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**How can working in an offshore environment in the UK affect the health and safety, wellbeing and family life of an offshore worker?**

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**“This dissertation is my own original work and has not been submitted elsewhere in fulfilment of the requirements of this or any other award”**

**43 pages. 9177 (Nine thousand one hundred and seventy seven words).**

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## **ii) ABSTRACT**

From the inception of oil and gas exploration and production within UK territorial waters there has been many studies carried out with the aim of assessing the impact of working offshore on a person's health and safety, wellbeing and family life. It has been shown in previous studies that this type of work imposes significant demands on an individual's health and also on their families. This dissertation report was written to clarify if the findings from these studies are still relevant in the modern offshore environment in the UK.

The research carried out for this report showed that there has indeed been a shift in how offshore personnel believe their work roles impact on their health and safety, wellbeing and family lives from previous studies. This report aims to justify how this conclusion was reached, and show how the implementation of current Regulations and Safety Management Systems along with a better understanding of Human Factors related issues has moved the industry forward substantially in the last ten years.

# CONTENTS

<b>1.0 INTRODUCTION.....</b>	<b>5</b>
<b>2.0 LITERATURE REVIEW.....</b>	<b>10</b>
i) The North Sea working ‘physical’ environment compared to onshore	
ii) Offshore job profiles, workloads and work hours	
iii) Safety involvement and safety perception on offshore installations	
iv) Psychological stressors and mental health related to offshore work	
v) General health behaviours and problems related to offshore work	
vi) Family responses to spouses working offshore and effects on family life	
<b>3.0 METHODOLOGY.....</b>	<b>20</b>
i) Sampling	
ii) Sample size and data collected	
iii) Sample profile	
<b>4.0 FINDINGS AND ANALYSIS.....</b>	<b>22</b>
i) Presentation of findings	
ii) Analysis of the data	
<b>5.0 CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>30</b>
<b>6.0 REFERENCES.....</b>	<b>33</b>
<b>7.0 APPENDICES.....</b>	<b>35</b>
i) Questionnaire	
ii) Results record	
iii) Data results charts	

## 1.0 INTRODUCTION

In 1965, a newly formed company called British Petroleum, decided to convert a construction barge, The Sea Gem, into the first offshore facility to undertake drilling operations in the UK sector North Sea. The Sea Gem subsequently went on to be recorded in the history books as the first UK offshore drilling rig to find hydrocarbons on the British Continental Shelf after it discovered natural gas off the East Coast of England in September 1965.

As a nation celebrated the birth of a new era which heralded a bright economic outlook and the possibility of huge oil and gas revenues from undisturbed reserves, the frightening power of the harsh North Sea environment brought home the challenges that would have to be overcome to make this new dream a reality.

In December 1965, two months after finding gas, two of The Sea Gem's ten legs collapsed which resulted in the rig capsizing into the freezing waters of the North Sea. Thirteen of the rig's thirty five crew perished in the accident. ([Burke, 2013- Ref 1](#)). The resulting public enquiry into the sinking of the Sea Gem concluded metal fatigue in part of the suspension system linking the hull to the legs was to blame ([The BBC, on this day 27<sup>th</sup> December 1965, The Sea Gem oil rig collapses, Ref 2](#)) and made recommendations to offshore companies operating in the UK which were implemented and still exist to this day, such as providing dedicated stand by boats and introducing trained Offshore Installation Managers (OIM) - a role which is still highly coveted and respected in current times.

The Sea Gem heralded the start of an offshore working revolution. Since the 1960's the offshore working environment in the North Sea has seen considerable change. This change has been pushed over time by new Regulation, which followed events such as the 1988 Piper Alpha disaster which saw the deaths of 167 men. ([Oil and Gas UK, Piper Alpha Lessons Learnt, 2008, Ref 3](#)). New and innovative technology has also continued to make even more challenging environments such as West

of Shetland a viable economic area for drilling, which many major companies have been quick to exploit.

UK offshore oil and gas drilling and production now employs a substantial workforce, which fluctuates depending on ongoing operations around the 30,000 personnel mark. In 2012 52,300 personnel travelled offshore in the UK with 25,760 of those persons being classed as 'core' workers (having spent over 100 days offshore during the year). The average age of the workforce was 41 years of age. 2012 saw a 13% rise in workers under the age of thirty working offshore compared to the previous year. ([Oil and Gas UK Offshore Workforce Demographics Report 2013, Ref 4](#)) This highlights a rise in operations that required an influx of new personnel to cover the shortfall of experienced crew. Not only is the sector a large employer in the UK, the exploration and gas companies involved in operating fields play a significant role in the UK economy as a whole.

Given the dangers and fast changing working environments that offshore workers find themselves facing, health and safety has become the number one driving force behind every operation that takes place on any installation that is working in the UK sector. After the Cullen report ([Cullen, 1990, Ref 5](#)), which made recommendations to the entire oil and gas industry after the Piper Alpha disaster, significant improvements were seen across the sector. These included improvements to company safety regimes, procedures, regulations, modifications to installation structures to include blast walls and temporary refuge areas, and also the requirement by the Health and Safety Executive (HSE) for companies to have a full and detailed Safety Case related to current operations. ([Offshore Installations Safety Case Regulations 2005 – Ref 6](#))

In the global maritime industry, (which covers offshore drilling rigs, both jack up and semi-sub types and FPSO's – 'floating production storage and offloading vessel', as well as all marine vessels servicing the oilfields) safety improvements are taken care of by Treaties and Conventions from the UN's International Maritime Organisation (IMO). The first ever regulation, entitled 'Safety of Life

at Sea' ([SOLAS - United Nations International Convention for The Safety Of Life At Sea, 1974, Ref 7](#)) was adopted in 1914 as a response to the Titanic disaster. Later, new treaties and codes were added, such as 'Standard of Training', 'Certificates and Watch-Keeping' (STCW), various codes on issues like the 'Caretaking of Human Resources', and the 'International Convention for the Prevention of Pollution from Ships' (MARPOL).

Offshore workers, given the demanding factors involved in the type of work they undertake, face many challenges. Not all are strictly related to their working offshore cycle. Offshore personnel working on an installation can be exposed to demands that far outweigh that of similar comparable work onshore. Shift patterns, risk exposure, working away from family and friends, sometimes in remote and hostile locations for long periods of time (maximum in the UK 4 weeks) and carrying out sometimes repetitive and monotonous work can lead to physical and mental stressors which can have a negative impact on a person's onshore life, as well as their relationships with family and friends onshore. ([Parkes, 2002- Ref 8](#)).

This dissertation aims to analyse past research and studies that have been undertaken which focus on the detrimental impacts to a person's general health and wellbeing from working offshore. The vast majority of these studies have been carried out between 1980 and 2000, a period which saw vast change across the industry. There has been little research and study in this area since the time detailed and the report will challenge if the conclusions from previous studies are still relevant and applicable in today's modern offshore workplace.

Since these early studies were undertaken around twenty years ago, we must adapt any previous findings to the recent and considerable changes seen in the North Sea environment. In this time the oil price has increased sharply from \$16 a barrel in 1994 to over \$100 a barrel in today's prices. ([Historical Crude Oil Prices Table, Inflation Data.com, July 2014, Ref 9](#)).

This has been led by a global shortage of hydrocarbons which has an infrastructure currently struggling to cope with the energy demands from developing countries such as China, India and Brazil. Most western developed states have already started the huge shift towards renewable energy such as wind, wave and solar power as a direct result of the cost of oil and gas and a lack of energy security.

These elements have necessitated the need to develop offshore oil and gas fields which previously would have been mothballed due to high estimated cost of field and production development. New technology has been at the forefront of tackling these challenges which makes deeper water and areas with environmentally challenging conditions accessible for development. Cost cutting by oil and gas companies that has enabled these projects to be economically viable has been filtered through every aspect of the industry. Operators which may have worked on a platform 2 x 2 week rotation will now most probably be working a 3 x 3 rotation, reducing crew travelling costs such as less helicopters, whilst at the same time increasing the personnel's time per trip away from home. Job security in the sector has declined, and new installations built are now seen to be smaller, but operate with a higher level of automated systems which require less crew to operate.

Research has been carried out for this report, in the form of a questionnaire, ([Appendix 1, Report Questionnaire](#)) which asks offshore personnel relevant questions related to their offshore working life cycle and how they feel this cycle affects their own offshore safety and life habits and also relationships when onshore on leave time. The aim of this questionnaire is to identify if conclusions and recommendations from previous studies are still relevant today and identify key areas where further areas for research and study could be developed, which match today's modern offshore working life. The question which the report aims to answer is 'How can working in an offshore environment in the UK affect the health, safety, wellbeing and family life of an offshore worker'? The analysis of the questionnaire answers aims to give a qualified reasoning as to how up-to-date previous recommendations are, and if they are still relevant.

Questionnaires were developed alongside key offshore personnel with responsibilities for the health, safety and wellbeing of crew on various installations. The questionnaire questions were thoroughly 'reviewed' and 'tested and discussed' with offshore personnel (from Roustabout level to Senior Management) before being approved by the author for sending out to installations. All personnel agreed that although some questions could be described as 'searching' or possibly 'hard hitting' all were extremely relevant and considered part of 'real life' by offshore personnel.

Questionnaires were then sent to offshore installations with the full approval of the rig operators for distribution. All questionnaires were completed offshore and are completely anonymous. No information relating to employers or installations was sought or recorded. The information collected was formatted into an excel spreadsheet to develop charts for visually aiding the assessment of data collected ([Appendix 3](#)), which are included in the report. Data was directly collected by email through an email address set up and used to enable workers to send scanned copies of questionnaires directly to the author at [offshoreworkinglife@hotmail.co.uk](mailto:offshoreworkinglife@hotmail.co.uk) from their offshore location. Some questionnaires were posted off the rigs in question to an onshore office and collected directly from there by the author. The main survey data collection took place between January and May 2014.

The research questionnaires would not have been possible without a high degree of co-operation from various offshore operators and contractors. The author hopes that the report will be of interest not only just to the companies involved but also the wider offshore community as a whole, and will generate further awareness as to how important human factors are to the safety, health and wellbeing of offshore staff, both when they are at work and also on their home leave time. These factors will be especially relevant as the industry continues to move forward with rapid change across the UK sector.

## 2.0 LITERATURE REVIEW

### i) The North Sea working 'physical' environment compared to onshore

In the report 'Work, health, and safety in the UK oil and gas industry – A survey of onshore sites and comparisons with offshore installations', prepared by the Department of Experimental Psychology at Oxford University for the Health and Safety Executive, 2001, (Ref 13) comparisons were made between information from five companies which recorded data analysis from their onshore and offshore workforces. This study found that only two of the companies perceived the physical stressors of working offshore (in terms of exposure to noise, poor air quality and environmental weather conditions) to be significantly more physically stressful than an onshore environment. The other three, in contrast, found that workload differs little from onshore or offshore installations. In this report the main focus was to analyse what the overall differences between onshore and offshore personnel are, and the perceptions of the offshore workforce of their environment and measure the affective physical wellbeing of these particular groups. It must also be recorded that this report did not capture findings from drilling installations, only production, and so did not take into account the differing physical stressors involved on drilling installations, which are far more physically demanding in many areas especially the work on and around the drillfloor. Thus the report compares only a section of the offshore industry, namely production operators, who undertake less demanding roles on their installation compared to a drilling unit.

In 2002, a research report titled 'Psychosocial aspects of work and health in the North Sea oil and gas industry' was published by the University of Oxford for the UK Health and Safety Executive (Ref 8). This report identified that the physical environmental related stressors to working offshore were actually influenced by the company involved and the type of work being undertaken (e.g. duties, role, safety perception) and showed no overall pattern to which environment (onshore / offshore) was

more favourable. These findings suggest that the opportunity to enhance working conditions were apparent whether working on or offshore.

[A study by Katherine Parkes in 1992, Psychological Medicine – Mental health in the oil industry: A comparative study of onshore and offshore employees \(Ref 14\)](#), found that the nature of work in the North Sea exposes personnel to a variety of psychosocial and physical environment stressors which may be causally linked to the higher levels of anxiety and tension observed in the offshore workforce. The report found that the offshore environment, which combines high noise and vibration areas, separation, loneliness, limited space, exposure to the elements, lack of privacy and reduced sleep quality was found to be directly correlated with reported anxiety. The direct level of risk and hazards found in the physical offshore environment was also found to have greater potential (man overboard, fire, explosion, loss of well integrity, dropped objects), due to the consequences of failures or oversights to be far greater. This is compounded by the daily offshore routine such as work permits, safety procedures, PPE requirements, smoking restrictions, electrical equipment and muster drills which act as a constant reminder of the potentially hazardous environment, and the need for constant vigilance even when off shift. This means offshore personnel are always alert to the fact that an emergency could arise swiftly and unexpectedly. The perception of risk is also reinforced by major disasters such as Piper Alpha and Macondo. This study finds, whilst referencing [Hellesoy, 1985- Ref 17](#), that there is evidence of a link between perceived risk and anxiety. Several other factors relating to ‘offshore working life’ were also found to prescribe to the scale of problems associated with ‘living in the environment’, resulting in health issues such as sleep deprivation and headaches.

ii) Offshore Job profiles, workloads and work hours

[In 2008, the UK health and Safety Executive found the need to publish Offshore Information Sheet No 7/2008, Guidance for managing shift work and fatigue offshore \(Ref 18\)](#). This Guidance Sheet was issued after many offshore incident investigations found that the root cause of said incidents had

elements of human error or operator tiredness playing a direct part. An offshore company's choice of shift pattern and 'tour' (two weeks on two weeks off, three weeks on three weeks off etc) length is decided at management level and will in most cases be aligned with the company's Safety Management System. This system will ensure that any shift pattern is risk assessed with a defined scope of objectives analysed against alternatives, with the chosen option being the one that reduces the risk to as low as reasonably practicable. The guidance highlights that although tiredness played its part in many incidents, this fact was very rarely mentioned in formal reports. The reason for this, the HSE believe, is that the individuals involved were concerned that personal blame could be attributed as a result. This belief is used to highlight the requirement to use detailed human factors techniques when carrying out risk assessments before any work commences and indeed during any subsequent incident or accident investigation. A correlation between type of shift work and fatigue is shown, as are the relations between staffing levels and workload on one hand and occupational stress on the other. Monitoring performance is recommended. Performance indicators should reflect aspects of shift work on health and safety matters, operational integrity and major hazards. Fatigue should be included in incident investigation procedures, along with shift monitoring to identify personnel who work overtime regularly perhaps to excessive and unsafe hours. Other measuring aspects that could be recorded as well as excessive overtime could be the use of sleep medication, record how many incidents and near misses refer to fatigue, and how management and Supervisors take action in response to fatigue related issues.

[The University of Surrey published its Research Report into the 'Effect of shift schedule on offshore shift workers circadian rhythms and health' in 2005 \(Ref 11\).](#) This report set out to measure changes in the circadian phases (body clock) during different offshore working shift cycles. The report findings show a study of sixty three male offshore workers on different shift patterns, and records hormonal and metabolic markers through blood and urine testing, as well as dietary intake records. A diet / lifestyle questionnaire showed that desynchrony (in the body clock) occurrence leads to

reduced alertness, fatigue, disturbances to sleep and to the normal metabolic response to meals consumed at night and consequently is detrimental to overall health and safety. The circadian system relies heavily on light conditions to regulate the body's systems and 'clock'. The report found that a better lit working area at night could help improve alertness and performance as well as metabolic responses to meals. The report goes on to highlight that shift work is becoming more and more a part of working life and as a result introduces more concerns for the health and safety of the worker. Shift work effects on health the report concludes are 'the manifestation of the health effects of disturbed circadian rhythms' with reported symptoms being gastro-intestinal disorders and an increase in heart disease factors. The report quotes '[Nicholson and D'Auria, 1999- Ref 19](#)', which also reported shift work associations with bowel habits, stress and irritability, asthma, epilepsy and chronic fatigue syndrome. In 2003, a significant association was identified between female breast cancer and shift work. ([Swerdlow, 2003- Ref 23](#)).

An offshore job profile will usually specify a clear job description that details every aspect of what the job entails. What is not included in the job description will be how the job will impact on your family and onshore life. In the report by [Katherine Parkes in 1992, Psychological Medicine – Mental health in the oil industry: A comparative study of onshore and offshore employees \(Ref 14\)](#) it is highlighted that whilst working offshore employees are not only exposed to stressors directly associated with the work environment or job factors, they are also separated from family, friends, their local community and from the emotional and practical support associated with such relationships. Adverse effects of stress on wellbeing can however be mitigated by family and social support, if indeed this support is available. If not this isolation may well contribute to anxiety being experienced offshore.

iii) Safety Involvement and Safety Perception on Offshore Installations

An 'Offshore Safety Case' (Offshore Installations Safety Case Regulations 2005) is a UK legal requirement for all offshore installations carrying out work on the UK continental shelf. The Safety Case details all aspects of Guidance aligned to the Regulations to support those who must have an understanding of the requirements ([Offshore Installations \(Safety Case\) Regulations 2005, Ref 6](#)). This guidance shows the needs for meeting the requirements of the regulations which provide a simple explanation of the main regulatory provisions and is addressed to those with duties such as licensees, installation operators, installation owners, well operators and others involved with offshore activities. The principal regulatory aim is to reduce the risks from major accidents and hazards to the health and safety of the workforce at such installations - or in connected operations. The Safety Case requirements were in response to the central recommendations of the Cullen Report ([Cullen, 1990, Ref 5](#)) into the 1988 Piper Alpha North Sea oil production platform disaster which killed 167 men.

In the 2009 GFK NOP Social Research 'Offshore Workforce Survey' Report Section 3.4 (Ref 10) it was reported that 70% of the offshore workforce who had taken part in the research questions said that they had not been consulted during the Safety Case report process. Levels of consultation were highest amongst Supervisors and Management with 46% reported. Only 22% of people involved in the survey said they knew where to find details of the Safety Case and overall only 21% felt that the full process was effective in gaining their input. With regards to involvement with Health and Safety in the workplace offshore the same report detailed that nine out of ten persons surveyed believed they felt well involved in health and safety in their workplace. Again Managers scored highest percentages for health and safety involvement with the lowest roles being scaffolders and technicians.

Furthermore 98% of workers agreed that there should be a strong workforce involvement in health and safety, with 92% of offshore managers valuing workforce involvement strongly. 86% of workers went on to say that they contributed to the management of health and safety issues. 91% of personnel were confident that their health and safety concerns would be dealt with appropriately, although only 58% strongly agreed that stopping a job they thought to be unsafe would not threaten their job, indicating that almost half would think twice about reporting an unsafe act or condition.

A five yearly follow up report to ‘Psychosocial work environment and the health of offshore personnel’ released in 2000 titled ‘[Psychosocial aspects of work and health in the North Sea oil and gas industry, HSE Research Report 002, Oxford University \(Ref 08\)](#)’ gave an updated overview of the offshore crew satisfaction with safety overall. This showed that overall satisfaction with safety and emergency response measures *decreased* during the five year period. Taking the overall findings into account there was also a marked difference between both drilling and production installations regarding the findings. In short, the decrease in satisfaction with safety routines, safety instructions/training, follow up of accidents and medical services was far more widespread on production platforms than on drilling rigs.

With regards to safety perception in the [Research Report ‘Work, health and safety in the UK oil and gas industry – A survey of onshore sites and comparisons with offshore installations, 2001 \(Ref 13\)](#)’, general satisfaction with safety measures and procedures was recorded although significant variations in sites and job aspects was seen. Personnel who mainly worked in office based jobs were more satisfied with safety measures than those working outside. This showed that the safety perception of a task was viewed by the persons actually carrying out the work to be of a higher degree of risk than the people who were office based and who were for the most part planning and preparing most of the work scopes. It was also noted that individual sites rated themselves in most cases as higher on the

safety measure scale than the next or similar installation, showing on site personnel for the most part held their own site in better regard than others in the area.

iv) Psychological stressors and mental health related to offshore work

When working offshore the main focus is always the prevention of injury and prevention of equipment damage (one will usually precede or follow the other). With so much emphasis on these areas the psychological stressors, the ‘injury’ that perhaps can go un-observed, are often overlooked or indeed not even discussed or brought into the equation when carrying out an investigation. Hence why a ‘human factors’ risk based assessment is essential when dealing with particular work scopes or job types, which can enable company management to ‘see’ potential psychological stressors before the stress develops to the point where harm is brought to the individual, or someone else in their work area. In order to try and assess psychological well being in the UK oil and gas industry [Cambridge University Press](#) published ‘[Mental health in the oil industry: a comparative study of onshore and offshore employees](#)’, in 1992 (Ref 14). The report shows how the unique lifestyle of an offshore worker has attracted the attention of researchers from a number of disciplines including occupational medicine, psychiatry, psychology and sociology. The offshore working life structure can have adverse health effects through the type of work schedule, proximity of workers, privacy problems, living and working in a confined space for up to three weeks at a time, and the constant thinking and acting around safety issues.

The same report quotes ‘[Cox, Human factors shift work and alertness in the oil industry](#)’, 1987 (Ref 20) which considered the demands of working offshore as such to ‘**tax the mental equilibrium of any person who is not wholly stable**’. This comment initially raised the more specific issue of the mental health conditions of offshore workers. After taking all of the assessments data into account the report struggled to commit to a set conclusion. The reasons for this were fairly simple, both onshore and offshore workers scored very similar overall marks during assessment which led the

report team to ask why this was the case given the evident 'stress' factors overly apparent in the offshore work cycle. One conclusion which took this question into account was to discuss the fact that offshore workers were for the most part self-selected to take offshore employment and the associated psychological factors (including the ability to cope with the extreme conditions involved) had a part to play in a person's decision to seek offshore employment in the first place, hence they knew what they were getting into and came well prepared. Someone not of this mentality simply would not have applied for the job

v) General health behaviours and problems related to offshore work

In the [Psychosocial aspects of work and health in the North Sea oil and gas industry, HSE Report 002, Oxford University 2002 \(Ref 8\)](#) comparisons were made between the minor health complaints and health behaviours of both onshore and offshore personnel. The general health results from this study showed that the reporting of sleep disorders and headaches amongst offshore workers was of a ratio of nearly double that of the onshore workforce. This in part can be attributed to the poor air quality (from exhausts, diesel engines, machinery running in tight spaces, chemical usage etc) and constant noise in various forms. It should be highlighted that although the rig personnel work 12 hour shifts, the rig itself does not cease work at any time. Taking this into account, the report on the other hand found musculo-skeletal and gastric problems were reported *less* offshore. The findings pointed towards location being the single biggest attributing factor to the differences found in health problems reported offshore, along with job type, age and type of shift work.

Health behaviour, smoking and body mass index comparisons were also reported on in the same research. With regards to smoking a +11% rate in smokers was seen compared to their onshore counterparts. For body mass index, up to the ages of 50 years of age offshore personnel had a lower body mass index. This trend completely reversed at 50 years of age with offshore personnel showing a higher body mass index than their onshore counterparts. One reason for these results could be the

younger concentration overall of offshore workers, especially on drilling installations, which has been labelled as a ‘young man’s game’, especially towards those working on drillfloor operations. Over 50 years of age offshore workers tended to have supervisory or management level positions which meant they tended to have less physically demanding roles and as such tended to increase body weight over the transition period between roles and also thereafter.

vi) Family responses to spouses working offshore and effects on family life

In 1985 the study ‘The Psychosocial consequences of intermittent husband absence: an epidemiological study’, was published by R Taylor and K Morrice at Aberdeen University (Ref 15).

The paper examined the psychosocial effects on wives during their partner’s intermittent absence whilst working away on offshore oil rigs. Random data samples were gathered in and around the Aberdeen area from the wives of onshore and offshore workers. The data analysis compared samples from both areas and attempted to prove a prevalence of ‘intermittent husband syndrome’. The evidence showed that in actual fact suggestions of psychosocial effects of intermittent husband absence were exaggerated. In fact there was little difference shown between the wives of workers either working on or offshore with regards to their mental or physical health. There were cases of intermittent husband syndrome identified, but these tended to be contained within a group of ‘novice’ wives, those wives who were either classed as being young, new wives or wives with newly born babies. Even amongst ‘offshore’ wives that had shown tendencies for mood and behaviour ‘swings’ there was still no correlation to showing increased rates of health disorders. The report defined levels of ‘reactivity’ in offshore wives, specifically in regard to marital conflict to be around 10%, not above normal levels.

Community, Work and Family published a report ‘Offshore spouses perceptions, attitudes and experiences’ in 2009 (Ref 21) which took the potential problems of ‘intermittent husband syndrome’ a step further by identifying impacts not only on offshore spouses but also the children of offshore

personnel. In particular the report highlights findings from interviews with children aged between 8 – 12 years of age from offshore families. This research found that repeated departures by a parent offshore were often a source of distress, especially at key events (e.g. birthdays and religious occasions such as Christmas, Passover, Ramadan etc) where the spouse was missing through being offshore. The study also highlighted the fact that the children interviewed were aware of the hazards involved in offshore work and also about the effects their parent's absence was having on their Mother or Father. A positive note discussed was that the children recognised that when the offshore parent was home they saw more of them than they would a typical onshore working parent. The material also highlighted concerns of wives for their husband's safety offshore, the demands placed on the wife dealing with domestic and parenting tasks and the importance of social and emotional support from extended family members, all of which highlighted the extra stress loads placed on the typical offshore working family.

### 3.0 METHODOLOGY

#### i) Sampling

Different options were discussed initially regarding how it would be best to research the views and opinions of offshore workers onboard UK installations. Firstly it was decided that any communication with the offshore workforce had to be undertaken with the full co-operation of workforce employers, whether that be offshore operators, drilling companies or third party employers. This was initiated through the operating company after consultation with onshore management. Their agreement to allow distribution of a questionnaire was gained after it was confirmed no employee names, installation name or workforce employing company would be recorded during the survey process.

It was decided quantitative data would be collected through the use of an anonymous questionnaire. the questionnaire was compiled after qualitative research interviews were held with offshore safety advisors to discuss the relevant questions which would return the best survey data related to the dissertation question 'How can working in an offshore environment in the uk affect the health, safety, wellbeing and family life of an offshore worker'?

All distribution and collection of questionnaires would be strictly controlled for distribution and collection through the offshore Safety Advisor at each site and either scanned and returned via email (at [offshoreworkinglife@hotmail.co.uk](mailto:offshoreworkinglife@hotmail.co.uk)) or posted for collection at the onshore operators office site in Aberdeen. Offshore Safety Advisors were given specific instructions to release the forms during the main on shift crew's first Weekly Safety Meeting. This enabled the timing of questionnaire distribution to fall after the first week offshore. This meant the crew completing questionnaires were 'fresh' and into 'offshore mode' after a week on the rig, had this been carried out further into the trip the process may have been skewed by answers reflecting the fact some crew would be getting

physically and mentally tired which may have been reflected in their answers given in the questionnaire. All the Safety Advisors verified this process was carried out according to instructions.

The questionnaire was short enough to be given out on one sheet of paper (two sided) to enable self-completion and enough returns to give a high quality sample.

ii) Sample Size and Data Analysis

A total of 121 returned questionnaires were received during the period January to May 2014. All questionnaires were processed into a dedicated excel spreadsheet (see [Appendix 2 – Data Results](#)) initiated to record data and generate charts from the questionnaire key variables.

iii) Sample Profile

These results are based on 121 questionnaires completed by offshore workers from January to May 2014.

- 25% of the workforce surveyed stated they have worked offshore for less than five years, 34% six to ten years, 19% eleven to twenty years and 22% over twenty one years.
- 40% of the personnel surveyed were on a 2 week on 2 week off rotation, 44% work 3 weeks on 3 weeks off and 13% work 2 weeks on 3 weeks off.
- 43% of the workers surveyed classed themselves as manual workers, 21% as office based and overall 36% of personnel confirmed they were designated Supervisors.
- 96% of those surveyed were male, 4% female.
- 95% of people who took part reside in the UK, with 5% living out-with the country.

A detailed analysis of the survey results has been undertaken in the Findings and Analysis section of this report.

## 4.0 FINDINGS AND ANALYSIS

### i) Presentation of Findings

A total of 121 offshore personnel completed and returned questionnaires. The average offshore installation can vary from 90 to 140 crew members. The number of questionnaires returned was recognised to be a favourable number given that it projects what could be seen as a good overall reflection of a full mixture of crew on your average offshore installation. This was confirmed after the results were dissected into the excel spreadsheet pre-analysis, which highlighted the fact questionnaires had been completed by every age of worker, type of worker, and workers who had been working offshore in the short term to the long term, thus giving a very good projection of overall safety and human factors perceptions in the offshore working environment. ([Data results chart projections Appendix 3](#)).

The analysis of the data returned found that 65% of personnel were attracted to working offshore for the benefits of the time off, 61% of people also stated salary expectations as an attraction with 37% including career opportunities as a contributing factor for seeking offshore employment. Only 7% of crew in this section of the questionnaire said that the reason for seeking offshore employment was because they were unemployed or that it was the best available opportunity at the time. This section of the questionnaire tied into the next question which asked if crew believed they spent more or less time with family as a result of working offshore. 69% of crew stated they felt that they spent more time with family as a result of working offshore. 21% stated they believed this not to be the case.

Re-adjustment back into family life after an offshore trip was highlighted as being relatively smooth, 97% of personnel stating this was achievable on most occasions within a few days (42% straight away, 55% within a few days). Furthermore 91% of crew said their family re-adjusted well to them coming home, with 9% stating this not to be case. 85% of personnel viewed that working offshore

made their home life better in general, 13% said they believed working offshore had a detrimental effect on their family life. Of the persons who believed working offshore made their family life better 56% of these people said this was because it helped financially. 23% believed working offshore results in less stress with regards to looking after their family.

82% of crew questioned enjoy their job. 16% who stated they enjoy their job also said they looked forward to going away to work. 23% of crew do not enjoy their job.

57% of crew see their job as a type of family sacrifice, 43% do not believe this to be the case. 90% of people surveyed believe their family and friends see their position offshore as a good job. 76% of people believe their job is worth the sacrifice (time away). 72% of these people think that they have more time for family and friends through working offshore.

The questionnaire asked if crew believed their family life would improve if they took an onshore job. 19% of people said that this would be the case. 78% said no.

Personnel were asked how stressful their position was on a scale of 1 – 10. The average result of returned questionnaires was 6.25 out of 10. Crew were asked if their position was mentally demanding and 83% said yes. 46% of crew stated their position was physically demanding.

48% of personnel stated they believed their personnel health was impacted positively (eat healthier, attend gym more) as a result of working offshore. 49% stated they believed their health was impacted negatively (eat more, lack of sleep, smoke more).

With regards to offshore recreational facilities 64% of those questioned said they believed the provided facilities were adequate. 34% believe facilities are not adequate.

How working offshore impacts your health onshore (during time off) was assessed by asking how people's health was affected onshore by the effects of working offshore. 29% of people believe working offshore affects their health negatively (by smoking and drinking more) when at home. 70%

said working offshore does not impact their health onshore. 23% of people surveyed stated they drank alcohol excessively when home on time off. Of these persons 10% drank alcohol excessively when only in their own company.

How parent and child relationships are affected by a parent working offshore was broached. 45% of those questioned believe their relationship with their child is impacted by working offshore. 30% say they believe there is no impact from this situation. 79% of personnel believe their wife and children look forward to them coming home. 12% of crew stated that there are times when they feel unwelcome in their own home. 21% believe there are times when their wife or children look forward to them going back to work.

Safety with regards to working offshore was a section of the questionnaire which received many written comments (which were not requested) showing all safety aspects related to working offshore are high on the agenda of offshore workers. 36% of workers do *not* feel safe travelling (by chopper) to their installation. 63% said they do feel safe travelling to their installation. 38% of crews believe all safety precautions are *not* taken to ensure their safe travel to work. 60% said they believed all safety precautions were taken. 47% of people reported that their family was not comfortable with their travel arrangements to work (by chopper). 52% said their family was comfortable with these arrangements.

83% of crew believe they are treated with respect at work. 17% believe they are not treated with respect. 92% of personnel believe safety is the most important factor whilst working offshore. 8% believe it is not. 40% of these personnel stated there has been a time during their offshore careers when safety has not been the most important factor (during a particular time on the installation). This question was followed up with a more specific question to identify reasons as to why this may have been the case i.e time pressure, inadequate management, lack of importance or other. These extra areas have not been recorded through lack of participation on the question. Personnel were asked

what they believed was the most important overall overriding factor during their time on the installation – Personnel Safety or Operations? 70% of participants marked Personnel Safety and 30% marked Operations on their question sheet.

87% of crew taking part believe their role to be long term. Of the 13% who believe that not to be the case 2% was down to these individuals making a short term financial decision to work offshore. Another 8% believed their role was short term through lack of job security.

Employer engagement was highlighted with a question asking the crew if they believed their employer engaged with them in a positive manner. 79% said yes this was the case. 21% did not. Those who answered no were asked separately how they feel the employer could change this and how they could engage more positively, some written answers to this question stated **“more communication”, “practice what they preach”, “get to know their people”, “tell the workforce the truth”, “better communication”, “better focus on the good rather than the bad all the time”, “they treat us poorly”, “we are just a number to them”, “listen more to the people who are actually out here doing the work”, “more leadership”, “back seat drivers micro manage”, “company driven for shareholders and less on understanding the workforce” and “safety training too intense – eventually becomes detrimental”.**

ii) Analysis of the data

With regards to the physical stressors related to the offshore working environment, it was shown in the literature review regarding the paper [Psychological Medicine – Mental health in the oil industry: A comparative study of onshore and offshore employees, Parkes, 1992 \(Ref 14\)](#) that the impact of the offshore working environment can lead to greater anxiety in the offshore workforce compared to onshore personnel, mainly due to the perception of risk offshore that is reinforced by the safety regimes in place and of course major events such as Piper Alpha and Macondo. The data collection

for this dissertation report correlates with the findings from this report which found evidence of a link in anxiety and perceived risk in offshore personnel. The data collected here reported that 83% of current offshore personnel who took part in the survey questionnaire believe their offshore position is mentally demanding, this is nearly double the 46% of crew who stated they feel their work is physically demanding. Taking into account that 22 years have passed since Katherine Parkes report (which also highlighted the onshore mental health related stressors such as detachment from family and friends) and also the huge shift towards much tighter safety regimes and regulation since that time, it appears that if anything, the mental stressors involved in offshore work are having a bigger impact on mental health than ever before.

Relating to physical stressors and the feedback received from crew who carried out the survey, the data collected for this report correlates with findings from the paper [Work, health, and safety in the UK oil and gas industry – A survey of onshore sites and comparisons to offshore installations](#), prepared by the Department of Experimental Psychology at Oxford University for the Health and Safety Executive, 2001 (Ref 13), which found little evidence to prove offshore personnel were more physically challenged than that of an onshore worker, although the paper in question did not survey offshore drilling sites. Even still, the data collected for this report substantiates this position given that the data collected for this report was primarily from drilling sites which could be described as the most physically demanding types of positions, yet still had a lower percentage of personnel reporting physical stressors.

A section of the literature review highlights results from the [2009 report by GFK NOP Social Research 'Offshore Workforce Review'](#) (Ref 10) which reported high percentages of personnel had not been consulted on critical safety management processes such as their safety case, although 9 out of 10 crew noted that they did feel involved with health and safety in the offshore workplace. In that report 58% of personnel believed 'stopping the job' would not threaten their job, which indicates

over 40% believe it would, which is highly disturbing, given the constant assurances by offshore companies that this will never be the case. In the data collected for this report personnel were asked if they believed 'safety' was the most important factor on their installation, 92% responded yes. An additional question was asked to confirm if this had always been the case, 40% stated that there were times in the past when this was not the case, which again gives cause for concern. 83% of the workforce stated they are treated with respect by their employing company. The evidence here suggests that in the 5 years since the [GFK NOP research](#), there has been a positive movement towards an open and transparent safety system offshore whereby the workers feel safety is now the over-riding factor, and have confidence to report any safety issues without fear of retribution, although with the 40% result on whether this has (not) always been the case, there is clearly some room for improvement although this could be attributed to past experiences which are no longer relevant. This view is solidified further when analysing the results from one of the last questions in the survey, which asked if the workers felt their offshore employer engaged with the workforce in a positive manner. An overwhelming 79% said that they felt this was indeed the case.

Human factors always have and always will play a significant role in how the offshore industry progresses, both from a safety and technology perspective. In 1992 the [Cambridge University Press](#) published 'Mental health in the oil industry: a comparative study of onshore and offshore employees' (Ref 14). This study showed how important it is for oil and gas companies to carry out human factors based risk assessments to enable company management to 'see' potential psychological stressors before it reaches a point where harm is brought to the individual or co-worker. This study viewed the lifestyle of a typical offshore worker and describes its structure with long work schedules, privacy issues and living in a confined space for weeks at a time with constant safety awareness issues as a situation which can have adverse health effects and impacts on the workers onshore life. Similar findings were recorded in the [Psychosocial aspects of work and health in the North Sea oil and gas industry](#), HSE Research Report 002, Oxford University (Ref 8) which showed sleep

disorders and headaches were the largest reported health concern offshore, and were health behaviour, smoking and body mass index of offshore workers are compared with onshore workers. Higher smoking rates in offshore workers were recorded as well as a larger body mass index in those offshore over 50 years of age. In the survey for this report health related questions were asked which were specifically directed to find out how working offshore affects the health of those who took part in the survey. The results were almost split 50/50 on whether working offshore affects their health positively or negatively. 48% stated the time on the rig results in a positive health change (through gym attendance and eating healthier), with 49% saying they are negatively affected by sleeping less, smoking more and eating more. The general findings for this issue is that it is very difficult for a company to introduce physical change on an individual, and rather that in most instances it is the individuals personal choice as to how they conduct their own time on the rig and hence affect their own 'offshore lifestyle'.

Looking at how personnel are affected onshore by working offshore one question was asked which took the health effects question a step further. This question asked if crew believed they drank alcohol and smoked more onshore due to working offshore. 29% believed this to be the case. 77% of those who responded yes also drank excessively in their own company. 21% of participants surveyed gamble but only 7% believe it to be habitual. All of the information recorded shows how imperative it is for a full and proper Human Factors Risk Assessment to be carried out regularly on each installation due to the many mitigating factors which can affect the personal circumstances of an offshore worker, all of which will go un-noticed offshore otherwise.

In 1985 the study 'The Psychosocial consequences of intermittent husband absence: an epidemiological study', was published by R Taylor and K Morrice at Aberdeen University (Ref 15). Family engagement was analysed between an offshore worker and their spouse and children. This study found that the negative effects between spouses (with one working offshore) were often over

exaggerated. The 2009 study by Community, Work and Family ‘Offshore spouses perceptions, attitudes and experiences’ (Ref 21) tried to identify the impact of working offshore on workers children and found that removing the parent from the household regularly did indeed result in a negative event, especially at key dates in the calendar. The study also commented that children questioned were more than aware of the dangers faced by the parent whilst travelling to and from working offshore, but highlighted the children were also aware that over the course of a period they actually had more free time with the parent. Extra demands on the wife or husband left onshore whilst the spouse was away were also highlighted. In the survey for this report 44% of personnel believed that their children were in fact impacted positively by them working offshore. 26% believed their children were impacted negatively. We can assume the percentage of crew who have not participated in this question do not have any children. With regards to personal relationships 79% believe their partner looks forward to them coming home, although 21% also believe their partner looks forward to them going back to work. 12% of crew indicated that there are times when they feel unwelcome in their own home. Overall a high percentage of crew have a positive family experience when combined with working offshore, which correlates with the findings from the 1985 the study ‘The Psychosocial consequences of intermittent husband absence’, (Ref 16) even though the data collected from both is 29 years apart.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The author of this report is and has been an offshore worker for many years and as such has been made more than aware over this time of the common offshore stereotypes, safety perceptions, associated risks and most of all the family impacts from working offshore. The author over this period of time has worked in many difficult and challenging environments including those in Africa, Asia, Scandinavia and the UK. Whilst working in these differing environments some elements relating to offshore life were surprisingly common and universal in their effects on the people working offshore. These issues were often relatively simple, but led to in some cases escalating problems for the people involved which in turn had a serious impact on their health, safety, wellbeing and family life at home and also when in the offshore environment.

The purpose of the research carried out for this report was to ascertain whether or not previous studies carried out over the last twenty years which relate to life on offshore installations in the UK sector North Sea are still relevant in today's world, and whether there is further scope for future research perhaps with an added dimension focusing on different aspects of the research findings.

The research questionnaires were well received by the offshore workforce and indeed some questioned as to why they had never received similar questionnaires from their employing companies. Some comments recorded were **“this is exactly the sort of information they (the employing company) should be looking at”**, **“this makes you think about things a lot more, especially how being here affects your family”** and **“it's about time someone cared about this sort of thing”**. Due to the fact the questionnaires were very well received the information received back was extremely honest. This was in fact not entirely expected by the author. Some feedback, especially that regarding lifestyle habits and family affairs were very open and honest to the point where the author feels that perhaps some of these issues could be developed further and also merit additional research in the future.

The author, before starting the research had in mind what could be regarded as the typical offshore stereotype worker, one which at work is a hard working, safety conscious individual who is also under both mental and physical pressure to get the job done. At home this stereotype man is a well off, hard drinking, gambling man with many family problems (Gilbert, 2013 -Ref 22). Past research has touched on these stereotypes and recorded diverse findings. The research data carried out for this report has shown that for the most part this is indeed not the case.

Today's typical offshore worker is a man in his 30's to 50's who enjoys and feels appreciative of his offshore work position and who believes that his work is first and foremost a means of taking care of his family. With this in mind the research here showed that 69% of personnel actually believe that their job means they spend *more* time with family, even though they spend half their life away from home. 83% of people questioned also believe the job makes their home life better. Nearly 80% of personnel stated that working *onshore* would *not* improve their family life. These results show an immensely positive attitude regarding the integration between the work environment and the family life of these individuals. These findings contradict evidence provided in past studies which have focused on the offshore impact on family life, and show that working offshore can have a stabilising and positive effect on an individual's family life, through higher earnings, more time spent with family (2 to 3 full weeks off 24 hours a day, compared with a typical 9 to 5 worker who may only spend 2 to 3 hours a day with family) and the possibility of having a long career path.

With regards to health perceptions previous study findings could not be confirmed, although as far as the health effects of working offshore are concerned it has certainly been proved that the individual should and has to take the majority of the responsibility for their own health and wellbeing whilst both on and offshore.

Safety and risk perception was an area of the report which highlighted the current negativity surrounding these issues. Travel to and from an installation was highlighted as an issue for workers.

In the questionnaires the author deliberately did not mention helicopters, simply travel to and from, in an attempt not to draw into the negativity surrounding helicopter travel at this time, given the recent fatal accidents that have taken place, although it was fairly obvious as to the nature of the question. This aside, generally safety was seen to be the most important factor on an installation, (92% believed this to be the case) which is a much increased percentage factor from the studies highlighted in the Literature Review for this report.

All of the information processed points to the fact that the major changes to regulation and safety management systems over the last twenty years, along with a greater understanding of human factors related safety aspects, has had a major and profoundly positive impact towards offshore workers, who feel better supported, safer, under less pressure to get the job done, more secure in their job and happier with their family lives.

The people who work offshore are for the most part an intelligent, focused, safety conscious and family orientated group of people. These people trade their time, privacy and family life in order ensure their families are looked after and to provide a service that ensures households across the country can switch on a light, watch the television, turn on their gas central heating in their homes and fill their cars with petrol. No other industry outside the medical profession can boast to be such an important and integral part of people's everyday lives. In the wider context it is difficult to assess if the typical British person feels thankful to this group of people for the challenges they face, the environment they work in or the services they provide, but one thing is for certain, whether their work is appreciated or not, the North Sea albeit it with its unique personal and industry related technological challenges, is now a safer, more efficient and streamlined working arena. Above all the companies involved in this work do their best to care for and understand their employees' needs, both work related and personal, which has had a profound and positive effect on the safety, wellbeing and family lives of our offshore workforce.

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APPENDIX - i) Questionnaire, page 1

## OFFSHORE WORKING LIFE QUESTIONNAIRE

Offshore Location (optional):

Date: \_\_/\_\_/\_\_

The purpose of this anonymous questionnaire is to ask open and honest questions about how working offshore affects the different aspects of your life, whether it be family, health, work, recreation, financial, friendships, safety or indeed anything else. The aim is to ask questions that will answer or debunk some of the myths surrounding working offshore and hopefully paint a true picture of how any stresses or impacts of working offshore can affect different areas of your life. The results of these findings will be analysed in a University Dissertation, and ultimately could help increase understanding, across the general public as well as employers, to the realities of what a person working offshore has to deal with on a day to day basis, and how this benefits them, or not. All question sheets are anonymous and your time in helping to complete the questionnaire is greatly appreciated. Let's try and work together to make our work and home environments a better, more stable & people focused place to be.

Please post completed forms in boxes provided, alternatively scan and send to

[offshoreworkinglife@hotmail.co.uk](mailto:offshoreworkinglife@hotmail.co.uk)

Any emailed forms will be printed off and then the email deleted. Many thanks to my offshore colleagues who helped put this questionnaire together.

**Basic Information** – Please mark X in the appropriate boxes below

Sex	Male <input type="checkbox"/> Female <input type="checkbox"/>
Age	20-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> 61-70 <input type="checkbox"/>
Job	Manual <input type="checkbox"/> Office <input type="checkbox"/> Supervisory role? <input type="checkbox"/>
Home	Live in the UK? Yes <input type="checkbox"/> No <input type="checkbox"/> Travel time to Heliport from house -please state:
Shift	2/2 <input type="checkbox"/> 2/3 <input type="checkbox"/> 3/3 <input type="checkbox"/> Ad-hoc / third party <input type="checkbox"/>
Offshore	Time in years: 1-5 <input type="checkbox"/> 6-10 <input type="checkbox"/> 11-20 <input type="checkbox"/> 21-30 <input type="checkbox"/> Over 31 <input type="checkbox"/>
Status	Single <input type="checkbox"/> Married <input type="checkbox"/> Partner <input type="checkbox"/> Divorced <input type="checkbox"/>
Children	Number - Please state :
Hobbies	Fishing <input type="checkbox"/> Gym <input type="checkbox"/> Football <input type="checkbox"/> Golf <input type="checkbox"/> Rugby <input type="checkbox"/> Other, please state:
Breaks	Holidays per year 1-2 <input type="checkbox"/> 3-4 <input type="checkbox"/> More <input type="checkbox"/> Mainly UK? <input type="checkbox"/> Or abroad? <input type="checkbox"/> Both <input type="checkbox"/>

Questions below: If not comfortable answering certain question please leave blank.

What attracted you to offshore: Time Off  Salary  Career  Best or only opportunity/unemployed   
 Do you feel you see more of your family because you work offshore? Yes  No

When home, how long does it take to re-adjust to family life?  
 Straight Away  A Few Days  Ten Days  2-3 Weeks  - Do you find it Difficult? Yes  No

How does your family re-adjust to you coming home? Well  Not well   
 Do you feel working offshore makes your home life better? Yes  No   
 If so why? Helps financially (home, car, clothes)  less stress in looking after family  Other   
 Do you feel working offshore has a negative impact on your family life in general? Yes  No

Questions continued next page.....

## Questionnaire page 2

Do you enjoy your job? Yes  No  If yes, do you look forward to going away to work? Yes  No   
Do you view your job as a type of family sacrifice? Yes  No   
How do you feel your family and friends view your job? A good job  Not a good job?   
Does your family feel your job is worth the sacrifices? Yes  No   
Do you find your friends are mostly working in oil and gas also? Yes  No   
Do you find you have more time for friends and family because of the nature of your job? Yes  no   
Would your family life improve with a onshore 9 to 5 job? Yes  No   
On a scale to 1 – 10, how stressful do you find your job? Please state :  
Do you feel your job is physically demanding? Yes  No   
Do you feel your job is mentally demanding? Yes  No

How does working offshore impact on your own personal health?  
Better (eat more healthy, gym)  Worse (eat more, smoking, lack of sleep)   
Do you find the recreational facilities onboard the rig are adequate? Yes  No  Adequate?

Does working offshore impact your health at home? Drink / Smoke more? Yes  No   
When you are home do you find yourself drinking excessively? Yes  No  If yes, on your own?   
Do you gamble? Yes  No  If yes, more so since working offshore? Yes  No   
Is your gambling habitual? Yes  No

Are your children affected by you working offshore? Positively  Negatively   
Do you feel your relationship with your children is impacted by your work offshore? Yes  No   
Do you feel your wife and children look forward to you coming home? Yes  No   
Do you feel your wife or children look forward to you going back to work? Yes  No   
Do you ever feel unwelcome in your own home? Yes  No

Do you feel safe travelling to work (your installation)? Yes  No   
Do you feel all precautions are taken to ensure your safe travel to work? Yes  No   
Is your family comfortable with your travel arrangements? Yes  No   
If no does this create extra stress in your relationship? Yes  No   
At work do you feel you are treated with respect? Yes  No   
At work do you feel your personal safety is the most important factor? Yes  No   
Has there ever been a situation where you felt this was not the case? Yes  No   
If yes, why? Time pressure?  Inadequate Management  Lack of importance  Other

What do you feel is the overriding factor during your time on the installation?  
Personnel safety?  Operations?   
Do you feel your offshore role will be long Term? Yes  No   
If no, why? Short term financial solution?  No job security?  Prefer onshore, 9 to 5 role?   
Do you feel your employer engages with its offshore workforce in a positive manner? Yes  No   
If no, how do you feel your employer could engage more positively? Please state:

Thank you for your time it is much appreciated. D McCabe, Offshore HSE Advisor.

**APPENDIX ii)**

**Results record**

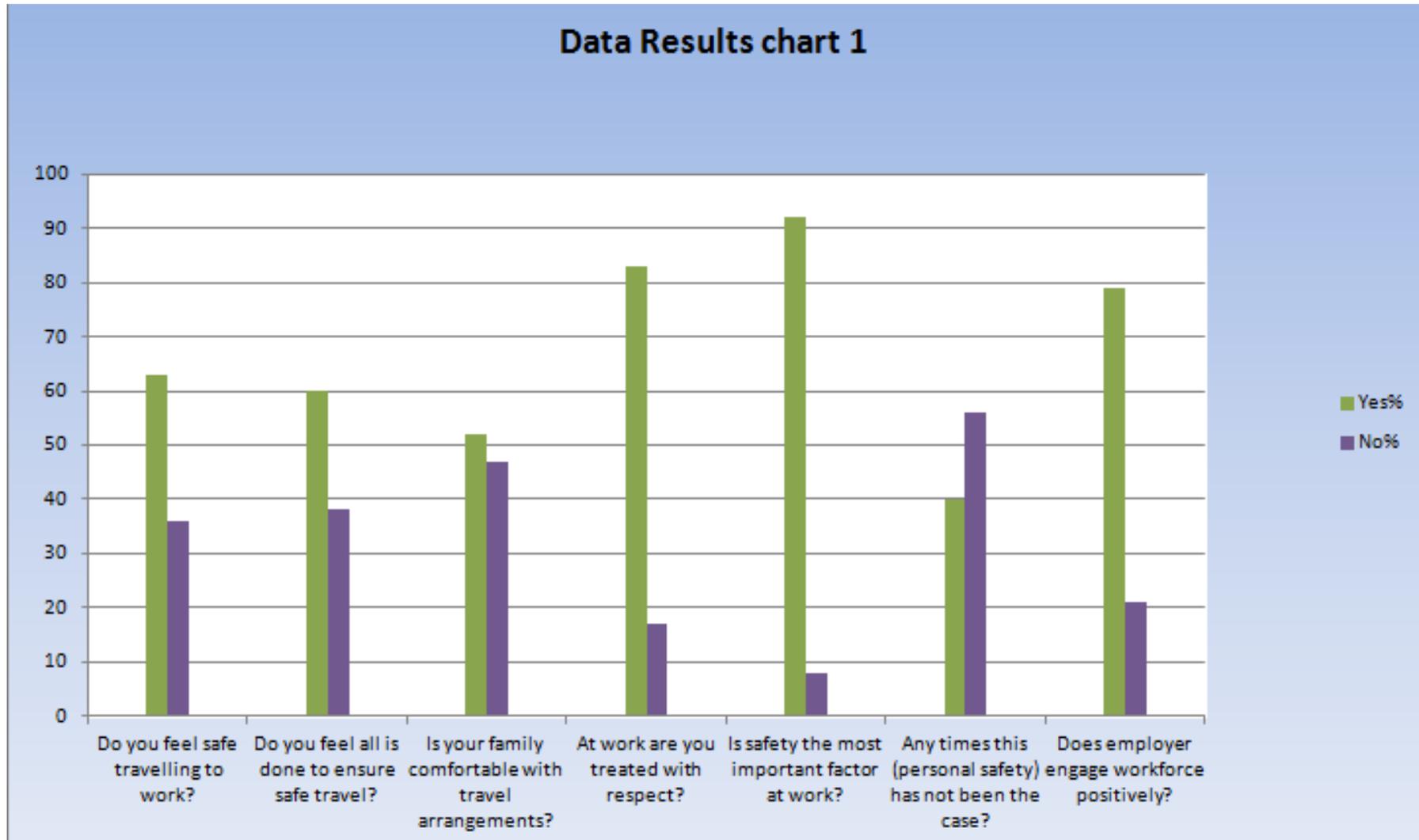
Sex	Male	116-96%	Female	5-4%																
Age	20-30	19-15%	31-40	37-30%	41-50	43-30%	51-60	22-18%	61-70	6-5%										
Job	Manual	52-43%	Office	21%	Supervisor	36%														
Home	Live in the UK?		Yes	115-95%	No	6-5%	Travel time to heliport from house hrs													
Shift	2/2	48-40%	2/3	16-13%	3/3	53-44%	4/4	0	ADHOC	4-3%										
Offshore	Time in years		1-5	29-24%	6-10	41-34%	11-20	23-19%	21-30	17-14%	Over 31	11-9%								
Status	Single	23-19%	Married	63-52%	Partner	29-24%	Divorced	6-5%												
Children	Number - Please State			0	35-29%	1	27-22%	2	38-31%	3+	15-12%									
Hobbies	Fishing	21-17%	Gym	37-31%	Football	43-35%	Golf	37-31%	Rugby	10-8%	Other Please State									
Breaks	Holiday per year			1-2	88-73%	3-4	21-17%	More	4-3%	Mainly UK	5-4%	Abroad	3-2%	Both						
What attracted you to offshore?	Time off			79-65%	Salary	74-61%	Career	45-37%	Best or only opportunity/unemployed			8-7%								
Do you feel you see more of your family because you work offshore?	Yes			83-69%	No	26-21%														
When home, how long does it take to re-adjust to family life?	Straight Away			51-42%	A Few Days	66-55%	Ten Days	1	2-3 Weeks	0	Do you find it Difficult?			yes	11-9%	no	22-18%			
How does your family re-adjust to you coming home?	Well			110-91%	Not well	11-9%														
Do you feel working offshore makes your home life better?	Yes			103-85%	No	16-13%														
If so why? Helps financially (home, car, clothes)	68-			less stress in looking after family	28-	Other	20-													

		56%				23%		17%			
Do you feel working offshore has a negative impact on your family life in general?				Yes		25-20%		No 88-73%			
Do you enjoy your job?		Yes 99-82%		No 19-16%		If yes, do you look forward to going away to work?		Yes 28-23%		No 68-56%	
Do you view your job as a type of family sacrifice?		Yes 69-57%		No 43%							
How do you feel your family and friends view your job?		A good job 109-90%		Not a good job 4-3%							
Does your family feel your job is worth the sacrifices?		Yes 92-76%		No 13-11%							
Do you find your friends are mostly working in oil and gas also?		Yes 51-42%		No 68-56%							
Do you find you have more time for friends and family because of the nature of your job?				Yes 87-72%		No 31-26%					
Would your family life improve with an onshore 9 to 5 job?		Yes 23-19%		No 94-78%							
On a scale to 1 – 10, how stressful do you find your job?		Avg 6.25									
Do you feel your job is physically demanding?		Yes 56-46%		No 65-54%							
Do you feel your job is mentally demanding?		Yes 100-83%		No 21-17%							
How does working offshore impact on your own personal health?											
Better (eat more healthy, gym)		58-48%		Worse (eat more, smoking, lack of sleep)		59-49%					
Do you find the recreational facilities onboard the rig are adequate?				Yes 77-64%		No 41-34%					
Does working offshore impact your health at home? Drink / Smoke more?				Yes 35-29%		No 85-70%					
When you are home do you find yourself drinking excessively?				Yes 28-23%		No 93-77%		If yes, on your own?		12-10%	
Do you gamble?		Yes 26-21%		No 90-74%		If yes, more so since working offshore?		9-7%		no 58-48%	

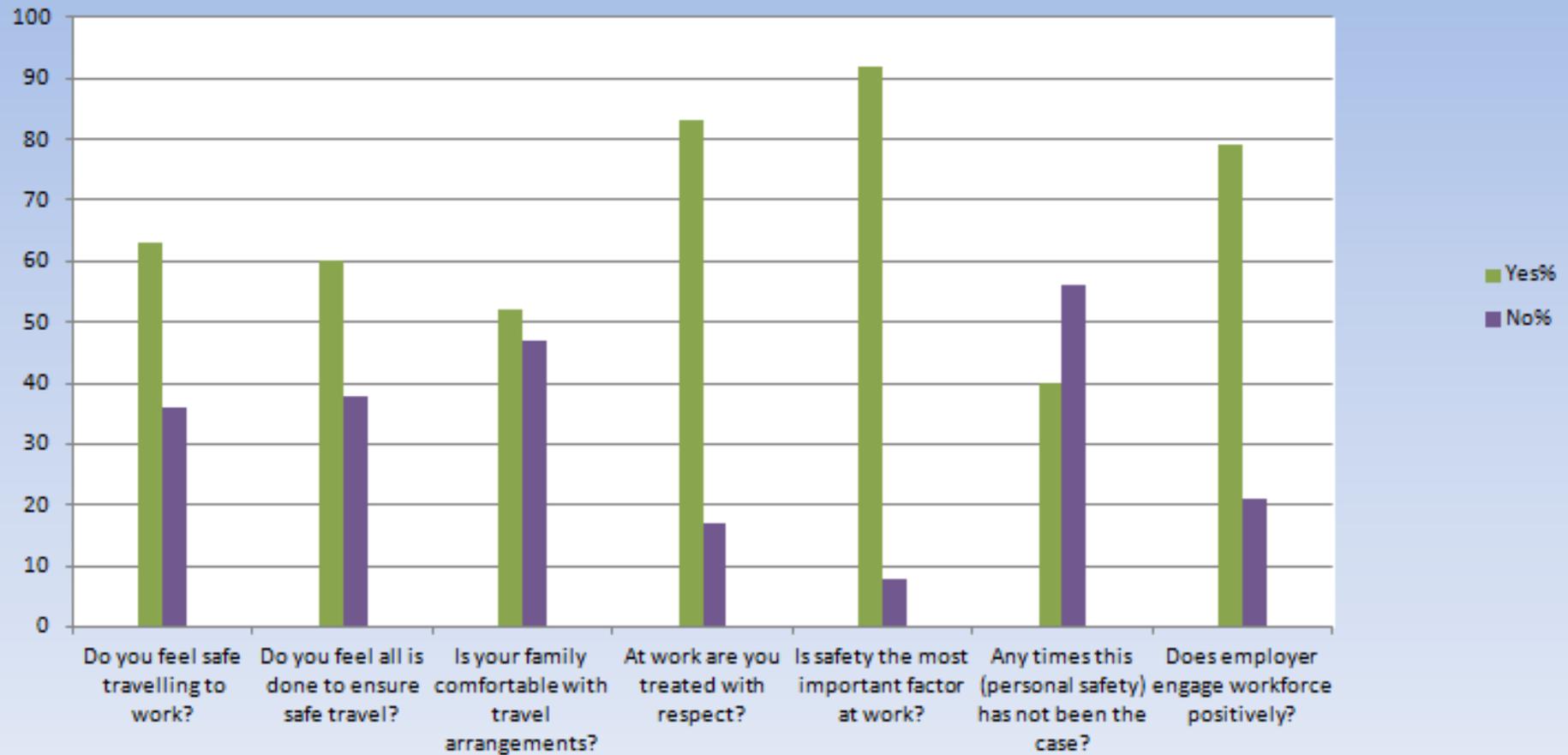
Is your gambling habitual	Yes	7-6%	No	64-53%				
Are your children affected by you working offshore?	Positively	53-44%	Negatively	32-26%				
Do you feel your relationship with your children is impacted by your work offshore?	Yes	54-45%	No	36-30%				
Do you feel your wife and children look forward to you coming home?	Yes	95-79%	No	3-2%				
Do you feel your wife or children look forward to you going back to work?	Yes	25-21%	No	76-63%				
Do you ever feel unwelcome in your own home?	Yes	15-12%	No	88-73%				
Do you feel safe travelling to work (your installation)?	Yes	76-63%	No	44-36%				
Do you feel all precautions are taken to ensure your safe travel to work?	Yes	73-60%	No	47-38%				
Is your family comfortable with your travel arrangements?	Yes	63-52%	No	57-47%				
At work do you feel you are treated with respect?	Yes	100-83%	No	20-17%				
At work do you feel your personal safety is the most important factor?	Yes	111-92%	No	10-8%				
Has there ever been a situation where you felt this was not the case?	Yes	49-40%	No	68-56%				
If yes, why?	Time pressure		Inadequate management		Lack of importance		Other	
What do you feel is the overriding factor during your time on the installation?					Personnel safety	85-70%	Operations	36-30%
Do you feel your offshore role will be long Term?	Yes	105-87%	No	16-13%				
If no, why? Short term financial solution?	Yes	3-2%	job security	10-8%	09-May	3-2%		
Do you feel your employer engages with its offshore workforce in a positive manner?	Yes	95-79%	No	26-21%				

APPENDIX iii)

Data results charts 1, 2 and 3.



### Data Results chart 2



### Data Results chart 3

