

*International SOS*  
**Foundation**

# THE PSYCHOLOGICAL IMPACT OF REMOTE ROTATIONAL WORK

Dr Rachel Lewis PhD CPsychol

Christian Ferragamo

Dr Joanna Yarker PhD CPsychol



# FOREWORD

The unique work and lifestyle of remote rotational workers has long been thought to have a high impact on mental health and wellbeing. It may come with the perks of higher pay, but are the 'golden handcuff's' enough to offset the working environment, with its propensity to be isolating at the best of times. On and off-shore, working pressures and varying shift patterns also add their weight. And this is not to mention the impact of the current pandemic.

Valuable studies have been carried out in various parts of the world focusing on this critical topic, with many collating regional data. With millions of employees carrying out remote rotational work today, the International SOS Foundation undertook a research initiative to assess and provide global insight into the psychological impacts of this particular working mode.

When we first planned this endeavour, the world was not in a pandemic. This has had a huge impact and makes it an ever more relevant topic. Workers found themselves on remote rotation for months longer than they anticipated, often not knowing when they would be able to return home to family and friends. In the light of this, the study exposes just some of the impacts from this current environment.

And, while loneliness and emotional exhaustion may be expected in some respect, the fact that the study reveals that suicidal thoughts are experienced by more remote rotational workers than either, is shocking. Particularly considering the majority of the workforce feel that they are supported by the organisations they work for.

There is a disconnect somewhere – one that needs to be addressed to protect people and save lives.

Within this study, we are exposed to key findings that could help to understand and, importantly, bridge this disconnect. The focused expert insights and response from remote rotational workers themselves is aimed to help organisations/managers with greater insight into the impact on mental wellbeing, and provide a way forward with some of the strategies that can be implemented to protect the workforce.



**Dr Rodrigo Rodriguez-Fernandez**  
Medical Director,  
Health Consulting, NCD  
Wellness programmes

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**FIGURE 1. METHODOLOGY FLOW CHART**



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## 3.1. Stage One and Stage Two: Literature review and participant interviews

### 3.1.1. Outcomes of remote rotational work

From the systematic review of the literature, 36 studies (33 academic and three practitioner) were identified that related to the psychological implications of remote rotational work. Research covered 14 countries and regions, across seafarers, miners, oil and gas, wind, and construction workers. 12 papers were from Australia; 10 from Norway, three from the UK, three from China; and one from each of the following: Croatia; European multinational; Germany; Ireland; the Middle East; the Netherlands; and Vietnam. The majority of research has focused on the offshore oil and gas industry (17 papers), seafaring (eight papers) and mining (four papers), with only one paper each from construction and wind. Only two papers studied workers from across multiple sectors. Most research conducted in this area has been cross-sectional and quantitative in nature, with 10 studies exploring outcomes over time. Three papers (all practitioner papers) used a mixed methodology. A full list of the papers included within the evidence review is included in the reference section.

The findings from the evidence review were grouped into four categories, demonstrating the psychological outcomes for remote rotational work are: i) emotional outcomes; ii) family, social and work-life outcomes; iii) psychosocial/psychosomatic outcomes; and iv) job- and organisation-related outcomes.

Figure 2 summarises the findings from the evidence review and the interviews, and lays out the negative psychological outcomes associated with remote rotational work identified in the evidence review. The majority of the studies focused on the emotional aspects of remote rotational work, such as stress, anxiety, burnout, fatigue, depression and suicidal thoughts. This was followed by psychosocial impacts,

such as psychosomatic health complaints, in particular sleep disturbances. Only five papers explored the impact of remote rotational work on the family such as behavioural and adjustment issues in children, and impact upon the spousal relationship. Fewer papers explored organisational issues but those that did explored negative outcomes such as intention to leave and perceived risk; along with positive outcomes which in particular focused on the community on-rotation and sense of comradeship.

Although this body of evidence predominantly investigated the negative psychological outcomes of remote rotational working, a subset of research also explored factors associated with psychological benefits, reflected in each of the four outcome categories. Emotionally and psychosocially, there were factors found to contribute to job satisfaction and sleep quality in this population, elaborated on in the next section of this report. With regards to job- and organisation-related outcomes, a wide range of positive psychological outcomes were explored, ranging from work enjoyment and work involvement to feelings of community and social inclusion at work.

Data obtained from the stakeholder interviews was largely in accordance with the evidence review findings, with some exceptions. While the reviewed literature indicated that suicidal ideation was prevalent in the remote rotational worker population, this view did not arise in the stakeholder interviews. Interviewees did mention some specific emotional struggles, although these were mainly related to anger towards the organisation and negative feelings of being stuck out at sea. The academic literature had also explored drivers for job satisfaction, wellbeing and happiness; yet contributors to positive affect on the job was not widely spoken about in the interviews. Secondly, from a family perspective, some of the literature had shone a light on the negative impact remote rotational work may have on the



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### 3.2. Stage Three: Survey results

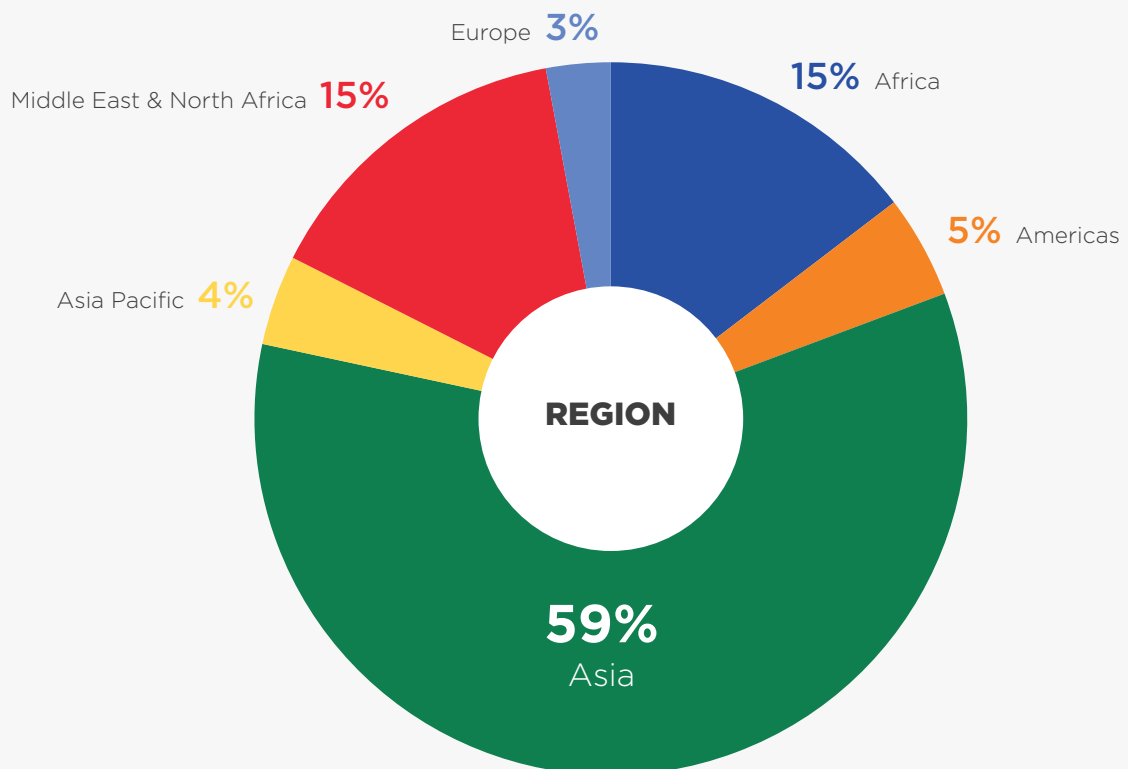
The results from stages one and two were combined to create a model, setting out both the psychological outcomes of remote rotational work, and factors affecting those outcomes, which was used to create a survey questionnaire.

#### 3.2.1. Demographic data from the survey

The survey was completed by a wide range of remote rotational workers across types of rotation, sectors, areas and from a range of professional and cultural backgrounds.

The respondents were split between mining, offshore and seafaring/maritime industries and were globally represented.

**FIGURE 3. REGION WHERE WORK IS BASED**



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The vast majority of remote rotational workers were satisfied with the culture of their organisation, with 95% feeling that their health and safety was prioritised, 79% that their organisation was committed to diversity and inclusion and 78% that there was a culture of openness.

Respondents were also satisfied with the provisions such as job resources (87%), accommodation (88%), internet connection (78%) and leisure time facilities (69%). Although the majority felt that they did have psychological support, (23%) did not. The lowest scoring question in this section related to work flexibility, with 40% feeling that they did not have adequate flexibility in their role.

When looking at differences across the sample, it was clear that respondents from Asia (and also the Middle East and North Africa) were significantly more satisfied with the organisational provisions they enjoyed than respondents from the Americas and Asia Pacific. It was also found that this data was affected by seniority – those in a managerial position enjoyed greater provisions such as internet connection and felt that they were more equally valued than employees not at managerial status.

### 3.2.3. Psychological implications of remote rotational work: Emotional outcomes

#### Negative outcomes

**TABLE 4. MOOD SUFFERING WHILE BEING AWAY**

Whilst away on rotation, my mood/mental health suffers



■ Strongly Agree %   ■ Agree %   ■ Disagree %   ■ Strongly Disagree %

The majority of respondents (52%) felt that their mood declined, and their mental health suffered whilst on rotation. This was found to be consistent across the sample regardless of gender, job role, what region they worked in and whether they had children. To measure mental wellbeing, we used the WHO-5 Well-Being Index, a scale that has been validated across the world. The WHO-5 provides a score for individuals from between 0 (worst imaginable wellbeing) to 100 (best imaginable wellbeing). In the general population, we would expect an average score to be 70, with a score of 50 or less being a marker for clinical depression.

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# 4

## KEY MESSAGES AND CONCLUSIONS



Remote rotational work continues to be a lucrative business for many employees, employers and communities alike, particularly in those areas that are rich in natural resources (Parker et al., 2018). However, despite the positive impact of this type of work on the economy, it can be deleterious to employee psychological health. Although recent times have seen an increased research focus on remote rotational worker wellbeing, it is suggested that many employees do not have adequate health and wellbeing monitoring or strategies and policies in place to protect employee wellbeing. Further, although there has been a growing body of research, there has tended to be a focus on one sector (such as offshore oil and gas) or one location (such as Western Australia), exploring often one psychological factor. This has meant that there have been a lack of overarching recommendations or guidelines for the protection of mental health in remote rotational workers.

This research is the first of its kind to both synthesise existing literature and gather perspectives from experts and remote rotational workers themselves. The aim is to enable stakeholders who have a duty of care to remote rotational workers to make evidence-based adjustments and recommendations to their employees around this type of work and to enable organisations to increase awareness in all their employees about the psychological implications of remote rotational work, thereby mitigating risks. Ultimately, it aims to increase the safety, health, security and wellbeing of remote rotational workers by understanding more about the psychological implications of this type of work, both on rotation and off rotation. A final aim, given the timing of this research, was to understand how the psychological experience of remote rotational work had changed as a result of the COVID-19 pandemic.

To answer these aims, a three-phase approach was taken: firstly a review of both academic and practitioner literature; secondly interviews with both remote rotational workers and stakeholders who employed or had a wealth of experience working with them; and finally a survey of remote rotational workers themselves.

The literature review and interviews conducted in stages one and two of the project identified four categories of outcomes:

- **Emotional outcomes:** negative outcomes such as burnout, loneliness, depression, suicidal thoughts; and positive outcomes such as job satisfaction, fun and excitement
- **Family/social/work-life outcomes:** negative outcomes such as children's emotional wellbeing, adjustment and behaviour, work-family conflict, negative impact on relationships, financial pressure on being the breadwinner; and positive outcomes such as social relations and family functioning.
- **Psychosocial/psychosomatic outcomes:** negative outcomes such as fatigue and insomnia, sleep difficulties, stomach problems; and positive outcomes such as sleep duration.
- **Job and organisational related outcomes:** negative outcomes such as intention to quit, lack of competence and motivation; and positive outcomes such as work enjoyment and involvement, feeling of community and comradeship.

The findings from stage one and two were used to create a model of the psychological outcomes of remote rotational work, and the factors affecting those outcomes. This was then used to create the stage three survey. The data gathered at Stage Three both corroborated and built on the findings from the literature review and interviews.

Table 24 shows a summary of the key findings from the Stage Three survey in terms of the psychological implications of remote rotational work. The columns denote where these outcomes were different for a particular group or demographic of remote rotational workers. For instance, suicidal thoughts were most commonly experienced by males, by employees (rather than managers) and for those based in Asia. No differences were found by parental responsibility, marital status or having children.

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# 5

## RECOMMENDATIONS

The recommendations in this section are drawn directly from the evidence gathered in all three stages of the research. They are designed to enable organisations and employers, managers and the remote rotational workers themselves - together with their colleagues, friends and families - to better support and protect the mental health of the remote rotational worker population.

## 5.1. Recommendations for organisations and employers

RECOMMENDATION	EXAMPLE
<b>ORGANISATIONAL CULTURE RECOMMENDATIONS</b>	
<b>Prioritise the development and maintenance of a safety culture</b>	Remote rotational worker wellbeing is impacted by the extent to which workers believe that the organisation prioritises their physical and psychological health and safety. It would be useful to assess all aspects of safety management, involvement and prioritisation, including extending and maintaining some of the measures taken during the COVID-19 pandemic
<b>Demonstrate a commitment to diversity and inclusion</b>	There are many aspects of remote rotational working where inequalities and inconsistencies are perceived for instance by nationality, job role and contractual arrangements. A recommendation is to build a culture where all employees are valued equally and treated with consistency.
<b>Create an organisational openness around mental health</b>	Within this population, although mental ill health is high, diagnosis and treatment is very low, suggesting both an unwillingness to come forward and a cultural stigma. The recommendation would therefore be to create a culture where employees feel safe to disclose existing conditions and talk to colleagues and managers if they are suffering or at risk of mental health issues. This needs to be sensitive and inclusive to the cultural/national differences around mental health conceptualisation and stigma.
<b>POLICY AND PRACTICE RECOMMENDATIONS</b>	
<b>Develop a mental health and wellbeing strategy and policy</b>	It is clear that although there is a high prevalence of mental ill health, there remains a culture of stigma and non-disclosure, and resources and support offered to maintain mental health are variable. This strategy should focus on both prevention and support for remote rotational workers' mental ill health and also include an emergency strategy to include that of suicide postvention.
<b>Develop a process of monitoring and evaluating mental health and wellbeing</b>	Monitor and assess the mental health of remote rotational workers over time using valid measures. This will enable tracking over time, and the identification of 'hotspots' or areas of priority within the workforce.
<b>Consider strategies to increase the number of females working in remote rotational work</b>	Evidence from both this and previous research suggests that females have higher wellbeing and engagement than males; however males are very much in the majority. Consider recruitment and attraction strategies to increase the female remote rotational worker population.
<b>Build mental health support and resources into induction and onboarding processes</b>	Equip remote rotational workers with the knowledge of the psychosocial hazards of this type of work, along with the skills and resources to manage those risks. In particular, the onboarding process should highlight and signpost support services and provisions.
<b>Review flexible working policies and arrangements</b>	Most workers would benefit from more flexible working arrangements. During the pandemic, many remote rotational workers were able to do a proportion of their work at home. Consider conducting a review of all roles in order to reduce necessity to be on rotation on site as much as possible.
<b>Increase control and flexibility</b>	Where possible, increase the individual autonomy and flexibility of workers. This could involve organisational involvement such as worker collaboration in design of social facilities, decisions about leaving site, choice over holiday periods.

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### **About the International SOS Foundation**

Launched in 2011, the International SOS Foundation has the goal of educating organisations on health and security issues impacting the global workforce. Our altruistic goal of protecting and saving lives is carried out through conducting research and thought leadership initiatives on Duty of Care, sustainability and resilience to raise organisational standards in Duty of Care. The Foundation is a registered charity and was started with a grant from International SOS. It is a fully independent, not-for-profit organisation.

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