their physical and mental health, as well as their social life and personal relationships. Moreover, it seems that people working in airlines often suffer from psychological issues (which are the core of general health), it should be taken seriously into account. Therefore, this study aims to shed light on stressors faced by airline employees working at Royal Jordanian Airlines; this can be summarized by determining sources and amount of stress of aircrew employees and learning more about their stress coping

strategies. Since this is the first study of its kind in the country, it contributes greatly to the field of professional stress researches in Jordan, focusing on mental health issues in in aircrew field.

Study Questions

This study aims to answer the following questions:

i. What are the sources of psychological stress, and to what extent does airlines crew suffer from working in the aviation field?

ii. What are the most used tools by airlines crew to cope with psychological stress?

iii. Are stress coping strategies used by aircrew correlated to crew type, professional experience, and social status at ($\alpha \geq 0.05$)?

Study Importance

Work related stressors are a subject of recent concerns and put into consideration by major institutions as important; because of their effect of professional, psychological and social stress on employees' performance and wellbeing. This resulted in having to increase financial compensation, becoming exhausting to these institutions [18].

The significance of this new study is that it will shed a light on psychological stress associated with the work of aircrews in Jordanian Airlines. It also stems from the importance of aircrew as a career. Individuals in aircrew face unique changes and challenges that only exist in their type of profession. The current examination of psychological stress encountered by the aircrew consisting of pilots and copilots (cockpit crew), flight attendants (cabin crew). The researcher will focus on psychological stress caused at work in terms of source, intensity, and coping strategies and skills. After looking into previous studies and researches concerning psychological and social factors affecting airline crews, the researcher found that there are not many studies carried out on the aircrew locally or internationally, and there is a need for such a study because of its significance.

Since the topic of this study is new and addresses the issue of the aircrew personnel, suggestions and recommendations should be taken into consideration. They can also include concerns and issues within their training program to help employees identify stressors during work and personal life; and how to tackle them, thus creating an early intervention system.

Study Limitations

This current study is limited by the nature of the chosen sample working in the aviation profession presented by the airline crew, cockpit crew (pilot and copilot), and cabin crew (airhosts) working in the Royal Jordanian Airline/Jordan. Additionally, the study seems limited by the tools used and specifically designed for this study for its verification and validation in measuring stress intensity on aircrew member, and how it affects

their mental and physical health and their social life; as well as measuring their stress coping strategies and skills.

Method and Procedure

It includes a presentation of the community, the sample of the study and methodology of the study tools and variables, and statistical data. Here are more details:

Study Sample

The sample includes everyone working in the Department of Air Operations consisting of 346 pilots distributed in the following ranks: pilot, copilot, senior pilot assistant, and trainee pilot (341 males, 5 females) (332 Jordanians, 14 non-Jordanian). Also, cabin crew employees (flight attendants) that includes 653 members, 252 males and 401 females, 431 Jordanian nationality and 222 non-Jordanian. All of the sample are working at Royal Jordanian Airlines (Department of Human Resources/Royal Jordanian, 2010). (Table 1) below illustrates sample distribution according to gender and position:

Table 1: Sample Distribution.

Crew Type	Gender		
	Male	**Female**	**Total**
Cockpit Crew	341	5	346
Cabin Crew	252	401	653

All samples targeted and accordingly, the study's survey was distributed to aircrew members as a whole; the *Department of Air Operations* were sent the survey through the company's internal mailing system; the *Crew Center* located at Queen Alia Airport and represents the assembly point for all aircrews (departures/arrivals) were handed out the survey by the researcher. Also, an email was sent by Mangers of *Departments of Air Operations* and *Air Services* to all the aircrews through company's email to encourage and ensure they answer survey and participate in the study (attachment one). Because the study sample are busy and do not have enough time to answer with their big workload, only 265 surveys were handed back of which 12 were excluded for incomplete answers. Thus, the sample consisted of 253 pilots and flight attendants, 73 of which were pilots and copilots, 66 males and 7 females; 153 flight attendants of which 53 were males and 100 females. Taking into consideration that initial survey sample was excluded from the study group, which consisted of 17 pilots and flight attendants (7 pilots and 11 flight attendants). Therefore, the percentage of the sample in comparison to whole study population is 25.4%; and statistically, this percentage is acceptable and sufficient to present the whole study community.

Study Approach

Since the aim of this study is to identify the cause of stress for people working as aircrew members, descriptive research methodology was used, as it offers a better understanding of the problem addressed in this study to the researcher. It also collects large amount of data concerning actual work stress and employees' perspective in order to describe, analyze, and interpret them; to better understand the relationship between different variables and conclude relevant observations that serve the aircrew industry.

Study Tools

After reviewing the theoretical literature and previous studies for this topic, and the psychometrics used in studies on work stress, their effect, general coping strategies, and work stress for aircrew members in particular; the researcher found that these studies used previously designed tests. Some studies designed tests based on study needs. After reviewing the psychometrics stress tests associated with work and general stress, revision of previously designed tests and review of chapter 6 regarding measuring work stress, Fields (2002). His book contains a large amount of measurements that assesses work stress specifically and general stress and their sources, appearances, and coping methods. Based on that, the following tests were prepared: *Sources of Stress Questionnaire*, and *Coping Skills Questionnaire.*

To design these measurements, results of the initial interviews conducted by the researcher with study sample is used as a preliminary study to identify sources of stress, their effects and coping strategies from their point of view. Also, use of psychometric measures prepared for this topic in literature and previous studies. After conducting preliminary interviews with aircrew sample, the content was analyzed, and situations related to the research subject were identified, these situations are transformed into questionnaires.

Validity & Reliability of the Study Tools

After completing the design of the study tools, they are presented in a preliminary form to a group of arbitrators of professors in the educational and psychological sciences. They will also be presented to those with experience in aircrew field and whose observations are taken into account to make the proposed amendments in the context to fit the relationship between relevant paragraphs in question.

It was confirmed that the study tools were constant by presenting them initially and distributing them to an experimental sample limited to (30) subjects. Later, tools were modified according to views of the survey sample. After adjustment, the stability of the scales was confirmed by using Cronbach's alpha formula for each scale; to verify the degree of consistency of each paragraph in the questionnaire, consequently the degree of stability of the instrument as a whole. Data were collected, organized and analyzed using appropriate statistics and utilizing SPSS package to produce and interpret results of the study.

Results

This study aims to identify the degree aircrew suffer from work stress at their job; identifying the sources of stress, the impact on health, coping strategies in dealing with work stress,

and the relationship between the results and the type of aircrew position (pilot vs. flight attendant), their practical experience and their social status. Questions are answered based on the results of the statistical analysis and the different variables examined according to the results of the study members. Based on the gradient and the scale of the mathematical means, data was distributed according to the degree of importance of direction, in order to give a clearer and richer picture of the direction that study sample is taking towards the field in which it is measured. The following are the study questions and the results:

Question One

What are the sources of psychological stress, and to what extent does airlines crew suffer from working in the aviation sector? To answer this question, the averages and standard deviations of the total score obtained by the sample is extracted to measure the dimensions of stress sources. The average general levels of work stress are also extracted on the scale, as Table 2 shows these results.

Table 2 show that the overall degree of work stress among the study subjects indicates that there is medium work stress, with an average of 176.61 and a standard deviation of 34.61. To determine the level of how the study subjects, feel towards work stress, the general average of the total score was obtained (2.65) from (1-5) and by standard deviation (0.56). Determined the number of the study sample and their percentage (from the group to which they belong) and the level of their work stress according to the type of job and gender, Table 3 shows these results.

Table 2: The averages and the standard deviations of work stress level. Aircrews on the scale of stress sources.

Dimension	Total Score	Average Score	Standard Deviation	General Average	Standard Deviation	Level of Wor Stress
Work conflicting with social life	30	20.61	4.72	3.4	0.787	High
Administrative Organization	30	18.56	4.99	2.91	0.796	Average
Professional Development	40	20.64	5.34	2.7	0.784	Average
Working Conditions	140	61.09	15.23	2.61	0.623	Average
Role Conflict	40	23.27	6.09	2.60	0.677	Average
Personal Relationships	50	20.87	5.67	2.24	0.578	Low
Total Score	330	176.46	37.61	2.65	0.560	Average

Table 3: The frequency and percentages of the study sample from their levels of work stress depending on crew type and gender.

Crew	Social Status	Low		Average		High	
		Number of Individuals	Percentage	Number of Individuals	Percentage	Number of Individuals	Percentage
Cabin Crew	Males	13	%17.80	47	%64.38	7	%9.58
	Females	1	%1.36	5	%5.47	1	%1.36
Flight Attendants	Males	6	%3.92	42	%27.45	5	%3.26
	Females	12	%7.84	75	%49.01	13	%8.49
Total Score	Males	19	%8.40	89	%39.38	12	%5.30
	Females	13	%5.75	79	%34.95	14	%6.19
Total Score	Sample	32	%14.15	168	%74.33	26	%11.50

Table 3 shows the frequency and percentages of the study sample distributed at the levels of work stress according to staff type and gender. Based the standard deviation, study subjects are classified at various degrees of work stress (weak, medium, high). It was found that 74.3% of study subjects had moderate levels of work stress (22.6% pilots and 51.7% flight attendants), and (11.5%) suffer from high levels of work stress (3.54% pilots, 7.96% flight attendants), and 14.15% suffer from low levels of work stress (6.19% pilots, 7.96% flight attendants). Table 3 shows that the highest rate of moderate work stress was among male pilots (64.38%) compared to the aircrew, followed by fe-

male airhostesses (49.01%). The percentage of individuals who are considering leaving work due to psychological stress related to work is 51.3% of the sample (30 pilots and 86 flight attendants) considered quitting, which may indicate that half of the sample of the study suffers from work stress at a certain level that makes them think about leaving work.

Question Two

What are the most used tools by aircrew members to cope with psychological stress?

In order to answer this question, the averages and standard deviations of the total score obtained by the study subjects are extracted from the scale of stress coping strategies. Frequencies and percentages were also calculated to show the most common coping skills used among aircrew members. Table 4 shows these results.

Table 4 shows that there are slight differences between the values of the averages on the performance of the study subjects and the dimensions of work stress coping strategies. To find out if these differences are statistically significant, average of the general study population's skill preference has been derived for each skill depending on type of staff and gender. Table 5 shows the results.

Table 4: The averages and standard deviations of aircrew performance on the scale of stress coping strategies

Crew		Defensive Skills	Physical Skills	Avoidance Skills	Cognitive Skills	Total Score for Coping Skills
Cabin Crew	Average	10.74	9.37	10.53	35.83	66.47
	Standard Deviation	2.84	2.41	3.48	5.52	7.50
Flight Attendants	Average	10.68	9.6	11.05	35.94	67.29
	Standard Deviation	2.59	2.16	3.57	6.42	7.21
Total Score	Average	10.7	9.53	10.88	35.90	67.02
	Standard Deviation	2.67	2.24	3.54	6.13	7.30

Table 5: The general average trend and repetitions for use of coping skills by study subject regarding work stress depending on type of staff and gender

Crew		General trend	Automatic methods	Physical skills	Avoidance skills	Cognitive skills
Cabin crew	Males	Low	30	15	51	21
	Females		3	3	4	1
	Males	Average	26	29	14	23
	Females		3	2	2	4
	Males	High	10	22	5	22
	Females		1	2	1	2
Flight attendants	Males	Low	21	9	37	7
	Females		53	13	72	13
	Males	Average	25	27	10	30
	Females		39	52	20	48
	Males	High	7	17	6	16
	Females		8	35	8	39

Table 5 shows that the most common skills used by survey members to cope with work stress are physical skills such as physical relaxation, sleep, exercise; cognitive skills such as problem solving, time management; and automatic defense techniques such as crying or laughter. Cabin crew had the highest scores for these skills. The number of individuals using average physical coping skills was (79) flight attendants making a percentage of (51.6%); while flight attendants using high physical coping, skills were (52) making a percentage of (33.9%) amongst all aircrew. As for cognitive coping skills, (78) flight attendants were using the skill in an average manner adding to a percentage of (51.9%), while the number of flight attendants using it in a higher form was (55) making a percentage of (33.9%) of the whole aircrew. Females generally had higher results than males within each crew type. As for automatic defensive skills, there were (64) flight attendants using it in an average way resulting in a percentage of (41%), females also had higher results. The cabin crew scored higher for not using avoidance skills such as smoking, alcohol drinking, and drugs, total of (55) pilots, 75.3% of entire aircrew members. The results also indicated that (109) flight attendants do not use avoidance skills either, percentage of 71.2% of total aircrew.

Question Three

Are stress coping strategies used by aircrew correlated to aircrew type, professional experience, and social status at (α ≥ 0.05)? To test the significance of the differences between the averages of type of staff, gender, practical experience and degree of skills to deal with work stress, the averages and standard deviations were extracted. Table 6 shows that there are apparent differences in values of c averages. To find out if these differences were statistically significant, a triangular variation analysis was performed. Tables 6 & 7 show these results. Table 6 shows that there is an effect on the type of aircrew and the impact of gender interaction with experience on the levels of defensive skills at the level of statistical significance (α ≥ 0.05) on the effect of work stress on the study sample.

Table 6: Analysis of triangular variance to examine the impact of crew type, gender and practical experience on the degree of defensive methods.

Source of Variation	Total Squares	Degrees of Freedom	Squares Average	f value	Significance Level
Social Status	14.738	1	14.738	2.154	0.144
Crew Type	42.614	1	42.614	6.228	*0.013
Practical Experience	4.878	2	2.439	0.356	0.701
Social Status X Crew Type	23.643	1	23.643	3.4555	0.064
Social Status X Experience	39.554	2	19.77	2.890	*0.017
Social Experience X Crew Type X Experience	15.084	2	7.542	1.102	0.334
Error	1464.332	214	6.843		
Total	1607.137	225			

Table 7: Analysis of triangular variance to examine the impact of aircrew type, gender and practical experience on the overall score on the scale of coping skills.

Source of Variation	Total Squares	Degrees of Freedom	Squares Average	f Value	Significance Level
Social Status	27.676	1	27.676	0.515	0.474
Crew Type	48.163	1	48.163	0.897	0.345
Practical Experience	4.31	2	2.175	0.041	0.960
Social Status X Crew Type	52.207	1	0.972	0.325	0.487
Social Status X Experience	201.833	2	100.916	1.879	0.155
Social Experience X Crew Type X Experience	22.876	2	11.438	0.213	0.808
Error	11493.614	214	53.708		
Total	11996.889	225			

Discussion

The present study is an initial assessment of the level of psychological stress associated with work and its source among *Jordanian Airlines* aircrew personnel. It aims to identify the level of psychological pressure through the degree of prevalence of sources of these pressures in the work environment. The study also sought to identify the methods aircrew deal with psychological stress, interpreting these results in light of the study variables.

The following measures were used to achieve these goals: Sources of stress and coping with psychological stress. The subsequent is a discussion of the questions of the study based on the results achieved and in relation to the first question, which seeks to determine the most common source of work stress among aircrew and levels of these stressors. The results show that the most stressful source of pressure is conflict with family and their social life. The nature of work in aircrew requires constant travel and being absent from home and society. Therefore, they do not have enough time to interact with family and friends, or fulfill their obligations appropriately towards them, due to lack of time for personal life; this confirms that family and social issues occupy the first place in terms of sources of work stress for aircrews.

In conclusion, continuous absence and lack of communication with family and other community members may result in lack of support from parents, partners, friends and the community, which relieves the effects of social stress on them. This is consistent with studies that indicated that a career in aircrew causes stress [19,20]. The second source of work stress for aircrew members is related to company's management systems and policies adopted by the airline; these may cause employees psychological stress either because of lack of flexibility or because of high expectations in productivity and service quality; where these things take front focus at the expense of aircrew mental and physical wellbeing. Widyahening [21] agrees with a study that suggests that regulatory policies are one of the sources of work stress among aircrew personnel, and that [22] is the cause of poor mental health. As well as the study conducted by Gallup [23], which indicates that lack of appreciation from administration towards employees, with no consideration of staff's personal problems increases their psychological stress.

Moreover, as per the findings of this study, the final source of psychological stress as aircrew, emphasizes the issues of professional development causing psychological stress; air crew members are always concerned about their lack of job security, since they are led to believe that they are easily replaceable. The

previous findings are consistent with the Kelleher & McGilloway (2005) study, which indicates that aircrew members feel insecure about their job. In response to the second question related to the identification of psychological stress sources associated with aircrew work stress, it found that the level of psychological stress associated with pressures of working in aircrew occupation came at an average level to low. The results indicated that 74.3% of the aircrew felt that their work constitutes a source of psychological stress at an average level. 13.71% felt that their work constituted psychological stress at a low level. 11.5% of aircrew feel that their work poses psychological stress at a high level. 88% of the study sample suffers from psychological stress because of working as aircrew at levels ranging between medium and high. This result may be consistent with the study (MacDonald, et al., 2003), which indicated that hostesses suffer from psychological stress at a medium degree as a result of their job nature.

As per previous results, working conditions affect the health of aircrew. However, the pressure of the nature of their job role is more important factor for aircrew staff (hosts and hostesses) and this source is more stressful than other sources, thus affecting their general health. The differences mentioned may lead some cabin crew to feel that their role is not important, which may increase their work-related stress and affect their health more than pilots. The results are consistent with Wahlstedt et al. [20] and Morley-Kirik & Griffiths [24]. As for the third question, which aims to identify coping methods used to deal with psychological stress faced by aircrew personnel, results show that the level of individual's method of study sample in dealing with stress was a weak level. The study also shows that the most common coping methods used by aircrew members came in the following order: cognitive methods, physical methods, and self-techniques.

The cognitive methods and time management (problem solving, time management, positive thinking) ranked first among all measured methods, although they came at a weak level. The study also found that cabin crew members use it more than pilots when facing stress. Additionally, physical methods (aerobics, sleep, relaxation) were more common among pilots compared to cabin crew. The most used method by pilots was sleep as means of physical comfort and relaxation since it makes them feel much better afterwards. Consequently, self-techniques (laughter, crying, sense of humor and talking about the problem) were used almost equally between both crews (cabin and cockpit). These methods may help the individual cope with psychological stress. The results also indicate that female pilots in particular use this method the most.

Avoidance methods (smoking, escaping problems, drinking alcohol, and drug abuse) seem to be the least used by aircrew. This helps them face their problems realistically and effective methods. This finding contradicts the result of a study [25]

which indicated that pilots use alcohol and drugs as methods of coping with stress. This result may be logical because of the cultural and religious factors of aircrew who eliminate alcohol consumption. As for the results of the third question, to determine whether there was a significant impact of the type of aircrew job description, experience and gender on the degree their stress coping strategies. The results did not show any significant statistical value indicating stress level with coping skills. This can be explained by the fact that all study subjects have these skills in varying degrees regardless of their job type, gender or experience.

The results and analysis indicate that there is an effect of the scientific experience on the distance of physical skills in the degree of suffering of study members due to work stress. Those with less than 10 years of practical experience have more physical skills than those with greater experience in dealing with work stress. This can be explained by the fact that those with less than 10 years of experience are young (twenties and thirties) and are more likely to be involved in sport sports than those with greater experience who may are likely older than 40 years of age. People with more than 10 years of experience have greater responsibilities at work and home and do not have time to exercise, instead they rely on cognitive skills more younger colleagues considering their maturity level and long experience [26,27].

Recommendations

The study examines the level of work stress among aircrew personnel; and the impact of stressors on aircrew study samples' physical and mental health, and impact on social life. As a result of this study, it is highly recommended that researchers pay close attention to this subject and study new variables and add other details that will enhance research literature in this field.

This study suggests the following:

To conduct more surveys, which may include largest possible number of personnel working in the Jordanian Airline aircrew in different countries and regions to enhance the study. On the other hand, compare results of the current study with similar studies conducted in the Arab region. The Aviation Administration has adopted a set of appropriate positive measures to remove or at least mitigate some sources, such as holding social activities involving families of aircrew personnel or introducing sport teams for aircrew. It is good to keep in mind that a good number of Jordanian basketball players work among aircrew.

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