

**The Role of Sleep in Boosting Resilience and Work Engagement in the
Irish Workplace**

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Abstract

Sleep and recovery periods are crucial to employee wellbeing and job performance. Despite the vast literature on sleep, few studies focus on the impact of poor sleep on employees in Ireland. The aim of this study is to further explore the relationship of both quantity and quality of sleep on perceived stress, resilience and work engagement. A total of 62 participants consented to take part in an online sleep survey. Findings from this mixed correlational and experimental design showed a significant difference in stress and resilience between sleep quantity groups and a significant correlation between stress, resilience and sleep quality, with no significance for work engagement. Moreover, there was a significant relationship between bedtime and engagement with work. Findings from this investigation have potential implications for individual and organisational wellbeing, more specifically for the development of work-based intervention programmes aimed at promoting sleep.

1. Introduction

Positive workplace wellbeing is a contemporary topic with growing emphasis being placed on integrating the appropriate interventions into the workplace. At present, there is an increasing recognition for the important influence that sleep has on the health and wellbeing of employees, with sleep having a substantial practical value to organisations (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011). However, research into the impact of sleep on employee wellbeing is lacking. Until recently, sleep was seen as a side effect of having a mental health condition. Only now is sleep getting recognised as a potential cause of mental health issues, suggesting a bidirectional relationship overall (Freeman et al., 2017; Scott, Webb, & Rowse, 2017). A recent meta-analysis showed that little consensus exists about the relationship between sleep and mental health correlates in the workplace (Litwiller, Snyder, Taylor, & Steele, 2017). Hence, the aim of this research is to examine the relationship of sleep quantity and quality on perceived stress, resilience and work engagement in employees.

1.1 Overview of Sleep

Sleep is most frequently described as a ‘state of immobility that consists of greatly diminished physical responsiveness that allows for reorganisation of neural activity’ (Litwiller et al., 2017, p. 682). In other words, sleep is an essential, involuntary and active process, without which we cannot function effectively (Robotham, Chakkalackal, & Cyhlarova, 2011). Furthermore, it represents one of the pillars necessary for maintaining good psychological and physical health. Consistent findings show that sleep is a recovery activity with the main functions being repair of minor damage, memory consolidation, emotional regulation and restoration of health and vigor (Hamilton, Nelson, Stevens, & Kitzman, 2007, p. 149). Focusing on psychological health, this is predicted by the distinct constructs of quantity and quality of sleep, with each construct having an independent impact

on mental wellbeing . Previous research has demonstrated that the correlation between quantity and quality of sleep tends to be small or nonsignificant (Barnes, Lucianetti, Devasheesh, & Christian, 2015).

1.2 Sleep Quantity and Quality

Individuals spend on average one-third of their life asleep (Robotham et al., 2011, p. 6).

Sleep quantity refers to the amount of time an individual spends in a sleeping state (Litwiller et al., 2017, p. 683). According to the National Sleep Foundation, adults between the ages of 18-64 should be getting seven to nine hours of sleep daily in order to maintain good health (National Sleep Foundation, n.d.). Those who sleep more or less than the recommended seven to nine hours per night are likely to have increased risks for morbidity and mortality, indicating a U-shaped relationship between sleep duration and wellbeing (Hamilton et al., 2007). Whilst it is clear that sleep quantity is crucial for overall wellbeing, evidence from organisational psychology shows that few employees get at least seven hours of sleep on a regular basis, with a majority of employees sleeping substantially less on work nights (Litwiller et al., 2017). This highlights a need to investigate the causal factors linked to reduced sleep duration in employees. In addition, whilst public health promotions emphasise the importance of sleep to the general public, few promotions are tailored towards the workforce. This study will aim to highlight the additional need to promote the importance of sleep to workers who are struggling to get the required hours per night. With regard to work schedules, those who start work early and work long hours are associated with a shorter sleep duration (Luckhaupt, Tak, & Calvert, 2010). The prevalence of short sleep duration among workers has increased over the past two decades, even though the average number of hours worked per week may have decreased slightly. This may have been attributed, in part, to the expanded possibilities of night-time activities that accompanied the introduction of electric

light and other technologies. In addition, technological advances have had the effect of putting some workers in a constant on call status, increasing the likelihood of stress and sleep disturbance (Shochat, 2012).

On the other hand, research suggests that sleep quality may be a better indicator than sleep quantity of the sleep regulation process. Sleep quality is characterised by difficulty falling asleep and staying asleep, the number of awakenings in the night, and feeling rested upon waking (Litwiller et al., 2017, p. 682). Good sleep quality is a result of spending enough time in all the sleep stages during the 90 minute sleep cycle, including sufficient time spent in the deep sleep stage which helps us feel refreshed upon waking (Robotham et al., 2011). Whilst sleep quality is important, it is impacted in employees. Impeding factors such as excessive work hours, high job demands, social relationships and even gender can have a profound impact on sleep quality (Burgard & Ailshire, 2009; Fatima, Doi, & Mamun, 2016; Nakashima et al., 2011; Virtanen et al., 2009). One study found that those who worked longer hours (greater than 48 hours per week) had significantly worse sleep quality than those who worked regular hours (less than 40 hours per week), and they also showed significantly more symptoms of depression (Afonso, Fonseca, & Pires, 2017).

Overall, it is evident that antecedents such as long work hours and stressful work roles can negatively affect sleep quantity and quality in employees. In addition, much of the research on sleep and associated interventions has been done on those with high risk occupations, such as police or military roles (James, Samuels, & Vincent, 2018; Young-McCaughan, Peterson, & Bingham, 2018). This indicates a niche in the research for more studies to be carried out using a sample of office workers. The current study will address this by investigating whether long working hours will have a significant impact on sleep in office workers in Ireland.

1.3 The Impact of Sleep Loss and Insomnia

Sleep is becoming a major worldwide epidemic. In the general population, one-third of adults report insomnia, insufficient or disrupted sleep (Steptoe, O'Donnell, Marmot, & Wardle, 2008). This suggests that a large proportion of the workforce are suffering from sleep loss, which refers to a shortened sleep duration relative to that needed for optimal functioning (Budnik & Barber, 2015, p. 89). Poor sleep relates not only to the total amount of sleep, but also to the quality of sleep and the amount of time spent awake (Robotham et al., 2011). Long term exposure to inadequate sleep contributes to heart disease, impaired cognition, psychological distress, workplace accidents, motor accidents and poor quality of life (Budnik & Barber, 2015; Smyth, 2012; Steptoe et al., 2008). Focusing on psychological health, sleep loss changes the secretion of hormones, such as cortisol, and impairs overnight processing of recent emotional experiences, resulting in the increased risk for mood and anxiety disorders (Holsboer, 2001; Walker & van der Helm, 2009). In terms of populations at risk, it was determined that sleep loss was more common in people reporting high work, financial and neighbourhood stress coupled with low emotional and social support (Steptoe et al., 2008).

While sleep loss is typically short-lived, excessive sleep disruption can lead to a more serious disorder. Insomnia is characterised by poor sleep quality, inability to get enough sleep and waking for long periods during the night, resulting in excessive daytime fatigue (Robotham et al., 2011, p. 6). This hyperarousal of the mind is deleterious to employees' executive functioning, causing reduced attention span, poor decision making, and memory impairments, resulting in decreased productivity and increased incidents in the workplace and beyond (Alhola & Polo-Kantola, 2007; Fortier-Brochu & Morin, 2014). In the UK, approximately one-third of the population suffers from insomnia, with similar figures expected in Ireland (Robotham et al., 2011).

In Ireland, research on sleep loss is lacking. A recent survey by the Natural Sleep Company (2016) highlighted that 54 percent of respondents out of a sample of 1,800 reported getting the recommended seven to nine hours of sleep per night. Of this group, 66 percent rated their quality of sleep as average or poor, suggesting that sleep quality is severely impacted in the modern world. A racing mind was reported as the leading cause of sleep loss, suggesting that stress plays a pivotal role in sleep patterns. More concerning is that the majority of respondents who presented with insomnia said they regularly experienced low mood, which is three times the figure of that for good sleepers (The Natural Sleep Company, 2016). Furthermore, a concerning aspect shows that the majority of respondents had sleep issues for more than one year. This finding suggests that much of the population may be living unknowingly with a sleep disorder. It is however, important to note the limitations of this survey. It is Ireland's largest sleep survey to date and with only 1,800 respondents out of a population of 4.8 million, it is clear that more research needs to focus on the topic of sleep in Ireland. Furthermore, an imbalanced gender response (79 percent female versus 21 percent male) indicates a poor representative sample in this survey. Moreover, the results reflect that of most self-report research completed on sleep in that the majority of participants who respond to sleep surveys are individuals who experience sleep disturbances themselves. This indicates a form of bias and therefore is not a representative sample for the overall impact of sleep quality and quantity on health and wellbeing. The current study hopes to contribute further and expand on these results. In particular, the current research will look at the relationship between stress and sleep to identify if a reciprocal relationship might be present.

1.4 Relationship between Resilience and Sleep

Positive psychological states promote better sleep. Consistent research findings indicate that positive affect is directly associated with good sleep and may even buffer against the impact of psychosocial risk factors (Steptoe et al., 2008). The vast majority of research already

conducted focuses on sleep issues themselves and on negative psychopathological states, with relatively little looking at the relationship between positive psychological states and sleep. It is known that individuals with high positive affect share characteristics with those of resilient individuals, such as high concentration, patience and calmness (Ong, Bergeman, Bisconti, & Wallace, 2006; Ong & Sholtes, 2010). In a psychological context, resilience means “achieving a positive outcome in the face of adversity” (McEwen & Karatsoreos, 2015, p. 1). Resilience changes overtime as a result of an individual’s experiences and interaction with the environment (Kim-Cohen & Turkewitz, 2012). Resilient individuals tend to be committed to their goals, have secure attachments with others, and view stressors as a challenge (Connor & Davidson, 2003; Ong et al., 2006). As it is most commonly viewed as a measure of the ability to cope with stress, the construct could potentially be useful in the development of future interventions relating to mental health disorders (McCuisition, 2016; McEwen & Karatsoreos, 2015). While studies have found that sleep is a resilience promoter, the question of whether there is a direct relationship between sleep and resilience in the workplace is not entirely clear. McCuisition (2016) highlighted the lack of research in this area and recommended that research would benefit more from studies focusing on the variables of resilience and sleep quality in particular. The present study will address this by examining these variables in workers in Ireland.

1.5 Relationship between Perceived Stress and Sleep

Psychosocial stress is an unavoidable part of life and plays a major role in mental health. Stress is broadly defined as a situation “in which environmental demands, internal demands, or both exceed the adaptive resources of an individual” (Keller et al., 2012, p. 677). More specifically, perceived work stress refers to the degree to which workers feel strain associated with their jobs (Karasek & Theorell, 1990). Organisational stress, caused by factors such as

lack of job control, work load, job insecurity and job autonomy, lead to psychological and physical strains in employees, impacting their quality of life (Trivellas, Reklitis, & Platis, 2013). The economic impact of work-related stress includes an estimated annual cost of 64.8 - 66.1 billion pounds in the UK alone due to increased absenteeism, reduced productivity, missed wages and health care costs (Nixon et al., 2011). Personal and work related stresses are recognised as key risk factors for sleep deprivation (Charles et al., 2015). In addition, sleep deprived employees interpret the workplace more negatively, fostering unfair workplace judgements, which likely increase work-related stress (L. K. Barber & Budnick, 2015). As this stress contributes to subsequent sleep issues, a reciprocal relationship emerges. Research has shown that higher perceived stress is associated with a reduction in sleep duration and is also linked to poor sleep quality (Charles et al., 2015). This in turn, has a negative effect on workplace productivity (Nixon et al., 2011). Further studies have shown the impact of job factors on stress. For instance, it was found that high job demands and low control lead to work stress and in turn poor sleep quality (Knudsen, Ducharme, & Roman, 2008). Despite the growing recognition of the consequences of stress and sleep problems in the working population, research on the associations between work-related stress and sleep quality have been limited. There are few studies carried out on a sample of workers in Ireland. Other research has recognised that there may be international differences in the significance of job stressors and sleep due to cultural variations. For example, job autonomy was associated with sleep issues in a sample of Belgium workers (Pelfrene et al., 2002). However, no such association was found amongst a sample of Swedish workers (Akerstedt et al., 2002). Due to this generalisation issue, this study finds it necessary to gather cross-sectional data on the relationship of job stressors to sleep in the workforce in Ireland.

1.6 Relationship between Work Engagement and Sleep

In recent years, the concept of work engagement has gained increasing interest as a psychological state (Bakker, Demerouti, & Sanz-Vergel, 2014; Sonnentag, Dormann, & Demerouti, 2010). Work engagement refers to an employee's strong focus of attention, intense absorption, and high energy toward their work related tasks (Rothbard & Patil, 2011, p. 56). Work engagement is a positive experience not only for the employee, but also for the organisation. For example, it can predict important organisational outcomes such as daily financial returns (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Sleep is an important and essential recovery period that ensures employees have energy, attentional focus and motivation to carry out work tasks with ease. It has been identified that both off-the-job recovery periods (i.e. sleep) and on-the-job recovery periods (i.e. short work breaks) are crucial for work engagement (Kuhnel, Zacher, De Bloom, & Bledow, 2016). Two major models have been put forward to describe employee recovery – the effort recovery model and the conservation of resources model (Hobfoll, 1998; Meijman & Mulder, 1998). According to both theoretical perspectives, recovery occurs when employees refrain from engaging in behaviours that drain their energetic and self-regulatory resources (Kuhnel et al., 2016). More specifically, when stressors are removed, recovery can occur and the psychobiological systems can return to pre-stressor level, enabling employees to be engaged with work. Without sufficient sleep, individuals tend to have lower self-regulatory resources and are less engaged with work (Barber, Grawitch, & Munz, 2013). Poor recovery after work, including a lack of leisure time, in turn leads to increased healthcare cost, absenteeism and even presenteeism in a workplace. Summing up the research, it is evident that both good quality sleep and sufficient duration are important for the restoration of energetic resources (Barnes, 2012). Despite the strong theoretical evidence, there is scarce current research on the link between sleep and work engagement in the workforce itself. So far, only one daily diary

study found support for the importance of sleep quality on work engagement (Diestel, Rivkin, & Schmidt, 2015). The current study will build on the findings by examining the effect of sleep duration and subjective sleep quality on work engagement.

1.7 Current Study

In light of the aforementioned studies, this research was designed to extend the existing studies on sleep in relation to employee wellbeing. The aim of this study is to further explore the relationship of quantity and quality of sleep on perceived stress, resilience and work engagement in employees based in Ireland. Furthermore, the research aims to investigate the impact of work hours on sleep quantity and quality. Any significant differences or correlations of sleep quantity and sleep quality respectively on perceived stress, resilience and work engagement will be examined. The findings of the study have potential implications to individual, organisational and societal wellbeing, more specifically the findings may point to sleep prioritisation as a potential target for work-based interventions aimed at promoting sleep. Main hypotheses of this study state that there will be a significant relationship between quality of sleep, perceived stress, resilience and work engagement in employees. In addition, it is hypothesised that there will be a significant difference in perceived stress, resilience and work engagement across three sleep quantity groups. More detailed hypotheses are presented below:

H1: It is hypothesised that there will be a significant difference in perceived stress, resilience and work engagement across the three sleep quantity groups.

H2: It is hypothesised that there will be a significant relationship between quality of sleep, perceived stress, resilience and work engagement.

H3: It is hypothesised that there will be a significant difference in sleep quality across the working hours groups.

H4: It is hypothesised that there will be a significant difference in sleep quantity across working hours groups.

H5: It is hypothesised that there will be a significant relationship between time gone to bed and work engagement.

2. Methods

2.1 Participants

The participants were recruited by means of simple random sampling and convenience sampling of employees in the researcher's own workplace in the private sector in Ireland. Permission was granted from the HR Manager in the organisation to access a sample for the purpose of sleep research. Eligible employees were asked to participate in a voluntary, anonymous, online survey for the purpose of sleep research. Each participant was asked to provide their consent to participate in the study and to confirm that they met the required inclusion criteria. Inclusion criteria included the participants being in employment and over the age of 18 years. A power analysis determined the sample size required to be 100. A total of 85 participants within the organisation consented to take part in this study. Of these, 23 responses were invalid due to incomplete survey responses and were removed from the dataset. A total sample size of 62 was selected for analysis. This sample was made up of 19 males and 43 females. The age of the participants ranged from 35 – 58 years old, with the mean age being 41.08 years ($SD = 7.35$).

2.2 Design

This study used a quantitative, mixed design with both correlational and experimental elements. A correlational design was used to measure the relationship of quality of sleep with perceived stress, resilience and work engagement. An experimental, between groups approach was used to measure any differences on perceived stress, resilience and work engagement across three sleep quantity groups. Hypotheses one, three and four are an investigation of differences between groups. For this experimental design, the independent variables in hypotheses one and three were quantity of sleep (<6 hours, 6-7 hours, >7hours) and hours worked per week (18-29, 30-39, >40 hours) respectively, and the dependent

variables included perceived stress, resilience, work engagement and sleep quality. With regard to hypothesis four, the independent variable was hours worked per week (18-29, 30-39, >40 hours) and the dependent variable was the number of hours of sleep per night.

Hypotheses two and five are a correlational design. In hypothesis two, the predictor variable was quality of sleep, and the criterion variables included perceived stress, resilience and work engagement. In hypothesis five, the predictor variable was bedtime and the criterion variable was work engagement. All hypotheses were tested by means of an online survey using Lime Survey as the tool to design the questionnaire. IT Solutions within the company granted access to the licence for Lime Survey Pro in order for the survey to be completed during working hours

2.3 Materials

2.3.1 Demographics

A demographic section was included at the start of the online questionnaire and included questions on: gender, age, job status, hours worked per week, work start and finish times, job role, and current medication.

2.3.2 The Pittsburgh Sleep Quality Index

The Pittsburgh Sleep Quality Index (PSQI) is a self-report questionnaire used to measure quality and patterns of sleep in adults over a one month interval (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989). A modified version of the PSQI was used which had a total of 19 items (Smyth, 2012). It differentiates “poor” from “good” sleep quality by measuring seven components: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medications, and daytime dysfunction. The participant self-rates each of the seven areas of sleep. In the scoring of

the PSQI, seven component scores are derived, each scored 0 - “no difficulty” to 3 – “severe difficulty”. The component scores are then added to produce an overall score ranging from 0 - 21. An overall score of “0” indicates excellent sleep quality and a score of “21” indicates very poor sleep quality. See Appendix A for the full scoring sheet for the PSQI. The PSQI shows high validity and reliability, with a Cronbach’s alpha of 0.83 for its seven components (Smyth, 2012).

2.3.3 Perceived Stress Scale

The Perceived Stress Scale (PSS-14) is a measure of the degree to which situations in one’s life are appraised as stressful (Cohen, Kamarck, & Mermelstein, 1983). The PSS-14 consists of 14 items which asks participants to indicate how often they have found their lives unpredictable, uncontrollable and overloaded during the last month.

Individuals rate items on a 4-point Likert scale, ranging from 0 – “never” to 4 – “very often”. PSS-14 scores are obtained by reversing the scores on the seven positive items and then summing across all 14 items. Items 4, 5, 6, 7, 9, 10, and 13 are the positively stated items to be reversed scored (Cohen et al., 1983). Overall scores on the PSS range from 0 – 56, with higher scores suggesting greater perceived stress. The PSS-14 shows good validity and reliability, with a Cronbach’s alpha of 0.78 (Cohen et al., 1983).

2.3.4 Brief Resilience Scale

The Brief Resilience Scale (BRS) is a self-report questionnaire to assess the ability to bounce back or recover from stress (Smith et al., 2008). The BRS consists of six items; three negative items (questions 2,4,6) and three positive items (questions 1,3,5).

Participants are asked to answer each question by indicating their agreement with each statement using a 5-point Likert scale ranging from 1 – “strongly disagree” up to 5 –

“strongly agree”. The BRS is scored by adding the responses for all six items giving a total sum in the range of 6 - 30. The total sum is then divided by the total number of questions answered to give an overall score. The possible overall score range is from 1 – “low resilience” to 5 – “high resilience”. The BRS demonstrates good reliability and validity, with Cronbach’s alpha ranging from 0.80 – 0.91 (Smith et al., 2008)

2.3.5 Utrecht Work Engagement Scale

The Utrecht Work Engagement Scale (UWES-17) is a self-report questionnaire that measures work engagement, which is defined as a unique, positive, fulfilling work-related state of mind (Schaufeli & Bakker, 2004). The UWES-17 utilises three subscales to determine the level of work engagement: vigor, dedication and absorption.

Participants answer 17 items that relate to their work engagement. The scale includes seven response options whereby a score of 0 means “never” and a score of 6 means “always”. The overall score is calculated by summing the scores for each item and dividing by the number of questions answered. The overall score ranges from 0 – 6, with higher scores indicating greater engagement with work. The UWES-17 shows high reliability and validity, with Cronbach’s alpha for the scales ranging from 0.80 to 0.90 (Schaufeli & Bakker, 2004).

2.4 Procedure

Permission was granted by the HR Manager of the organisation to gain access to a sample of workers for the purposes of data collection for sleep research. Permission was also granted by the IT Solutions Department to use the company’s licence to Lime Survey Pro so that employees could gain access to the survey internally during the working day. The questions

were approved by Dublin Business School Ethics Committee and the survey was drawn up on Lime Survey Pro software.

In early February, a survey link was distributed via email to three departments within the organisation using internal mailing lists. Permission was sought by each departmental manager prior to circulation of the survey. Participants were informed that the survey was for the purposes of sleep research.. An information sheet was provided on the first page of the online survey which outlined a brief introduction to the study, including the purpose, and that responses would be beneficial for development of wellbeing programmes. Participants were also informed that the survey was anonymous, voluntary and would take 10 minutes to complete. Due to the anonymity of the survey participants were advised that it would not be possible to withdraw after the survey was submitted. Contact details of both the researcher and supervisor were provided for questions about the study. The questionnaire began by requesting the participants consent followed by a list of demographic questions, including questions on age, gender, and work hours. Next, the PSQI was administered, followed by the PSS-14, the BRS, and the UWES-17. Following submission, participants were debriefed with contact details for voluntary support agencies along with details of the company's Employee Assistance Programme. The questionnaire can be viewed in full in Appendix B.

3. Results

3.1 Descriptive Statistics

Data analysis was carried out using IBM SPSS Statistics Version 24. A total of 62 participants were selected to take part in the analysis. Of these, 19 were male (30.6%) and 43 were female (69.4%). The frequency of gender is shown in Table 1. Participant ages ranged from 25 - 58 years old, with the average age being 41.08 years ($SD = 7.35$). Figure 1 shows a histogram of the distribution of age. All participants were in employment with 6 (9.7%) on part-time contracts and 56 (90.3%) on full-time contracts. The average hours worked per week ranged from 18 hours up to 60 hours, with most employees working 40 hours per week ($M = 38.58$, $SD = 6.34$). With regard to sleep patterns, the most common bedtime was 11pm ($M = 11.05$, $SD = 0.72$), with the hours ranging from 9pm up to 1am. The frequency of bedtimes is shown in Figure 2. The most common number of hours slept per night was 6 – 7 hours. Figure 3 shows the distribution of hours of sleep per night.

Table 1 *Frequency Table of Gender of the Participants*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	19	30.6	30.6	30.6
	Female	43	69.4	69.4	100.0
	Total	62	100.0	100.0	

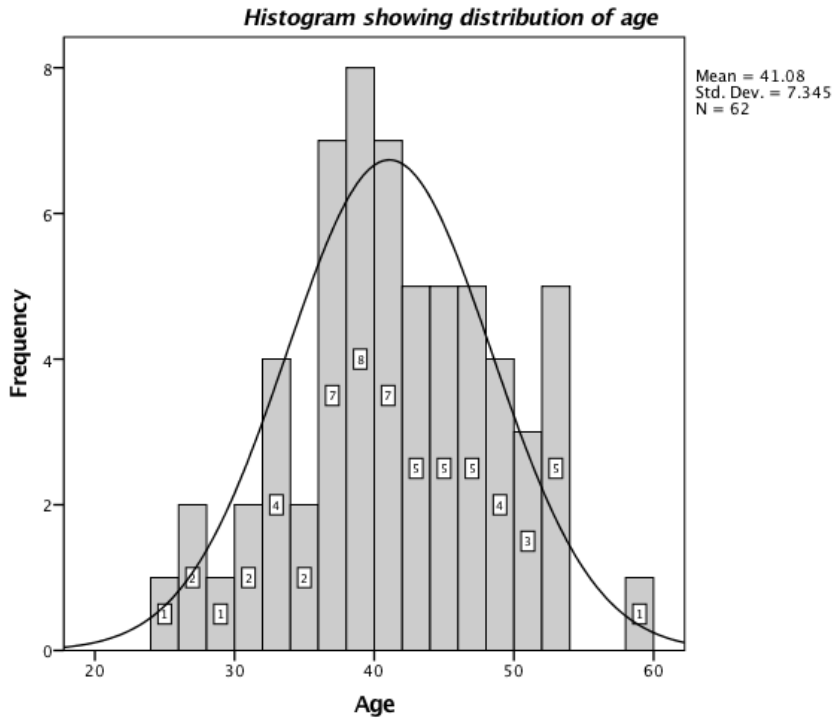


Figure 1 Histogram showing the Distribution of Age

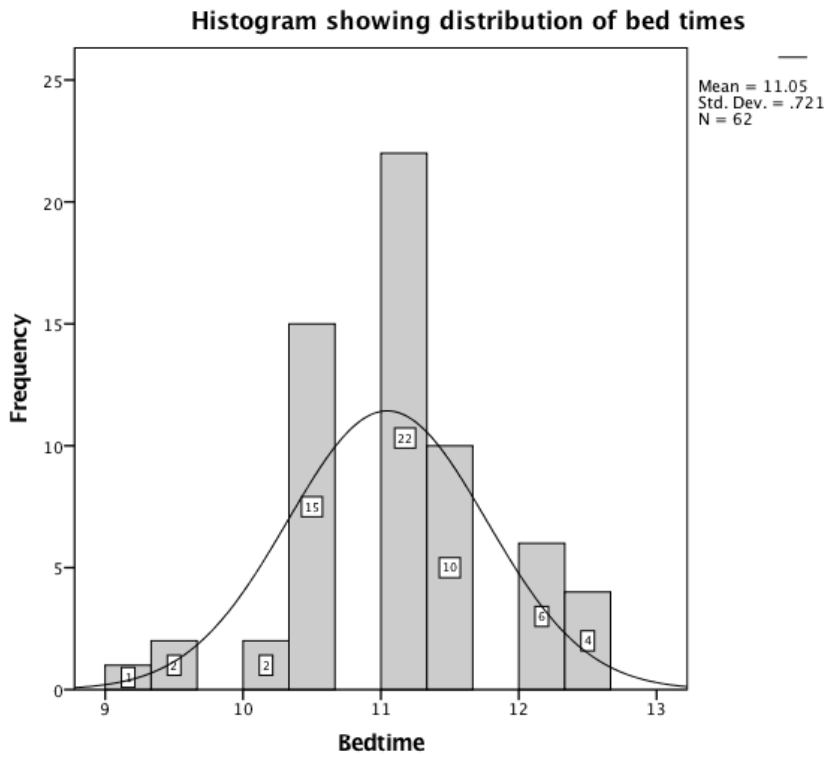


Figure 2 Histogram showing the Distribution of Bed Times

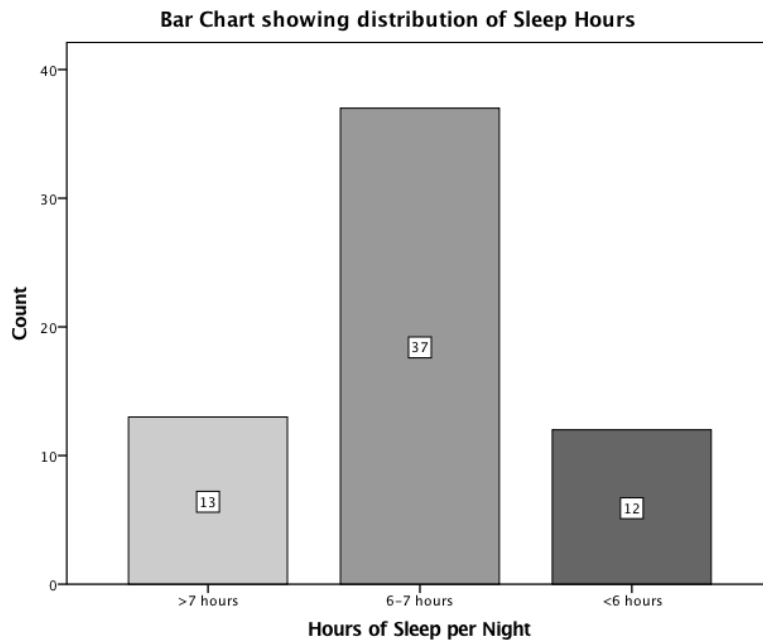


Figure 3 Bar Chart showing the Frequency of Sleep Hours per Night

Mean, standard deviation, minimum/maximum scores, and Cronbach's alpha (α) for each psychological measure are shown in Table 2. The maximum score on the perceived stress scale was 37 so the overall sample score was in the upper half of the scale ($M = 20.73$, $SD = 7.99$). The maximum score on the brief resilience scale was 4.67, so the overall score was in the upper half of the range ($M = 3.24$, $SD = 0.73$). The maximum score on the Utrecht work engagement scale was 5.06, which is high on the range for the scale ($M = 3.28$, $SD = 1.03$). The maximum score on the Pittsburgh sleep quality index was 12.00 and participants scored on average 4.94 ($SD = 2.53$). Furthermore, Cronbach's alpha was above 0.75 for the PSS, BRS and UWES, which is considered strong reliability (PSS $\alpha = 0.87$, BRS $\alpha = 0.79$, UWES $\alpha = 0.94$). Cronbach's alpha for PSQI was below 0.75, thus it is not considered to have strong reliability (PSQI $\alpha = 0.67$).

Table 2 *Descriptive Statistics of the Psychological Measures*

Variable	Mean	Standard Deviation	Minimum	Maximum	Cronbach's alpha
Perceived Stress Scale	20.73	7.99	2.00	37.00	0.87
Brief Resilience Scale	3.24	0.73	1.33	4.67	0.79
Utrecht Work Engagement Scale	3.28	1.03	0.24	5.06	0.94
Pittsburgh Sleep Quality Index	4.94	2.53	1.00	12.00	0.67

3.2 Inferential Statistics

3.2.1 Sleep Quantity and Stress, Resilience and Work Engagement

3.2.1.1 Perceived Stress and Sleep Quantity

A one-way analysis of variance showed that the level of stress differed significantly between the three sleep quantity groups ($F(2, 59) = 4.27, p = 0.019$). The ANOVA table for perceived stress is shown in Table 3. More specifically, Tukey HSD post hoc analyses highlighted that the stress levels were significantly higher for the <6 hours of sleep group in comparison to the 6-7 hours of sleep group (mean difference = 6.14, $p = 0.047$, CI [95%] 0.07, 12.21) and the >7 hours of sleep group (mean difference = 8.47, $p = 0.019$, CI [95%] 1.16, 15.80). Thus highlighting that the <6 hours of sleep group had significantly higher perceived stress levels. The Tukey HSD table for perceived stress is shown in Table 4.

3.2.1.2 Resilience and Sleep Quantity

A one-way analysis of variance showed that the level of resilience differed significantly between the three sleep quantity groups ($F(2, 59) = 3.58, p = 0.034$). The ANOVA table for resilience is shown in Table 3. More specifically, Tukey HSD post hoc analyses highlighted that the resilience levels were significantly higher for the >7 hours of sleep group in comparison to the <6 hours of sleep group (mean difference = 0.75, $p = 0.028$, CI [95%] 0.07, 1.42). Thus highlighting that the >7 hours of sleep group had significantly higher resilience. The Tukey HSD table for resilience is shown in Table 4.

3.2.1.3 Work Engagement and Sleep Quantity

A one-way analysis of variance showed that work engagement did not differ significantly between the three sleep quantity groups ($F(2, 59) = 1.15, p = 0.324$). Therefore the null hypothesis cannot be rejected. The ANOVA table for work engagement is shown in Table 3.

Table 3 ANOVA Table Comparing the Sleep Quantity Groups on Stress, Resilience and Work Engagement

Variables	Groups	Mean	SD	F	df	p
Perceived Stress	<6 hours sleep	26.17	5.73	4.27	61	0.019
	6-7 hours sleep	20.03	8.08			
	>7 hours sleep	17.69	7.62			
Resilience	<6 hours sleep	2.81	0.81	3.58	61	0.034
	6-7 hours sleep	3.27	0.73			
	>7 hours sleep	3.55	0.49			
Work Engagement	<6 hours sleep	3.32	1.02	1.15	61	0.324
	6-7 hours sleep	3.40	0.88			
	>7 hours sleep	2.90	1.37			

Table 4 *Tukey HSD Table showing significant differences between Sleep Quantity Groups on Perceived Stress and Resilience*

Variables	Groups	Groups	Mean Difference	p	95% Confidence Interval	
					Lower Bound	Upper Bound
Perceived Stress	>7 hours	<6 hours sleep	-8.47*	0.019	-8.23	3.56
		6-7 hours sleep	-2.33	0.609	-15.80	-1.16
	6 – 7 hours	<6 hours sleep	-6.14*	0.047	-12.21	-0.68
		>7 hours sleep	2.33	0.609	-3.56	8.23
	<6 hours	6-7 hours sleep	6.14*	0.047	0.07	12.21
	>7 hours sleep	8.47*	0.019	1.16	15.80	
Resilience	>7 hours	<6 hours sleep	0.75*	0.028	0.07	1.42
		6-7 hours sleep	0.29	0.424	-0.26	0.83
	6 – 7 hours	<6 hours sleep	0.46	0.129	-0.10	1.02
		>7 hours sleep	-0.29	0.424	-0.83	0.26
	<6 hours	6-7 hours sleep	-0.46	0.129	-1.02	0.10
	>7 hours sleep	-0.75*	0.028	-1.42	-0.07	

*. The mean difference is significant at the 0.05 level (two-tailed)

3.2.2 Sleep Quality and Stress, Resilience and Work Engagement

3.2.2.1 Perceived Stress and Sleep Quality

A Pearson correlation coefficient found that there was a strong positive significant relationship between stress ($M = 20.73$, $SD = 7.99$) and sleep quality ($M = 4.94$, $SD = 2.53$) ($r(60) = 0.51$, $p < 0.001$). Therefore the null hypothesis is rejected. This relationship can account for 26.01 % of variation of scores. Table 5 shows the Pearson correlations for perceived stress and sleep quality.

3.2.2.2 Resilience and Sleep Quality

A Pearson correlation coefficient found that there was a moderate negative significant relationship between resilience ($M = 3.24$, $SD = 0.73$) and sleep quality ($M = 4.94$, $SD = 2.53$) ($r(60) = -0.46$, $p < 0.001$). Therefore the null hypothesis is rejected. This relationship can account for 21.16 % of variation of scores. Table 5 shows the Pearson correlations for resilience and sleep quality.

3.2.2.3 Work Engagement and Sleep Quality

A Pearson correlation coefficient found that there was no significant relationship between work engagement ($M = 3.28$, $SD = 1.03$) and sleep quality ($M = 4.94$, $SD = 2.53$) ($r(60) = -0.01$, $p = 0.93$). Therefore the null hypothesis cannot be rejected. Table 5 shows the Pearson correlation for work engagement and sleep quality.

Table 5 *Pearson Correlations for Sleep Quality with Perceived Stress, Resilience and Work Engagement*

Variable	1.	2.	3.	4.
1. Sleep Quality	-			
2. Perceived Stress	0.51**	-		
3. Resilience	-0.46**	-0.73**	-	
4. Work Engagement	-0.01	-0.42**	0.33**	-

** . Correlation is significant at the 0.01 level (two-tailed)

3.2.3 Work Hours and Sleep Quality

A one-way analysis of variance showed that sleep quality differed significantly between the three work hours groups ($F(2, 59) = 3.06, p = 0.05$). The ANOVA table for sleep quality is shown in Table 6. More specifically, Tukey HSD post hoc analyses highlighted that sleep quality scores were significantly higher for the >40 hours of work group in comparison to the 18-29 hours of work group (mean difference = 2.92, $p = 0.04$, CI [95%] 0.07, 5.76). Thus highlighting that the >40 hours of work per week group had significantly lower sleep quality. The Tukey HSD analysis for sleep quality is shown in Table 7.

Table 6 *ANOVA Table comparing Average Working Hours Groups on Sleep Quality Scores*

Variable	Groups	Mean	SD	F	df	p
Sleep Quality	18-29 hours	7.40	4.90	3.06	61	0.05
	30-39 hours	5.00	2.17			
	>40 hours	4.50	2.17			

Table 7 *Tukey HSD Table showing the significant differences between the Working Hours Groups on Sleep Quality*

Variable	Groups	Groups	Mean Difference	p	95% Confidence Interval	
					Lower Bound	Upper Bound
Sleep Quality	18-29 hours	30-39 hours	2.40	0.12	-0.48	5.28
		>40 hours	2.92*	0.04	0.07	5.76
	30-39 hours	18-29 hours	-2.40	0.12	-5.28	0.48
		>40 hours	0.52	0.71	-1.05	2.08
	>40 hours	18-29 hours	-2.92*	0.04	-5.76	-0.07
		30-39 hours	-0.52	0.71	-2.08	1.05

*. The mean difference is significant at the 0.05 level (two-tailed)

3.2.4 Work Hours and Sleep Quantity

A one-way analysis of variance showed that there was no significant difference in sleep quantity between the three work hours groups ($F(2, 59) = 0.56, p = 0.574$). Therefore, the null hypothesis cannot be rejected. The ANOVA table for hours of sleep is shown in Table 8.

Table 8 *ANOVA Table comparing Average Working Hours Groups on Hours of Sleep*

Variable	Groups	Mean	SD	F	df	p
Hours of Sleep	18-29 hours	6.10	1.02	0.56	61	0.574
	30-39 hours	6.85	0.90			
	>40 hours	9.05	12.30			

3.2.5 Bedtime and Work Engagement

A Pearson correlation coefficient found that there was a weak positive significant relationship between the time gone to bed ($M = 11.05$, $SD = 0.72$) and work engagement ($M = 3.28$, $SD = 1.03$) ($r(60) = 0.26$, $p = 0.45$). Therefore the null hypothesis is rejected. This relationship can account for 6.76% of variation of scores. The Pearson correlation for work engagement and bedtime is shown in Table 9.

Table 9 *Pearson Correlations for Work Engagement and Time Gone to Bed*

Variable	1.	2.
1. Work Engagement	-	
2. Bedtime	0.26*	-

*. Correlation is significant at the 0.05 level (2-tailed)

4. Discussion

This study aimed to examine the relationship of sleep quantity and sleep quality on perceived stress, resilience and work engagement in workers in Ireland. In addition, the research aimed to investigate the impact of work hours on sleep quantity and quality. It also focused on bedtime and its relationship with work engagement. The number of participants was 62 (19 male, 43 female) and the average age was 41 years old.

4.1 Discussion of Findings

4.1.1 Sleep Quantity with Stress, Resilience and Work Engagement

This investigation examined the assumption that there will be a significant difference in perceived stress, resilience and work engagement across three sleep quantity groups (<6 hours, 6-7 hours, >7 hours). By performing a one-way analysis of variance, it was found that the stress levels differed significantly between the three groups, with the <6 hours of sleep group having significantly higher perceived stress in comparison to the other groups. This suggests that the less hours of sleep an employee gets, the more likely they are to show signs of stress. This is consistent with findings such as Charles et al. (2015) who found that higher perceived stress is associated with a reduction in sleep duration and also linked to poor sleep quality. However, it is not clear if the perceived stress is the causal factor of the sleep loss or vice versa, suggesting that a reciprocal relationship may be present.

A second one-way analysis of variance was carried out and it was found that the level of resilience differed significantly between the three sleep quantity groups. More specifically, the resilience levels were much higher for the >7 hours of sleep group compared to the <6 hours of sleep group. This suggests that sleep duration aids in boosting resilience in employees, with longer sleep hours associated with higher resilience. The literature on sleep and resilience in employees is lacking, but some studies have found that sleep is a resilience

promoter (McCuisition, 2016). The current study supports this view. Hence, this finding is of interest for future studies looking at resilience and sleep.

A further one-way analysis of variance found that work engagement did not differ significantly between the three sleep quantity groups. Therefore the null hypothesis could not be rejected. This suggests that while there may have been a moderate link between work engagement and sleep quantity, there was no notable differences between groups. This is inconsistent with previous findings, such as Barnes (2012), who found that sufficient sleep duration is important for the restoration of energy resources.

Overall, the hypothesis can be partially accepted as both stress and resilience were significant for sleep quantity.

4.1.2 Sleep Quality with Stress, Resilience and Work Engagement

This investigation looked at the relationship between sleep quality and perceived stress, resilience and work engagement. A Pearson correlation found a strong positive significant relationship between perceived stress and sleep quality, with poor quality sleep resulting in higher stress scores. Similar to the previous hypothesis, this could suggest a reciprocal relationship between sleep quality and stress. Further analysis would be beneficial to determine causal factors in more detail, with high job demands and low control being the key causal factors according to past research (Knudsen et al., 2008). The literature supports this finding, with Charles et al. (2015) showing that higher perceived stress is associated with poor sleep quality.

With regard to resilience, a Pearson correlation found that there was a moderate negative significant relationship between resilience and sleep quality. This finding suggests that poor sleep quality results in lowered resilience levels in the employee, highlighting the importance of getting enough sleep in both the REM and non-REM sleep stages in order to

boost resilience at work. As previously mentioned, research on the link of resilience to sleep in employees is lacking and therefore this provides a new finding which could be beneficial to future research in the area.

Finally, a Pearson correlation found that there was no significant relationship between work engagement and sleep quality, thus the null hypothesis could not be rejected. This is inconsistent with previous findings that highlight the importance of sleep for work engagement (Kuhnel et al., 2016). However, previous findings are lacking and don't specifically distinguish between sleep quantity and quality. Potential explanations for this finding may be that job duties and dedication to the role still take place even in the absence of sufficient sleep. Some employees may show intense dedication to their job role and career, that sleep may not have an influence on.

Overall, the hypothesis can be partially accepted as there was a significant relationship between sleep quality with stress and resilience.

4.1.3 Work Hours and Sleep Quality

This investigation examined the assumption that there will be a significant difference in sleep quality with hours worked per week. By performing a one-way analysis of variance, it was found that there was a significant difference in sleep quality between the work hours groups (18-29 hours, 30-39 hours, >40 hours). Furthermore, sleep quality scores were significantly higher for the >40 hours, suggesting that working more than 40 hours per week lowers quality of sleep. The findings on sleep quality are consistent with the previous literature, such as Afonso et al. (2017), who found that those who worked greater than 48 hours per week had significantly worse sleep quality. Overall, the significant findings means the hypothesis can be accepted.

4.1.4 Work Hours and Sleep Quantity

In contrast, a one-way analysis of variance showed that there was no significant difference in sleep quantity across the work hours groups. Potential reasons for this finding may include fatigue following working a long shift, meaning that employees would tend to go to sleep due to tiredness and thus get sufficient sleep during the night. This finding is inconsistent with previous research. For example, Luckhaupt et al. (2010) found that those who started work early and worked longer hours had a shorter sleep duration. Hence, the null hypothesis cannot be rejected.

4.1.5 Bedtime and Work Engagement

Further analysis investigated whether the time gone to bed had an impact on work engagement. A Pearson correlation found that there was a weak positive significant relationship between the time gone to bed and work engagement. This suggests that bedtime has an influence on engagement with work tasks. The positive correlation suggests, however, that the later gone to bed, the better the work engagement, as higher scores indicate better engagement. Further research could explore this further and also look at the optimal time to go to bed in order to be more engaged with work. Overall, the significant relationship means that the hypothesis can be accepted.

4.2 Limitations

There are a number of limitations with this study. Firstly, the confidence intervals for the tests were moderately large, suggesting the sample size may have been too small and thus suggests less accuracy of results. Furthermore, the sample was a convenience sample accessed through the researcher's own workplace, which means results may not be representative of the entire population, reflecting the limited validity of the investigation. In

addition, the small percentage of males represented (30.6%) compared to females (69.4%) means there may be an increased risk of sampling error.

With regard to the instruments used, there may be self-reporting bias, particularly with the PSQI. The open-ended questions regarding hours in bed, hours of sleep and bedtimes may be subject to bias as participants may have equated the number of hours in bed to the number of hours of sleep. Self-reporting is not an accurate reflection of the precise number of hours of sleep in a night, with a more accurate option being the use of wearable devices to track sleep. In addition, the tests on sleep quality are correlational and as such only indicate that a relationship exists between the variables and does not infer causality.

Finally, due to human error, two items from the PSQI were missing from the online survey. Despite this limitation, the Cronbach's alpha for the scale was 0.67, which is close to the ideal reliability coefficient of 0.75, suggesting that the scale is moderately reliable despite this omission.

4.3 Strengths

Despite the limitations, the current research had many strengths. Firstly, a sufficient link was shown between sleep quantity and quality with stress and resilience in particular. These findings are strongly supported by the literature, with stress being well established in previous studies. Most research has focused on sleep quantity, quality or stress, with few studies focusing on resilience. This study has provided one of the first findings on the link between sleep and resilience in employees in Ireland.

Furthermore, research on sleep is lacking in Ireland and this study addressed this by using a sample of workers in Ireland. Most studies on sleep have been carried out in the United States, Malaysia or Sweden, therefore its application to the Irish workplace is useful to remove any cross-cultural differences.

Finally, the timing of this study is ideal as current trends in employee wellbeing programmes point towards sleep management. There is an increasing recognition for the important influence that sleep has on employee wellbeing, with sleep having substantial practical value to organisations. This research brings knowledge to the area of sleep in employees in Ireland, which is beneficial when planning corporate wellness initiatives or developing health and wellbeing policies.

4.4 Implications for Future Research and Applications

This research brings knowledge to the area of sleep and employee wellbeing. More specifically, this study has provided key findings on the impact of poor sleep on stress, resilience and work engagement in workers in Ireland. Future research could look at repeating the investigation to see if results are valid to true populations. In repetitions, it would also be of benefit to have a larger sample size with an equal representation of male and female participants as well as age groups, as this was lacking in the present study. As the research findings show that bedtime had a significant impact on work engagement, further studies could investigate whether there is an optimal time to go to bed in order to be more engaged with work the following day. Furthermore, the findings show a link only between the variables and it may be of interest to carry out further analysis to investigate any causal factors involved. For example, the impact of modern technology is a potential causal factor causing overstimulation of the brain, thus hindering sleep (Shochat, 2012).

In terms of applications, the findings have implications for the likes of workplace intervention programmes that would focus on education about the importance of sleep for wellbeing and about sleep hygiene. Furthermore, the findings may be of interest for policy development in the workplace, particularly around ensuring sufficient recovery periods are available for employees throughout the day. The findings may also bring the importance of

sleep to the forefront in workplaces, allowing employers to be educated on how to spot the signs of insomnia in employees and implementing interventions for insomnia.

4.5 Conclusion

A number of important findings were evident in this study. This research found that there was a significant difference in both sleep quantity and quality with stress and resilience. Higher perceived stress was associated with reduced sleep quantity and poor sleep quality. Resilience was higher for those with longer sleep durations and good sleep quality. There were no significant differences found with work engagement and sleep quantity and quality.

Furthermore, the research found that the more hours worked per week, the lower the sleep quality. No significant findings were found for hours worked per week and sleep quantity.

Lastly, there was a significant relationship between bedtime and work engagement, which implies that it would be beneficial to carry out further research on this to determine if there is an optimal bedtime for enhanced work engagement. The findings partially agreed with the literature, but further research is required around causal factors in particular. Repetitions of this research would be beneficial to extend and strengthen the empirical evidence that insufficient sleep has an impact on employee wellbeing, so organisations can take action to ensure an effective health and wellbeing strategy, which in turn will facilitate a positive change in productivity.

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Appendix A

Scoring the Pittsburgh Sleep Quality Index (PSQI)

In scoring the PSQI, seven component scores are derived, each scored 0 (no difficulty) to 3 (severe difficulty). The component scores are summed to produce a global score (range 0 to 21). Higher scores indicate worse sleep quality.

Component 1: Subjective sleep quality

Response to Q	Component 1 score
Very good	0
Fairly good	1
Fairly bad	2
Very bad	3

Component 1 score: _____

Component 2: Sleep latency

Response to Q	Component 2/Q2 subscore
≤ 15 minutes	0
16-30 minutes	1
31-60 minutes	2
>60 minutes	3

Response to Q	Component 2/5a subscore
Not during the last month	0
Less than once a week	1
Once or twice a week	2
Three or more times a week	3

Sum of Q2 & Q5a subscores	Component 2 score
0	0
1-2	1
3-4	2
5-6	3

Component 2 score: _____

Component 3: Sleep duration

Response to	Component 3 score
>7 hours	0
6-7 hours	1
5-6 hours	2
<5 hours	3

Component 3 score: _____

Component 4: Sleep efficiency

Sleep efficiency = (# hours slept/#hours in bed) x 100%

hours slept –

hours in bed – calculated from responses to

Sleep efficiency	Component 4 score
>85%	0
75-84%	1
65-74%	2
<65%	3

Component 4 score: _____

Component 5: Sleep disturbance

Questions 5b to 5j	subscore
Not during the past month	0
Less than once a week	1
Once or twice a week	2
Three or more times a week	3

Sum of 5b to 5j scores	Component 5 score
0	0
1-9	1
10-18	2
19-27	3

Component 5 score: _____

Component 6: Use of sleep medication**Response to** **Component 6 score**

Not during the last month	0
Less than once a week	1
Once or twice a week	2
Three or more times a week	3

Component 6 score: _____

Component 7: Daytime dysfunction**Response to Q7** **Component 7/Q7 subscore**

Not during the past month	0
Less than once a week	1
Once or twice a week	2
Three or more times a week	3

Response to Q8 **Component 7/Q8 subscore**

No problem at all	0
Only a very slight problem	1
Somewhat of a problem	2
A very big problem	3

Sum of Q7 and Q8 subscores **Component 7 score**

0	0
1-2	1
3-4	2
5-6	3

Component 7 score: _____

Global PSQI Score: Sum of seven component scores: _____

(Buysse et al., 1989)

Appendix B

Copy of Online Questionnaire

Survey – Sleep Research

My name is Claire Heavin and I am conducting research in the Department of Psychology, Dublin Business School, that explores sleep quality and quantity and its relationship with mental health and work engagement in the Irish workplace. This research is being conducted as part of my studies and will be submitted for examination. The findings from this research may potentially be presented at a student congress or may form part of a publication for

You are invited to take part in this study and participation involves completing this anonymous survey. The survey will take approximately 10 minutes to complete. This survey is timely in that are beginning the roll out of a sleep programme and findings from this research will provide support for this new programme.

If any questions raise difficult feelings for you, contact information for support services are included on the final page. Should you require any further information about the research or would like to be informed of the outcomes of the research, please contact me at .

My supervisor can be contacted at

Thank you in advance for taking the time to complete this survey.

Survey



About you

Sleep Research

0% 100%

* Do you consent to participate in this study?

- Yes No

* Gender

- Female Male

* What age are you?

* Do you have a job?

- Yes No

* Do you work full-time or part-time?

Choose one of the following answers

- Full Time
 Part Time

* On average, how many hours do you work per week? (e.g. 40 hours)

* What time do you start and finish work at? (eg 9am to 5pm)

* Which term below best describes your job role?

Choose one of the following answers

- Customer-facing
 Customer Support
 Administration
 Management
 Information Technology
 Operations
 Compliance
 Other...

* Are you currently on any sleep medication or medication with drowsiness as a key side effect?

Choose one of the following answers

- Yes
 No
 Unsure

Survey



About your Sleep Habits

Sleep Research

0% 100%

The following questions relate to your usual sleep habits during the past month only.

Your answers should indicate the most accurate reply for the majority of days and nights in the past month.

Please answer all questions.

• On average, how many hours of sleep do you get per night?

• When have you usually gone to bed? (e.g. 11.30 p.m.)

• How long (in minutes) has it taken you to fall asleep each night?

• When have you usually gotten up in the morning? (e.g. 6 a.m.)

• How many hours of actual sleep do you get in a night? (Note: this may be different than the number of hours you spend in bed)

• During the past month, how often have you had trouble sleeping because you:

	Not during the past month	Less than once a week	Once or twice a week	Three or more times a week
Cannot get to sleep within 30 minutes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wake up in the middle of the night or early morning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have to get up to use the bathroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cannot breathe comfortably	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cough or snore loudly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel too cold	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel too hot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have bad dreams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reason(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

• During the past month, how would you rate your sleep quality overall?

Choose one of the following answers

- Very good
- Fairly good
- Fairly bad
- Very bad

Survey



Sleep Research

0% 100%

About your Feelings & Thoughts

The following questions ask you about your feelings and thoughts during the last month.

You will be asked to select the option representing how often you felt or thought a certain way.

Although some questions are similar, there are differences between them and you should treat each one as a separate question.

* In the last month, how often have you:

	Never	Almost Never	Sometimes	Fairly Often	Very Often
Been upset because of something that happened unexpectedly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt nervous and "stressed"?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dealt successfully with day to day problems and annoyances?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that you were effectively coping with important changes that were occurring in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Found that you could not cope with all the things you had to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been able to control irritations in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that you were on top of things?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been angered because of things that happened that were outside of your control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Found yourself thinking about things that you have to accomplish?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt difficulties were piling so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* The following questions ask you about your feelings and thoughts during the last month. You will be asked to select the option representing how often you felt or thought a certain way. Please respond to each question by selecting the option that best describes you.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I tend to bounce back quickly after hard times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a hard time making it through stressful events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It does not take me long to recover from a stressful event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is hard for me to snap back when something bad happens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually come through difficult times with little trouble	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to take a long time to get over set-backs in my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey



Sleep Research
0% 100%

About your Wellbeing at Work

The following questions are about how you feel at work. Please answer all questions by deciding if you ever feel this way about your job. Please select the response that applies to you in the last month.

* The following questions are about how you feel at work. Please answer all questions by deciding if you ever feel this way about your job. Please select the response that applies to you in the last month.

	Never	Almost Never	Rarely	Sometimes	Often	Very Often	Always
At my work, I feel bursting with energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the work that I do is full of meaning and purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time flies when I'm working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At my job, I feel strong and vigorous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am enthusiastic about my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am working, I forget everything else around me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My job inspires me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get up in the morning, I feel like going to work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel happy when I am working intensely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud of the work that I do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am immersed in my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can continue working for very long periods of time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To me, my job is challenging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get carried away when I am working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At my job, I am very resilient mentally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is difficult for me to detach myself from my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At my work I always persevere, even when things do not go well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for participating in this survey.

If you feel that answering this survey has raised some issues for you, please consider contacting some of the support services listed below, or speak to a friend, family member or professional.

Aware:

The Aware Support Line 1890 303 302
Available Monday – Sunday, 10am to 10pm.
Email for support at: supportmail@aware.ie

Samaritans:

Call on: 116 123
Available 24hrs a day, 365 days a year. Free to call.

Email:

Employee Assistance Programme:

Call:

Email: