Professional Doctorate

in

Health Psychology

Thesis Portfolio

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Contents

Acknowledgements

I have completed the Professional Doctorate in Health Psychology part-time over four and a half years, alongside working two part-time jobs and bringing up a young family. This has been challenging and rewarding in equal measure - a test of endurance, resilience and determination. I have numerous acknowledgements to recognise people that have helped me see it through.

Firstly, I would like to thank my supervisors' Dr Anna Baker and Dr Sarah Snuggs, for all their help and support throughout my time on the course. They have helped me to overcome obstacles, discuss ideas and have kept me focused when I have gone off-script! I would also like to thank previous supervisors that I have had the privilege of working with in my four years on the professional doctorate, everyone whom has had a contribution into the practitioner I have developed and continue to develop into, Dr Esther Murray, Dr Jo Lusher and Dr Lorna Rixon. A big thank you to my peer trainee health psychologists, our peer support sessions had moments of affirmation, reassurance and relief – thank you for listening to my worries and woes, and reminding me I was on the right track!

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Thank you all!

Authors Declaration

I, Tiffany Palmer declare that while registered as a student for the university's research degree, I have not been a registered student or enrolled student for another award of a UK university or other academic or professional institution. I declare that no material contained in the thesis has been used in any other submission for an academic award and I declare that my research complies with UK legislation governing research.

Preface

This professional doctorate is made up of a systematic review, a research project, consultancy report, professional skills report, teaching and training plan, teaching and training evaluation, teaching and training recording, and an intervention report , as detailed in the course handbook for the Professional Doctorate in Health Psychology (edition 2015/2016) completed over a period of four and a half years. As I continue to develop into a dynamic and evidence-based clinician, teacher and researcher, I appreciate the opportunities I have had on the professional doctorate, to work with a range of clients in different contexts. These have enabled me to evolve into a professional and ethical health psychologist, applying appropriate theories in practice, challenging my assumptions and increasing my self-efficacy as a reflexive scientist-practitioner. I have strived to gain work experience in a variety of settings and over the 4.5-year period have worked within the NHS, the charity sector, in industry, as a member of a public health committee and in my role as a teacher and trainer. This diversity has contributed to my progress, and taught me the practical challenges of funding, sustainability and applying health psychology in a political climate.

My main placement setting has been within Southend Adult Community College, which provides a plethora of courses to a diverse population of more than 5000 learners. The college offers a range of courses for leisure, academic qualifications and industry specific training. In addition, the college provides outreach provision and family learning courses. The "Ways2Wellbeing" programme offers free courses to more vulnerable learners, that may have been referred from social services, their GP or a key worker. As a tutor on the Ways2Wellbeing programme, I strive to offer courses that meet learners needs, and are in line with the Southend on sea Health and Wellbeing Strategy (2013). For example:

- *Helping people to make healthier choices* – I run courses on smoking cessation, diabetes awareness, motivation, healthy eating and cancer awareness.
- *To enable our older population to lead fulfilling lives* – as well as a course on loneliness and confidence building, I have run a mindful walking course, designed and delivered for my intervention competency of the professional doctorate (Section C2).

The supportive community environment that the college provides, was the ideal setting for the design and delivery of my intervention competency for the professional doctorate. A mindful walking course, following a pilot study, designed around service user involvement, was carried out within the college with extremely positive feedback, and the possibility for ongoing provision is currently being negotiated. This position, with the support of management has enabled me to develop into a competent and confident teacher and trainer. In addition to my role as a tutor, I have taught psychology undergraduates at London Metropolitan University for the purpose of the teaching & training competency (See section C5), as well as nursing undergraduates at the University of Essex as part of their public health module.

The diversity of learners at Southend Adult Community College has broadened my experience, as well as, required me to adapt and adjust as a teacher to accommodate the different levels and needs of people that I teach. I recently approached the principal with an idea for plans moving forward. I am currently writing a business plan to create a "Health Education Hub" providing health education and interventions that meet the needs of both tutors and learners, in line with the Southend Health and Wellbeing Strategy (2013) and Social Prescribing Guidance (2019). I will be the lead for this "Hub" which will meet both learning and health outcomes in order to meet criteria for funding. With service-user involvement at every stage of the process, this hub will be a work-in-progress, involving close collaboration with senior management and public health. The long-term goal is to provide outreach in the community, in addition to in-house interventions, to improve health and wellbeing and enable people to meet learning outcomes in a diverse population.

In addition to my teaching role, I have been involved with seafarers' welfare and the shipping industry in a number of capacities. At the beginning of my professional doctorate, I was offered a consultancy project with the International Seafarers Welfare and Assistance Network (ISWAN) to analyse data made to their helpline for the year 2015, having worked with them for my MSc in Health Psychology placement. I was initially apprehensive as I had just started on the professional doctorate, however after supervision and peer-to-peer support, I was mindful that consultancy projects are sometimes difficult to come across and I should

seize the opportunity. I negotiated a contract, wrote a project plan and met with senior management to ensure the exact details of the project and the timeframe were agreed. I spent months analysing the data and presented the findings in the form of a power-point presentation and written report to both senior management and the Board of Trustees. Seafarers are provided with a variety of platforms to communicate to SeafarerHelp, a free and confidential helpline with multi-lingual staff, SMS, Facebook, email etc. The aim of the project was to highlight issues around health and wellbeing for seafarers as reported to SeafarerHelp. The findings from the analysis were not exactly as expected, and my report highlighted areas and issues of concern that ISWAN staff were not previously aware of. Based on research findings, I presented descriptive statistics and ideas for interventions based on my findings. The charity implemented changes with immediate effect based on my recommendations. Following the success of the consultancy and the good working relationship I had with ISWAN senior management, I was asked to repeat the project in 2018 with the data from 2017.

Following on from my work with ISWAN, I was asked to sit on an expert panel for the International Transport Federation (ITF), who held two workshops covering different issues pertinent to seafarers and their health and wellbeing. The first was "Social isolation, Depression and Suicide" and the second was "Health Promotion in Seafarers". Together with various experts from a range of settings; charity sector, unions, maritime health, journal editors, maritime doctors, Chamber of Shipping etc., we brain-stormed ideas, discussed interventions and challenged each other in a professional and guided session to ensure best practice and apply theory to the difficult population that are seafarers. I was invited to present at the second workshop on "What are the cultural and social aspects to consider when implementing HP initiatives in the maritime sector?". Despite feeling out of my depth with the level of executives and professionals in the room, the presentation went well, I received positive feedback and felt like I added value to the session. These experiences, combined with my time at Southend Adult Community College, highlighted to me that one of my key strengths lies in presentation – communicating complex psychological theories and applying them to practical real-life situations tailored to a target audience, whether that audience be a professional expert panel or a group of vulnerable adults seeking re-employment after a long break. See section C1.

This introduction to the world of shipping, sparked my interest in the welfare of seafarers, their unseen plight and the potential for health psychology application to improve life at sea. I therefore chose to examine seafarers' self-efficacy for my research project, in an attempt to highlight previously under-researched psychological issues in this vulnerable population, with the aim of having real-life impact. Various professionals in the field warned me of the difficulties of conducting a piece of research in this area, particularly as a part of a professional qualification. However, the current lack of empirical research on life at sea, is often cited as a lack of evidence for addressing issues and promoting change in this population. Therefore, building on the existing evidence base is pivotal to examining the intricacies and covariates of issues to be addressed. In addition, the knowledge I gained from the consultancy projects I worked on, opened my eyes to this vulnerable population and I felt compelled to contribute to the evidence base, by focusing my research withing the shipping industry.

My research study focused on the relationship between loneliness and psychological wellbeing and examined whether this was mediated by self-efficacy. My findings indicated that psychological general wellbeing predicted loneliness and that this was mediated by self-efficacy. The limitations of this study are discussed, and I reflected throughout the process of analysis, and the dilemma of examining latent variables in a complex population with many covariates. As I have developed as a health psychologist, I have become more aware of my strengths and weaknesses as both a researcher and a practitioner. I value the study of real-life issues, though they may present with challenges and obstacles, and I believe that the purpose of research is to raise questions as well as to answer them. See section C3.

Following the completion of the professional doctorate, I will be leading a research team, working in collaboration with the International Chamber of Shipping, an anthropological colleague from Lloyds Register Foundation, a medical doctor from the University of Bergen specialising in seafarers' health and an occupational psychologist working from SafeMarine. I am currently setting up, and will be leading the research group, into the design of a standardised measure for use with a seafaring population, with the intention of guiding future research and providing a tool that enables comparable studies, to provide an evidence base to promote change in this population.

Aware that both my consultancy and research project had focused on the same population group, I endeavoured throughout the doctoral course to address diverse populations and health behaviours, to develop my transferable skills and diversify my experience. A systematic review is a challenging and daunting task and listening to my peers on the professional doctorate was the piece of work that generated most stress. With this is mind, I was aware that my systematic review should be well-thought-out and meaningful, and spent some months, thinking about ideas and possible reviews that would have value and impact rather than be a tick-box exercise.

The Department of Health & Social Care updated their guidelines on physical activity in 2019, with the aim of changing attitudes to physical activity (The Department of Health & Social Care, 2019). As a regular runner, I often take part in my local Parkrun, in addition, my son recently completed his Bronze Duke of Edinburgh Award, and for his community section of the award, he volunteered at Parkrun for 3 months. This gave me the insight into the process of Parkrun, from both the runners point of view and that of the volunteers. Being a community-led exercise intervention, the ethos of Parkrun resonates with me - the simple design and low-cost of an inclusive exercise intervention, that promotes wellbeing and increases exercise, by encouraging participation from diverse backgrounds. Since the introduction of the Social Prescribing Guidance (2019) Parkrun looks to gain momentum even more, and the model has been replicated throughout the world. For these reasons, I chose to examine Parkrun for my systematic review, looking at why people participate. There is currently little empirical research on Parkrun and no systematic review on participation to date. My aim was to produce a valuable piece of work, examining the current literature and making suggestions for future research in this community-led intervention, with potential to change public health on a large scale (See section C3.1). I enjoy the process of a systematic review and the methodical approach and structure. Review of the literature revealed some interesting themes across articles, and I plan to submit this systematic review for publication in an academic journal.

Furthermore, the recent COVID-19 pandemic is and will continue to have a profound impact on health as well as all aspects of life, changing the way people live around the world. I believe health psychology will have a more explicit role in the future of global and regional

health. As well as the application of behaviour change to wider issues beyond personal goals in improving health. The impact for seafarers has already been extreme, with many being refused repatriation and ships and crew being abandoned.

Now I am nearing the end of the professional doctorate course, I continue to develop as an autonomous practitioner in both skills and confidence. I have gained transferable skills throughout completion of the diverse competencies, and increased autonomy as a practising health psychologist. Upon completion of the professional doctorate, though official supervision will end, I believe that a person never stops learning, and will strive to find a mentor within the field of health psychology. Since my future endeavours are moving in areas where there is currently little health psychology input, I hope to establish a mentoring relationship with a psychologist with similar interests to myself, as a reference guide and to assist me in my continued professional development.

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SECTION C1

GENERIC PROFESSIONAL SKILLS COMPETENCY

Contents

Introduction

This commentary will describe and reflect upon my professional practice as a trainee health psychologist over a four and a half-year period, within my two positions; Health and Wellbeing Tutor at Southend Adult Community College and NHS Health Check Team Leader for Anglian Community Enterprise and my previous position; Health Coach at Southend Diabetes Prevention Programme for ICS Health and Wellbeing. In addition, I sit on the Behavioural Science and Public Health Committee (BSPHN) as the Continuing Professional Development (CPD) Officer, taking part in regular committee meetings, and hosting two CPD events a year, for healthcare professionals working in the behavioural sciences and public health. I have sat on an expert panel for the International Transport Federation (ITF) discussing health promotion and intervention design for seafarers onboard international merchant navy ships, and regularly work as a consultant for the International Seafarers Welfare and Assistance Network (ISWAN).

1.1 Professional autonomy & accountability

1.1a **Practise within the legal ethical boundaries**

Throughout my time as a trainee health psychologist, practicing within legal and ethical boundaries is integral to the role, both in clinical practice and through the areas of competence. I have followed the ethical and professional standards in line with the British Psychological Societies standards (Ethics Committee of the British Psychological Society, 2018) and the Health and Care Professions Council standards (2015).

The Equality Act (2010) is at the forefront of everything I do in both my current roles as an NHS Health Check Team Leader and a Health and Well-being Tutor at Southend Adult Community College. As a service delivering NHS Health Checks, it is my role as Team Leader to ensure that members of the public are treated fairly, in line with the Equality Act, by all members of staff. The Equality Act is the legal framework to protect the rights of individuals and protect people from discrimination and equally unpins my role as a health and wellbeing tutor. The cohort of learners that enrol onto the Ways2Wellbeing courses, are from diverse backgrounds with many learners suffering with severe mental health challenges, having differing levels of education, English and from varying SES backgrounds. I design

and deliver courses, mindful of the diversity of the learners, so the course content is accessible to all. The Individual Learning Plan's (ILP's) given to learners at the beginning of a course required learners to complete a form with their knowledge and goals for the course. This process, discriminated against those learners that were illiterate and drew attention to those people that were unable to complete the form, adding pressure to many of those learners that already struggled with their mental health. I sought to collaborate with senior management in the college and arranged a meeting to discuss the use of ILP's, with service user involvement. We successfully discussed and negotiated on how we could make the ILP forms more user friendly, whilst still gathering the information necessary to meet the criteria for data collection, and hence funding. Further to the Equality Act, the Further Education and Training Act (2007) plays a vital role in my position, particularly in relation to "raising skills and improving life chances". Many of the learners that I see, are not in work, due to mental illness, long-term unemployment, bereavement and domestic issues, therefore creating an environment that overcomes barriers to engagement, is at the forefront of my mind.

Within each of my roles, I have responsibility for personal information and sensitive data. All information has been stored and recorded in line with the Data Protection Act 1998 (updated 2003), until the introduction of GDPR in May 2018, giving individuals tighter control over their own data, and impacting the storing and sharing of data within organisations. In my role as an NHS Health Check Team Leader I am responsible for patient data, entry storage and retrieval on the software application SystmOne. This includes a person's weight, height, BMI, cholesterol, HbA1c, blood pressure, as well as lifestyle information, such as alcohol and smoking habits. This software is accessed by medical services and GP's throughout the NHS and therefore holds large amounts of sensitive and personal data. Within my role, I ensure that those people working within my team, are recording accurate details and data on patients before it is entered onto the system, to be viewed by their GP and necessary healthcare professionals.

Clients are required to give consent for sharing in (within the organisation) and sharing out (with GP and weight management service for example). As the remit of the Health Check Team is to be out in the community, it is my responsibility to ensure that the laptop is secure at all time and the lock screen is activated if I am required to move away for the screen for any amount of time. When out in the community, the service can be very busy with members of the public asking questions, and this can be distracting when entering patient information

onto the system. I have, therefore, developed strategies and a checklist that I refer to ensure nothing is overlooked in the busy working environment.

In addition, in my role as a Health and Wellbeing Tutor at Southend Adult Community College, I have access to learners' personal details and vulnerability factors e.g. mental health diagnosis. These are accessed with the college grounds on a secure system and no personal information on learners is printed. I have designed my own forms for feedback, which are given to learners at the end of a course, these forms are anonymous with no personal information and for my own personal reflection and development.

Setting boundaries and clearly defining the role of a trainee health psychologist is an important part of my teaching role. Many learners at the adult college suffer from mental health issues and are on a mental health care pathway. For this reason, many of the learners have come into contact with clinical psychologists, and the lines are blurred between what it is a health psychologist does that is different from that of a clinical psychologist. Therefore, when I introduce myself at the beginning of any course I run, I talk about the differences between a clinical and health psychologist and explain how public health falls under the remit of a health psychologist. This introduction leads me into the topic I am teaching and gives me a reference point to refer back to, if I am asked a question relating to a specific mental health issue. I strive to make any explanations, honest, clear and succinct with concrete examples that help to clarify and define aspects of learning. This approach enables me to ensure there are clear boundaries and the remit of my practise is clear, ensuring I practise in a non-discriminatory manner. The power imbalance between practitioners and clients can be a vast divide and a key part of my role is to minimise this. Using Gibbs Model of Reflection (Gibbs, 1988), I have developed skills to reflect on situations and seek advice and feedback where necessary. Service user involvement is a crucial part of the fabric of the college and assists in minimising the power imbalance. During health and wellbeing sessions, I aim to empower people, to take management of their own health, and remind them that they are the expert of their own health. Sessions are designed to facilitate their learning through engagement with peer-led discussion. I endeavour to make sessions, relaxed and informal, with service user involvement the linchpin of effective learning. I have developed as a teacher and a practitioner that encourages participation and engagement. In my four years of training, I have developed into a confident teacher and facilitator and moving forward I am working

with senior management at the college to secure funding to open and lead a health hub within the college for both staff and learners.

1.1b **Practise as an autonomous professional**

Throughout the professional doctorate, I have demonstrated increasingly higher levels of autonomy, demonstrating metacognition and insight into my strengths and limitations, and seeking supervision and guidance when necessary. Early on, in the professional doctorate, I was offered the opportunity for a paid consultancy project. This led to some anxiety and self-doubt, as I would be working completely autonomously for an external charity on a valuable piece of work that would have the potential to change policy and influence funding for intervention design. I was encouraged by my supervisors to take the opportunity and I closely followed the 7C's framework (Cope 2010). I felt that this framework was comprehensive and systematic and gave me the confidence to carry out the consultancy. I closely followed the candidate handbook for the Professional Doctorate Qualification by the British Psychological Society, ensuring I met each of the components and the assessment requirements associated with the consultancy competency. The consultancy was successfully carried out, with positive feedback from senior management at the charity. I was grateful that my supervisors had encouraged me to take on the consultancy so soon into the doctorate, and it gave me the confidence to take on various teaching opportunities and apply for a position on the Behavioural Science and Public Health Committee. An important aspect of working autonomously is recognising and acknowledging one's own weaknesses and limitations. In my role as a tutor, I am often asked advice from learners regarding their own personal battles with their mental health. I refer learners back to my course introduction and explain the remit of a health psychologist compared with that of a clinical psychologist. I refer or signpost learners to relevant services or people within the college and advise them to contact their GP or CPN if they have a concern regarding their mental health.

Over the four years, the range of roles I have taken on, have contributed to my development as a healthcare professional. I have become confident in working across multiple departments and with a range of professionals. Working at the adult college, I have been asked on occasion (by staff and learners) to teach courses and sessions that were outside the remit (e.g. specific to mental health diagnosis) of a health psychologist. I have developed in my skills

and confidence to explain with clarity, the role of the health psychologist and know the limits of my practice. At times, learners will email me regularly and seek ongoing communication beyond the scope of my role as a tutor. This is an area that I have sought supervision for, and at times referred vulnerable adults to the safeguarding team within the college. I assess professional and personal challenges through supervision and ongoing reflection. In my last tutor observation and appraisal, I was awarded good/outstanding for my teaching. I am currently bid writing with the principal of the college to secure funding to support a health hub within the college.

In addition, my ongoing work in the shipping industry, has developed into a collaboration with academics and experts in the field to create a research team. I am leading this project, with the aim of designing a standardised measure that may be used in future research with a seafaring population. These two exciting ventures have both evolved from my continued development and autonomy as a trainee health psychologist. I look forward to the progression of these two projects and the application of health psychology theory and models to real-life solutions to vulnerable populations.

1.1c **Demonstrate the need to engage in continuing professional development**

As a member of the British Psychological Society and a member of the Division of Health Psychology, this has enabled me to keep up with relevant developments, reading publications and listening to podcasts, familiarising myself with emerging policy documents. In addition, alongside attending the London Metropolitan workshops and peer sessions, I have sought to engage in opportunities for continuing professional development outside of the mainstream organisations. As the CPD officer for the BSPHN, this role has expanded my breadth of knowledge and my professional network. I have held the position for three years and hosted 2 events annually for the BSPHN, organising workshops with key speakers and everything that goes along with hosting events: food, audio equipment, liaising with speakers etc. In addition, attending committee meetings and fulfilling actions, as well as writing opinion pieces has been an integral part of the role. Being a member of a committee, has brought me into contact with passionate and driven health psychologists in public health, and given me an insight of the diversity of roles of health psychology in practice, and has been rewarding and daunting

in equal measure. At the beginning of the post, I very much felt I was thrown in at the deep end. However, all members of the committee are helpful, professional and enthusiastic and therefore this gave me the confidence to throw myself into the role and increased my self-efficacy as a result. Initially, I did not want to be seen to making decisions on committee matters that were not in my remit (such as approving a venue without confirmation from executive committee) however, over time I developed confidence in making considered decisions. This role has been central to my development as a practitioner, and when I reflect on my development, I recognise that despite the challenges, it has contributed to the autonomous practitioner I have become. I am willing to take the lead when necessary, but also able to work as part of an effective team, and collaborate with others in a multi-disciplinary environment, working to my own strengths and recognising the limits of my remit.

Furthermore, I have completed various online training for both of my roles as an NHS Health Check Team Leader and as a tutor at Southend Adult Community college, both of which require me to complete regular training on; safeguarding, GDPR, health and safety, equity, PREVENT, SystmOne, health behaviour change (Scottish NHS) etc.

In addition, I seek to attend relevant conferences in areas that interest me and add value to the roles I am working in e.g. International Shipping Week, Social Prescribing Conference, Centre for Behaviour Change annual conference. I seek feedback from managers and learners within my placement and supervisors on the professional doctorate programme. Regular meetings and supervision have enabled me to review my progress and set myself professional goals and manage my time to fulfil my competencies, using methods of triangulation (Felder & Brent, 2004). I designed my own feedback forms for learners' and respond to feedback from all relevant stakeholders. Service user involvement is integral to effective learning and behaviour change, and this is encouraged from learners at Southend Adult Community College. Moving forward, I will be leading in two projects, working in isolation as the only health psychologist within a multidisciplinary team. Therefore, I hope to secure a relationship with a health psychologist within academia to act in a mentoring capacity, enabling me to bounce ideas and reflect on my continued professional development.

I am increasing my professional profile with social media accounts on LinkedIn and Twitter, and this has enabled me to increase my network and access research and influencers in real time. Social media allows me to access industry specific, as well as academic insights on the same platform, to respond directly to leading academics and industry experts.

1.2 Professional skills

1.2a Communicate effectively

Over the four and a half years I have been completing the professional doctorate I have developed into a dynamic, confident and effective communicator both in my written and verbal communication. I am competent in engaging with a varied audience, for example, being part of a committee (BSPHN), health promotion materials, educational leaflets, committee papers, consultancy contracts and reports, conference abstracts and learners' feedback. Face-to-face, I am mindful of verbal and non-verbal communication and the significance of culture, age, ethnicity, gender, religion and SES and how this can affect communication styles (Professional Practice Board of the British Psychological Society, 2008). I feel I have developed into a more effective communicator and I am now better able to facilitate learning, help people to engage in behaviour change, and deliver lifestyle and health messages to the patients and learners that I meet in my two jobs.

Within my role as an NHS Health Check Team Leader, it is important for me to communicate results of a health check, as the target audience for health checks is those members of the public that are not engaged with their GP or other healthcare services. The role is preventative therefore the health check offers lifestyle advice and feeds back results such as cholesterol and HbA1c or patients may be referred to their GP or a service with their consent. Communication is key to ensuring patients feel reassured, have a clear understanding of their results and feel empowered to follow up on referral advice. They are given the opportunity to ask questions and clarify anything they don't understand. Clear communication is an integral aspect of engaging with patients in the role the NHS Health Check Team Leader. The target audience for health checks are those members of the public that are not currently accessing their own GP practise, and have barriers to engagement. Patients would be given the relevant information about lifestyle advice and leaflets to take home, with signposting to services.

However, sometimes people will request specific advice about their diagnosis or treatment, and in such cases I would advise them to talk with their GP or relevant healthcare professional. I provide them with tips on how to ask the right questions, using the acronym to assist them when making a list of questions (BRIAN - benefits, risks, instinct, alternative, nothing). These simple techniques, along with their results from the health check, helps people to feel empowered and confident, when making contact with their GP or other professional.

My teaching role with Southend Adult Community College, provides the opportunity to deliver health promotion messages and provide relevant courses direct to learners. Teaching groups that vary in size (2-16) and ability, the cohort of learners enrolled on the Ways2Wellbeing Programme within the college are from a variety of backgrounds. Learners are referred to the programme from various sources, for example, the job centre, GP's, Southend Association for Voluntary Services (SAVS), HARP (local homeless charity) and more recently, since the launch of social prescribing services, link workers. In collaboration with senior management and with service user involvement, the Ways2Wellbeing Programme is developed and adapted to meet learners' needs. As an example, I was approached by a keyworker from SAVS, that had a man in his 20's with severe anxiety disorder and found it hard to leave the house. We enrolled him onto a motivation course, and I suggested enrolling the keyworker as a learner alongside him (after discussion with him). The rest of the group were unaware, and they were all treated as equal learners. This enabled me to plan activities in pairs and always put the man concerned with his keyworker. Each week we set a SMART goal (in private) within his capabilities (for example, to enter the room 2 minutes before his keyworker and say hi). Over the 5-week course he grew in confidence and signed up for another course (loneliness) without his keyworker. He attended all 5 sessions and set himself goals for each week (such as asking a question). At the end of the course, we made a plan moving forward which entailed applying for voluntary work in an area that interested him. Within 6 months he had completed 3 months of voluntary work and had been gained paid employment invigilating exams. At the end of the academic year, I nominated him for "learner of the year" award, and he proudly received runner-up. This is just one example of the significance of service user involvement, multi-disciplinary working and collaboration, within my role as a health and wellbeing tutor. On a personal note, this experience increased my self-efficacy as a tutor, highlighted to me the privileged role of

teaching and reaffirmed the importance of involving service users. I have become aware over my four years of training, that my ability to communicate effectively with a diverse audience, is one of my key skills, and I endeavour to utilise this as I move forward and take on new projects and challenges as a health psychologist.

1.2b Provide appropriate advice and guidance on concepts and evidence derived from health psychology

As a health psychologist in training, it is imperative to ensure, that advice and guidance provided is appropriate and derived from evidence in health psychology. As an example of this, I was asked to sit on an expert panel for the Seafarers' Trust, an organisation that comes under the umbrella of the International Transport Federation (ITF). The Seafarers' Trust hosted two workshops titled: Social isolation, depression and suicide (SIDS) and Health Promotion in Seafarers (ITF Seafarers' Trust, 2016). These were two separate workshops, each lasting for two days. The first day of each workshop consisted of listening to different experts in the field from multi-disciplinary backgrounds, the second day of each workshop was interactive brainstorm and activities to discuss potential interventions and how to overcome barriers within the maritime sector. For the workshop on health promotion, I was asked by the Head of the Seafarers' Trust to give a presentation on; What are the cultural and social aspects to consider when implementing health psychology initiatives in the maritime sector? I was mindful that concepts of health psychology may not be familiar to many people in the audience who had diverse expertise in different backgrounds; International Chamber of Shipping, charities, shipping company representatives, Medical Advisor to the University of Bergen (maritime university), for example, and therefore recognised that the evidence I presented would need to be clear and succinct, current and relevant. I used this platform to tailor and present the use of the behaviour change wheel (Michie et al, 2014), as a guide, to introduce a systematic, theory-based method for addressing key concepts and guiding effective behaviour change for seafarers. This presentation was well-received by the audience and was adopted in the second day of the workshop, for guiding policy makers and stakeholders in a systematic approach to intervention design.

1.2c Building alliances and engage in collaborate working effectively

Throughout my time training I have built alliances and engaged in effective collaborative working, and my skills is this area continue to develop. Building and sustaining professional relationships collaboratively is an essential part of an effective team and valuable service. In my role as a Health and Wellbeing Tutor, learners on the Ways2Wellbeing courses are interviewed prior to enrolment to ensure they are suitable for the courses they wish to do and that they pose no risk to themselves and others. The information collected at the interview process is not passed on to the tutors concerned and this valuable information was being stored on file. It came to my attention that this was the case, and I proactively requested a meeting with the relevant staff members involved and we talked frankly about procedures, our concerns, and ideas for increased cohesion.

It became evident, that registration staff responsible for initial interviews, had no knowledge that the information gathered was not passed on to tutors prior to the start of the course, but was kept on file. We discussed potential pitfalls of this, particularly in relation to safeguarding and self-efficacy theory (Bandura, 1977), how we could better meet the needs of learners and share information in line with the new GDPR regulations, that were a concern to people. We all agreed that collaboration was the key tenet to providing an effective learning experience for vulnerable adults, that already had many barriers to learning and a college environment. We felt that by communicating effectively, we could share important information via email that was in line with GDPR and inform tutors of vital pieces of information with learners' consent. Collaborative working is essential for an effective service, with communication as the key element and engaging service users were appropriate.

1.2d To lead groups or teams effectively

I continue to progress as an effective team leader, as I have demonstrated working within the NHS Health Check service. This position gave me the opportunity to lead a team, build relationships and create an environment that was open and approachable. The health check service requires staff to select shifts via an app, and with numerous staff and team leaders, there is continual change from shift to shift. This required a specific style of leading in such a unique environment. I was mindful of adhering to, and implementing policies and procedures

accurately and consistently, as I was aware that this was not always the case with other team leaders. The nature of the role required team leaders to feedback immediately to staff and different expectations from team leaders sometimes made this task a challenge. By being consistent in my approach, I became confident in the role and received good feedback from my peers and management.

Furthermore, over the period of my training as a health psychologist, I have developed my ability to negotiate and influence, which was demonstrated when setting up and delivering of my consultancy contract. I conducted a consultancy project with the charity International Seafarers' Welfare and Assistance Network (ISWAN) negotiating, timings, fee and outcomes. I delivered the outcome data on time, presented findings to the management team and set up training sessions for staff as a result of my findings. In addition, I presented these findings to the Board of Trustees, presenting advice for organisational change derived from evidence. I received good feedback and was invited back the following year to complete the same project on the data from the next calendar year.

Reflection

Throughout my training to be a health psychologist I have worked in various placements and with different organisations, as evidenced above. This wide range of areas has enabled me to work in diverse settings, highlighted issues of funding, internal politics, and challenges to engagement. I am mindful of working in a non-discriminatory manner and am aware of emerging policy documents, the significance of service user involvement and the importance of collaborative working. My biggest challenges throughout the training has been in relation to funding and organisational politics. My first role was working with the diabetes prevention programme in Southend, and there were political challenges within the organisation that I had not expected, and the service eventually closed due to lack of funding. Secondly, in my role as an NHS Health Checks Team Leader, the organisation has high targets with little funding, and this has resulted in the service employing more staff than necessary, on a zero-hours contract, to ensure shifts were always covered. This created tension with the team and unfair distribution of available shifts. Individual supervision sessions with my university supervisor and workplace supervisor provided space to reflect on my personal and professional

development, to discuss work challenges and their emotional strain, which has enabled me to build up my professional resilience (Rajan-Rankin, 2013).

Using the Gibbs model of reflection (see figure 1), my daily logs have enabled me to describe various experiences related to my everyday practice, consider the influencing factors, try to make sense of the situation and what else could have been done, as well as put actions moving forward (Gibbs, 1988). This led to my increased confidence in discussing health psychology and its application within different settings.

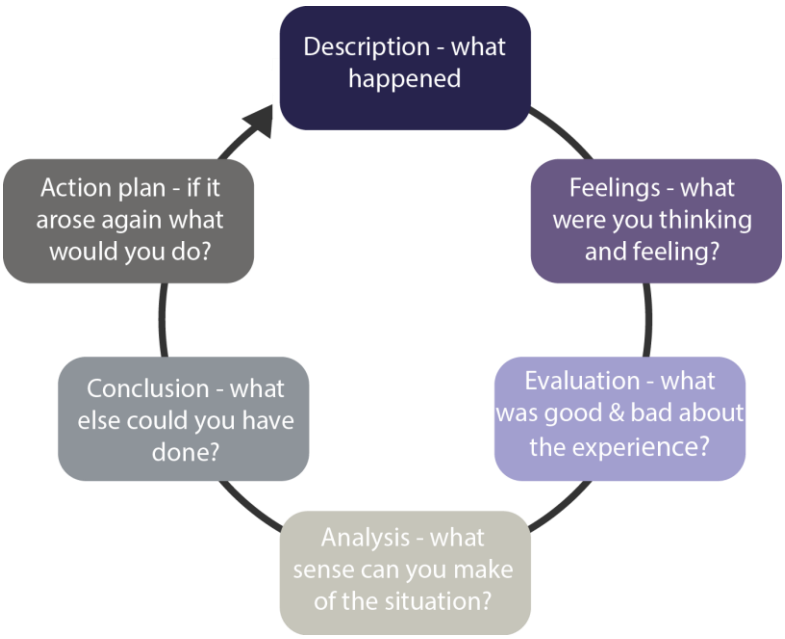

Figure 1: Gibbs model of reflection (1988)

As I come to the end of my professional doctorate, I realise how much I have developed as a scientist, a practitioner and a teacher. I am dynamic and confident with a diverse skillset, and have come to know myself better, my strengths, my weaknesses and my passions. I now have a clear direction that I would like my career path to take. My portfolio highlights my achievements, my diversity of experience and my reflexive approach. I aim to continue my career as a reflexive health psychologist, and to continue my professional development as an evidence-based practitioner.

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SECTION C2

BEHAVIOUR CHANGE INTERVENTION COMPETENCY

Contents

Overview

For the purpose of the behaviour intervention competency, this report is divided into two parts.

The first part describes a case study of a group behaviour change intervention including; the process: assessment, formulation, intervention and evaluation (Section 2.1a / 2.1b / 2.1c), of a mindful walking intervention programme, with reduced perceived stress as a target health outcome. The course was designed and delivered by me, as a tutor with Southend Adult Community College and incorporated into the "Ways2Wellbeing" programme. Ways2Wellbeing is a programme that offers a range of short courses and workshops to support wellbeing and good mental health. Courses and workshops are provided free of charge, and referrals regularly come from HARP (local homeless charity), SAVS (Southend Association of Voluntary Services), CPN's (Community Psychiatric Nurse) or word of mouth. The course offered 2-hour sessions run over 5 weeks. Participants (adult learners) were asked to complete baseline measures for stress (Perceived Stress Scale) at the beginning of the programme. These were then completed again at the end of the 5-week course, to measure effectiveness of the intervention, as well as anonymous feedback forms reflecting on their experience.

The second part is a reflective report comparing and contrasting the application of two models in relation to the assessment and formulation of the mindful walking course (Section 2.1d / 2.1e). The TPB (Theory of Planned Behaviour) and the COM-B Model were examined in relation to the mindful walking course, for their relevance, appropriateness and effectiveness. On comparing and contrasting each, the COM-B provided a more pertinent model and the reasons for its application are given below.

Case Study for Group Behaviour Change

2.1a To design and implement health psychology baseline assessments of behaviour related to health outcomes.

The impact of stress on health has long been documented and a body of evidence suggests that stress is involved in the development, maintenance, or exacerbation of several mental and physical health conditions (Slavich, 2016). According to the government, Health and Safety Executive, in 2017/2018, the number or workdays lost to stress, depression or anxiety in the UK was 15.4 million (Health & Safety Executive 2018/19). However, the term stress is used to describe a range of conditions from mild acute experiences, to severely adverse conditions and makes analysis of the condition difficult. Researchers believe this is problematic and the use of the term "stress" should be restricted to situations where the capacity to cope is exceeded by environmental demands (Koolhaas et al, 2011). According to Koolhaas and his colleagues, stress has both a physical element (objective) and a psychological element (subjective) and it is the perception of the predictability and controllability of this psychological element that has an impact on our health. Given the consistent relationships between perceived stress and physical health (Cohen et al., 2007), and between perceived stress and poor health behaviours (Cohen et al., 1983), it is suggested that if perceived stress is reduced, this can lead to an improvement in physical health and more positive choices around health behaviours (Sirois & Tosti, 2012).

Mindfulness, defined as "the awareness that arises out of intentionally attending in an open and discerning way to whatever is arising in the present moment" (Shapiro, 2009), is increasingly being used as an effective tool to reduce perceived stress and studies have shown significant negative correlations between mindfulness and perceived stress (Atanes et al,

2015; Bao et al 2015). Practising mindfulness and the observation of emotions non-judgementally, enables participants to adopt a calm manner in stressful situations (Kabat-Zinn, 2003). Studies have shown that mindfulness practise has led to improvements in depression, anxiety, stress, and quality of life in a variety of both clinical and healthy populations (Gotink et al. 2016). Studies suggest that participants lack the self-efficacy to practice mindfulness meditation alone, and require the facilitation of a group or structured session to maintain practice (Hopkins & Kuyken, 2012).

Previous studies have looked at combining mindfulness with walking in nature (Wolsko & Lindberg, 2013). Research on green exercise has suggested being outside can lead to lower blood pressure, resting heart rate, body fat, body mass index, total cholesterol and depression, and increased physical functioning (Hanson and Jones 2015). Other studies on environment and mental health have shown the benefits of walking in nature (Roe & Aspinall 2011).

Research that has examined mindfulness-based stress reduction (MBSR programmes which run over an 8-week period - introduce participants to a variety of activities including mindful walking (Kabat-Zinn, 2003). Participants are required to pay attention to their senses, using nature to distract from automatic behaviours (high demands, hurrying). Mindful walking facilitates mindfulness practice doing an everyday activity to become aware of bodily sensations and enabling people to feel grounded in the present moment (Segal et al, 2002). Research suggests that mindful walking in nature could contribute to keeping up mindfulness practice as well as the benefits of a healthy lifestyle, thereby

reducing stress-related symptoms and diseases (Gotink et al, 2016). Walking does not require specialist equipment or skills and can be easily integrated into a person's lifestyle.

This intervention was formulated following a 4-week pilot study conducted in November 2018. The course aimed to deliver a programme that incorporates mindfulness with green exercise with a primary target of reducing perceived stress as a health outcome. The mindful walking course, designed by me, included both elements in the classroom and a mindful walk in the local grounds of a medieval hall. Based on feedback from the pilot study and service user involvement, the mindful walking course was included in the prospectus of the college. The cohort of leaners that attend the Ways2Wellbeing Programme at SACC are diverse. Often participants suffer with poor mental health, may be long-term unemployed, lonely or bereaved. Hence, courses are designed with sensitivity and are accessible to all, regardless of financial, emotional or social circumstance. Courses are free for people to attend, and the only requirement is an enrolment interview for registration staff to assess suitability of the course.

Each week, a classroom session consisted of discussion, activities, as well as question-and-answer opportunities in a relaxed environment, with the aid of slides to facilitate learning. The classroom session also included a sample of mindful breathing with the aid of a mindfulness techniques were explored with the aid of a mindfulness app on a mobile phone, these differed each week, giving participants the opportunity to experience different options for being mindful, these included; mindful breathing – 3 minutes as an introduction, mindful breathing 7 minutes, body scan, engaging the senses. Following the mindful

meditation in the classroom, we then continued the session outside. A short, 3-minute walk from the college, leads us to the grounds of a medieval manor where there are opportunities in the grounds, with ample seating to observe the wildlife on the lake, walk amongst the trees round the perimeter of the grounds or even explore the medieval hall complete with sights and sounds from years gone by. This location provided learners with ample opportunity to try the mindfulness techniques we had learnt in the classroom, whether it be mindful breathing, enjoying the sights and sounds of nature by engaging the senses, or completing a body scan.

Feedback from learners, verbally and from the anonymous feedback form was overwhelmingly positive. Participants particularly expressed how they liked the combination of the classroom-based theory - followed by the practical application on the same day. Feedback from the participants was that the course was not long enough, and they would like it to continue. For this reason, and in collaboration with senior management the course was extended to 5 weeks as all courses needed to be completed from start to finish in a half-term slot in order that the course was not interrupted by a school holiday (in line with college policy). By establishing a 5-week course, if the intervention was deemed successful and placed on a rolling timetable, it could be moved to any time throughout the college calendar and still be able to run its course without interruptions. In addition, participants expressed how they valued the theory and psychology teaching aspect of the course and expressed a wish to extend the classroom-based element of the sessions. The pilot study consisted of 45 minutes in the classroom and 1.15 hours outside, following the pilot study this was extended to approx. 1 hour in the classroom and 1 hour outside (though varied each slightly from week to week depending on activities / weather etc).

Twelve participants enrolled for the course and completed their registration interview. All twelve participants were given an information sheet to read (or was read to them in cases where learners struggled with their literacy) informing them of the purpose of the intervention as part of my qualification of the professional doctorate. Following this brief, participants had the opportunity to ask questions before they signed a consent form, to ensure they fully understand the content of the course and the purpose of the baseline assessments.

On the first day of the mindful walking course, 6 participants turned up. I read the information sheet to everyone, asked them to read and sign a consent form. Participants were reassured that they could change their mind at any time. It is important on all Ways2Wellbeing courses, that participants are made to feel safe and that they belong, due to the vulnerable population enrolled. The atmosphere is relaxed, everyone is welcome, and engagement is encouraged. Ground rules were set in the first session together as a group. Participants were encouraged to participate and suggest their own rules, guided by myself as the tutor. Grounds rules included respect, listening, no swearing, use of mobile phones was agreed between the group, no racism, sexism, ageism, and confidentiality is emphasised as the most significant aspect of the course. After spending some time with introductions and icebreakers, the group were each given an Individual Learning Plan (ILP) that are a college requirement for all courses, along with a wellbeing questionnaire (Perceived Stress Scale) as the baseline measure for the intervention. See Table 1.

Table 1: Baseline measure for PSS

Learner	Baseline Measure
EW	34
EK	33
GO	18
JS	25
RP	17
SW	20

Of the 6 participants, none of them scored in the low perceived stress range (0-13), four participants scored in the moderate perceived stress range (14-26), and two participants scored in the high perceived stress range (27-40) (Cohen et al, 1983).

2.1b Evaluate the pattern of behaviour and formulate working hypotheses about the target behaviour based on assessment.

The aim of the Ways2Wellbeing programme based at Southend Adult Community College, is to provide a series of programmes for people who are not ready for the mainstream courses offered at the college. This may include people that for various reasons do not feel ready to be part of a formal education. They may be people that have been out of work for some time, they may have been bereaved, suffer with mental health issues, or feel lonely. My role within the college is to design and deliver courses in relation to health and wellbeing that meet the needs of the learners that attend. Working in collaboration with my line manager and senior

management at Southend Adult Community College, we responded to the requests of learners to deliver a course in mindfulness.

Using the evidence base from the literature and feedback from the pilot study, I designed a course that met the needs of learners, was accessible to all regardless of education levels, social circumstance or history of mental illness. By completing the pilot study with a group of learners and listening to their feedback, I was able to evaluate the needs of the learner and using health psychology theory and models was able to design an intervention that incorporated mindfulness and walking. Feedback from the pilot study illustrated that learners benefited from the science base learnt in a classroom-environment, (giving the participants the background and understanding of the theory), followed by the mindful walking session immediately after.

The classroom element of the course incorporated; an introduction to mindfulness, reasons for its recent popularity, the 7 principles of mindfulness, the evidence of its effectiveness, barriers to engagement, self-efficacy and behaviour change techniques. See Table 2 for the scheme of works.

Table 2: Scheme of Works

Course Tutor	Tiffany Palmer	**Course**	Mindful Walking
Duration	05/06/19-03/07/19	**Group**	Ways2Wellbeing
No. of Sessions	5	**Delivery Hours**	10
Venue	SACC-Ambleside Drive		

Aim of Course

To introduce learners to the activity of mindful walking.

To provide learners with the scientific background of mindfulness, and put the science into practice. A comfortable, welcoming environment, to learn the history of mindfulness and where it comes from and how we can incorporate it into our lives to improve our psychological wellbeing and reduce stress.

Date	**Objectives / Learning Outcome The Learner will:**	**Activities /Resources**	**Assessment**
05/06/2019	Week 1 will focus on getting to know people, to help them feel relaxed, welcome and engaged. Information sheet for intervention competency and informed consent. We will cover: What is mindfulness? Where did it come from? Why is it so popular? Does it work? An introduction to mindful breathing in the classroom	Icebreaker - Talk to the person next to you for 5 minutes, then introduce them to the rest of the group. Introduce baseline measure PPT Presentation / discussion on mindfulness addressing questions as listed in learning outcomes Mindful breathing track – from "The healing power of the	A baseline measure of perceived stress for the purposes of the professional doctorate. Assessment is informal, using discussion and question and answer sessions, in a relaxed and

		breath" book – 3 minutes	friendly environment.
	An introduction to mindful walking at Southchurch Hall	Walk outside – 30 minutes	
12/06/2019	Week 2 Reflect on previous week. We will focus on stress and the impact it has on our health and wellbeing. Reflect on last week, how we felt / how easy / difficult it was Learners will be introduced to the 7 Principles of Mindfulness Mindful breathing in the classroom	Icebreaker – Take an object for the bag that represents something about you. Presentation / discussion on stress And the impact on our health. Mindfulness app using coherent breathing – 7 minutes Walk outside – 45 minutes	
19/06/2019	Week 3 Reflect on last week We shall look at our barriers. What stops us from engaging in positive health behaviours. How can we overcome this? Introduction to self-efficacy Coherent breathing in the classroom Mindful Walk to Southchurch Hall	Presentation / discussion on mindfulness and where it has come from. Activity on Positive and negative health behaviours. Reminder of the 7 principles of mindfulness Mindfulness app using coherent breathing – 7 minutes Mindful Walk – 1 hour	
26/06/2019	Week 4 – Reflect on last week Introduction to behaviour change techniques to help people incorporate mindfulness into their lives and for it to become routine.	Presentation / discussion on techniques for incorporating mindfulness into our everyday life. Activity – setting goals and planning Mindful Walk – 1 hour	

03/07/2019	Week 5 – Reflect on last week Did we achieve our goals? If not, why not? Looking at ways to maintain a behaviour change. Mindful Walk to location of choice	Presentation and discussion around maintaining a behaviour change Mindful Walk -1 hour Set goals moving forward Baseline Measures Feedback Form

It is imperative that the information, theory and background is delivered in a way that it is accessible to all. A combination of discussion and activities that are inclusive and tailored to the learners in the group with varied educational backgrounds is essential. The mindful walk was delivered in one location in Southend, based at a park behind the college and less than a 5-minute walk. This meant that the mindful walk was accessible to anyone with a basic level of fitness, and it was made clear to participants that the purpose of the intervention was not cardiovascular but relaxation, and therefore the physical activity element need not be a barrier to engagement. The key element to come out of the pilot study was the format, - participants learning the theory in the classroom and putting it into practice straight away. This was considered a strength of the course, with the theory and science facilitating the practical application and learners felt this enabled more successful completion of mindfulness in the natural environment.

Ethical considerations were continually monitored throughout the design, development and delivery of the intervention. In line with college procedures and guidelines, management and the Head of Community Learning were involved and consulted throughout the development of the intervention, giving their feedback on amendments. The enrolment interview at

registration and a debrief session at the end of the course, gave participants opportunities to raise concerns and ask questions.

2.1c Provide detailed feedback formulation on the outcome of the assessment and working hypotheses.

Upon completion of the mindful walking course, two participants did not attend the final session and therefore did not complete the final outcome measure of perceived stress. Of the remaining 4 participants, 1 participant scored in the low stress range (0-13), three participants scored in the moderate range (14-26), and no participants scored in the high perceived stress range (27-40). Out of the four participants that completed the course and attended all 5 weeks, three of them moved down a level i.e. from moderate stress to low stress, or from high stress to moderate stress. Only one participant remained on the same level of moderate stress.

Table 3: Outcome measure of PSS

Learner	Baseline Measure	Outcome Measure
EW	34	-
EK	33	26
GO	18	-
JS	25	14
RP	17	6
SW	20	22

Statistical tests were not possible due to the small sample size, and further research with a bigger sample is necessary before any quantitative conclusions can be drawn. However, feedback from both anonymous course feedback forms and from verbal discussion at the end of the course, was very positive. Participants expressed enjoyment for the course, appreciation of the opportunity to be part of a group, and the combination of classroom-based theory and practical application.

Each session was carefully planned for timings and content and was designed to be relevant and meaningful. Each session built on the previous building in tips and techniques, looking at our barriers and helping learners to address issues in real time. Opportunities for reflection occurred weekly, and participants gave each other support and feedback, encouraging engagement and using behaviour change techniques they had learnt to advise each other (positive feedback to increase self-efficacy, help with setting SMART goals). As each week progressed and learners got to know each other, they developed a bond and commonality in their shared experience. One of the learners suffering from mental health issues, at times was emotional and struggled to take part and engage in discussion. The group was supportive, and the environment was caring. Participants were reminded of the ground rules at the beginning of every session and the sessions were consistently a safe and supportive environment with peer support and encouragement. I facilitated learning and guided conversation but encouraged peer-led discussions.

2.1a-c Reflection

The challenge of this course was the diversity of the participants and the flexibility required to meet individual needs. Different education and literacy levels, required me to think on my

feet, be flexible and adapt material to meet the needs of each member of the group. This sometimes involved putting learners into groups of 2 or 3 so they can help each other. This is a skill that I continue to develop, and feedback from all learners on the mindful walking course was that it was an appropriate pace and level. All participants scored themselves 4/5 or 5/5 as agree or strongly agree on the feedback form for the course for all statements including; I found the course interesting, I plan to continue using mindfulness, I feel confident to use mindfulness by myself. See Appendix for full feedback forms.

In addition, a high proportion of the cohort of learners that attend Ways2Wellbeing Courses suffer from mental illness that can be a barrier to engagement. I have developed in my role as a tutor and practitioner, to provide a supportive environment that is non-judgemental and always welcoming. Verbal feedback (spontaneous) from the mindful walking course acknowledged the atmosphere of safety and acceptance, and the group had a sense of belonging. A limitation of the supportive and accepting atmosphere, was expressed by learners, that non-engagement was made easier as they "knew you'd understand". This was expressed verbally at the end of the course, and again in email correspondence from a learner that did not attend the final session. This remains a challenge as a tutor, and engagement in interventions with those with mental illness is well documented (Dixon el al 2016).

Furthermore, previous studies have shown that a reduction in perceived stress was not evident at 6 weeks, following mindful interventions, but a moderate effect was evident at 12 weeks (Dalen et al, 2010), it is therefore viable that longer courses may be a suggestion for future research as this intervention produced promising results, even though not statistical significance could not be established.

The second part of this assignment is a reflective report, comparing and contrasting the application of two models in relation to the assessment and formulation of the mindful walking course (Section 2.1d / 2.1e).

2.1d Design, plan and implement health psychology interventions based on the assessment and formulation AND

21.e Evaluate and communicate the outcomes of health psychology interventions.

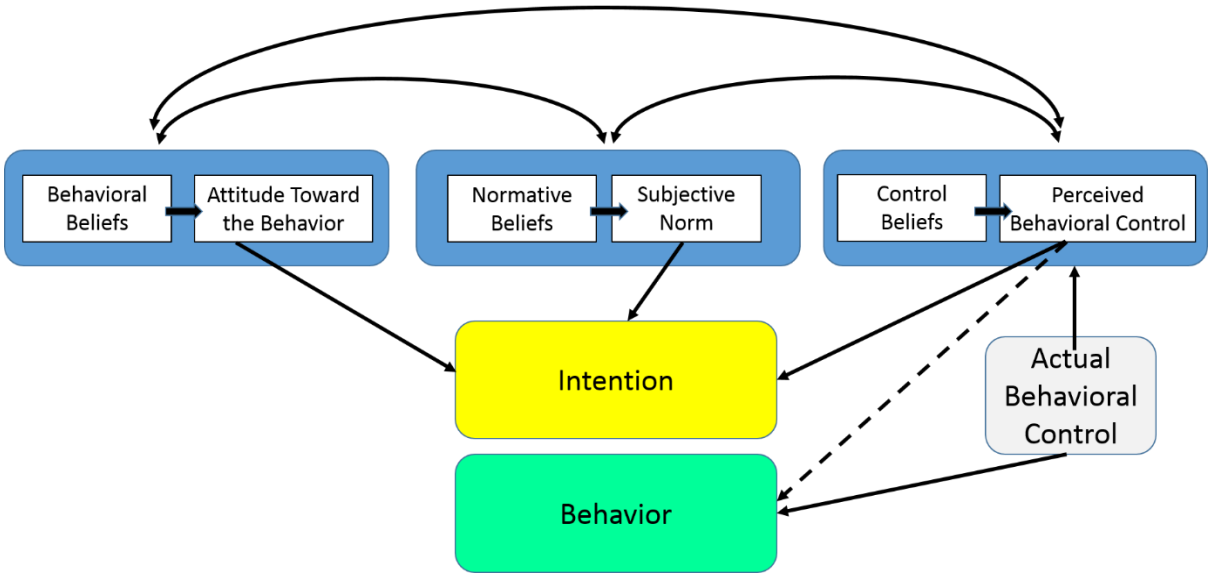
The learners that attend the Ways2Wellbeing programme at Southend Adult Community College are extremely diverse, with cultural backgrounds, education levels, varying degrees of mental illness and many with English as a second language. It is therefore imperative that when designing a course, that it is evidence-based, accessible to all and is inclusive. In line with the Southend Health and Wellbeing strategy we ensured that we met the targets of local public health and meet with the learning outcomes of the college. Health Psychology models and theories that underlie effective and robust interventions are at the basis of intervention formulation.

For the purpose of this report, I have compared and contrasted two models in relation to the mindful walking programme and examined how each contribute to the design and evaluation, but how one model is superior in its effectiveness and application in both explaining behaviour and in promoting behaviour change in a given population.

The two models I will be examining here are the Theory of Planned Behaviour (TPB) and the COM-B model. These two models are the most commonly used in health behaviour change with TPB dominating the field until the introduction of the COM-B model (Michie et al, 2011). I shall be outlining the process of each model and examine the process of each, with regard to the mindful walking intervention.

The Theory of Planned Behaviour (TPB) model, as originally developed by Ajzen (1991) had been the most widely used model to predict health behaviours. TPB has been used in a plethora of research, particularly looking at its effectiveness for examining behaviours (Ajzen, 1991; Brickell et al, 2006; Rivis & Sheeran, 2003; Sommer, 2011; Fife-Schaw et al, 2007). The theory states that attitude toward behaviour, subjective norms, and perceived behavioural control, together shape an individual's behavioural intentions and therefore behaviours. See Figure 1.

Figure 1. Theory of Planned Behaviour (Ajzen & Fishbein, 1980)



The Theory of Planned Behaviour (TPB) was developed from the Theory of Reasoned Action (Ajzen & Fishbein, 1980). Both suggest that a person's health behaviour is determined by their intention to perform a behaviour. A person's intention to perform a behaviour (behavioural intention) is predicted by 1) a person's attitude toward the behaviour, and 2) subjective norms regarding the behaviour (a person's perception of how others would view the behaviour). Subjective norms are the result of social and environmental surroundings and a person's perceived control over the behaviour. TPB was further developed to include behavioural control as an additional determinant of intentions and behaviour.

The TPB has been used to explain various health behaviours, people's intent and predicted behaviour, and can be applied to help develop appropriate programmes to bring about long-lasting changes in behaviour and has been repeatedly applied to increasing physical activity (Hagger et al, 2010). The theory suggests that in order to change the behaviour, you need to change the behavioural attitudes.

The TPB states that whether a person engages in a behaviour depends on both motivation (intention) and ability (behavioural control). There are three types of beliefs: behavioural, normative, and control divided into 6 parts of the TPB, (Ajzen, 1991). These are listed below with explanations of how they were applied to the mindful walking intervention.

1. Attitudes - This refers to an individual's attitude towards a behaviour. Do they think they will enjoy it? Do they perceive it as being good for them? Therefore, attitudes towards mindfulness / nature and walking were all important beliefs for people to hold if they want to take part. For this reason, at the beginning of the course and during the enrolment interview

with the registration staff, participants are reassured that this was not a cardiovascular workout and that they needn't be concerned about their fitness levels. Equally at the beginning of the course, we discussed expectations, and the format of the course. Participants were reminded that I was there to facilitate learning, the environment was one of mutual respect and there was no such thing as a silly question. We emphasised the need for confidentiality and how the key element of all the wellbeing courses that I run was one of engagement, and open discussion. That said, I reassured learners, many of whom suffer with mental health issues, that I aim to make participants feel comfortable in sessions, and therefore never single people out to ask questions or share information if they are not comfortable to do so. It is my aim, that participants begin the course with a positive attitude and their approach is one of open curiosity.

2. Behavioural intention - refers to motivational factors that influence behaviour. At the beginning of a mindful walking course, participants generally have limited knowledge as to what the course will entail, therefore their behavioural intention is to learn about mindfulness and how this can be incorporated with gentle exercise and nature. Participants are given a brief in their enrolment interview so that they know a little of what to expect and the first session is spent with participants getting to know each other and setting clear expectations and a timetable of what we plan to do.

3. Subjective norms - This relates to a person's beliefs about how peers or others around them view the behaviour. How do family and friends view mindful walking? Will they judge us? Teaching focuses on mindfulness and mindful walking as being a personal activity. As individuals we find a way to incorporate mindful walking into our routine. Since walking is a

common activity and mindful walking requires no specialist equipment, we are able to take part in the activity without anyone knowing if we choose not to tell them. This puts us in a position of control and the course aims to emphasise that using the biopsychosocial model of health we can adapt and have control over our activities that fit in with our lifestyle and demands.

4. Social norms - This refers to something that is considered 'normal' or acceptable. Mindfulness has had a sharp increase in recent years. The course teaches about the history of mindfulness, introduces Jon Kabat-Zinn and explores how mindfulness is moving into the mainstream, and being endorsed by celebrities (Paul McCartney, Ruby Wax, Oprah Winfrey). Mindfulness is currently trending, and it remains to be seen whether the current interest is just a trend or is here to stay. The course aims to increase awareness of how mindfulness is an internal state of mind, that can be incorporated into everyday activities.

5. Control Beliefs - This refers to the perceived level of control an individual feels they have to take part in a particular behaviour. This can be related to a number of factors present that may facilitate or impede performance e.g. Reassuring people that mindfulness takes practice and not to place personal expectations on oneself to get it right straight away. This is further facilitated by looking at the 7 principles of mindfulness within the course of the 5 sessions and revisiting them to facilitate learning and aid retention. Spending time in the first session getting to know participants, helping them to feel relaxed, being open about expectations and informing learners that the course is flexible and tailored and that my purpose is to meet learners' needs. One session during the course covers barriers, and what stops us from carrying out health behaviours that we intended. We talk about self-efficacy within this

session and discuss our concerns about our own self-belief and how this can sometimes hold us back. We discuss self-awareness, being mindful of our own mindset and being kind to ourselves. An advantage to having a small group is the ability to be flexible and tailor sessions to facilitate the control belief. Participants at the beginning of every session, reflect on the previous week, discuss what they enjoyed, raise any questions and make suggestions of what the next session should look like e.g. longer outside, more classroom- based teaching, self- efficacy. This helps participants to feel more empowered, increasing their control belief and self-efficacy and facilitating learning and success in undertaking a new activity.

6. Perceived behavioural control - This refers to a person's perception of the ease or difficulty of performing a particular task, or activity, which can vary depending on the task or situation. This is closely related to control beliefs, that if a person believes that the activity is within their capability, they will feel they are able to take part. Participants are more likely and more motivated to take part, if they know they are able to withdraw at any time, as well as having the correct knowledge, skills and resources. Information given before the start of the course (in interview) and again during the first session, reassured participants that the course was not a test of cardiovascular fitness and were kept informed of activities and timetable at every stage. At the beginning of the course, we talked about the content of the 5-week course, so participants knew that it was within their capability and that I responded to feedback from the group. The atmosphere was relaxed and open and this enabled participants to ask questions, seek reassurance or clarify any points that they were not certain of.

The Theory of Planned Behaviour has been used as a standard resource for intervention design for 30 years, though Sniehotta et al (2014) discusses several limitations.

- It assumes the person has acquired the opportunities and resources to be successful in performing the desired behaviour, regardless of the intention.
- It does not account for other variables that influence intention and motivation, such as fear, threat, mood, or past experience, environmental or financial aspects.
- It does not consider that behaviour can change over time.
- While the added construct of perceived behavioural control was an important addition to the theory, it doesn't say anything about actual control over behaviour.

Following the feedback from the pilot study, the opportunity to take part in the intervention on a regular day and time, combined with the resources acquired by taking part in the classroom-session prior to the activity of walking each week, was a key tenet for engagement and perceived success of the intervention. Therefore, the TPB did not meet the requirements of the formulation for this intervention and was not considered appropriate as it lacked the "opportunity". The application of a model for this purpose, needs to include the element of opportunity and for this reason the COM-B model was considered more applicable in the assessment and formation of effective intervention. The COM-B model will be discussed in more detail and its appropriateness examined in relation to the assessment and formulation of the mindful walking intervention.

COM-B and Behaviour Change Wheel

In contrast to the application of the TPB model for designing an effective intervention, the creation of the COM-B model and behaviour change wheel, was deemed a more appropriate framework for the design of a mindful walking course. The approach is broken down into 4 steps:

1. The APEASE Model
2. Stage 1 – Understanding the Behaviour
3. Stage 2 – Identify intervention options (intervention functions)
4. Stage 3 - Identify content and implementation options (behaviour change techniques)

Firstly, the APEASE criteria (Acceptability, Practicability, Effectiveness/cost-effectiveness, Affordability, Safety/side-effects, Equity) was applied for the decision-making process of the intervention strategy. These criteria were applied in a structured way in collaboration with senior management at the adult college and combined with expert judgement from myself as a health psychologist in training. See Table 4 for the APEASE criteria as applied to the design strategy for the mindful walking course.

Table 4: The APEASE criteria for designing and evaluating interventions

Criterion	Description	Intervention
Acceptability	Acceptability refers to the extent to which an intervention is judged to be appropriate by relevant stakeholders.	Intervention design has been in collaboration with senior management, academic supervisors, line manager and service user involvement during the pilot study. The programme has been judged as acceptable by all parties.
Practicability	An intervention is practicable to the extent that it can be delivered as designed through the means intended to the target population.	Proximity to a local park ensures that the programme can be delivered at a convenient location and at a preferred time for learners.
Effectiveness and cost-effectiveness	Effectiveness refers to the effect size of the intervention in relation to the desired objectives in a real-world context.	Literature supports the evidence of mindfulness in reducing stress and evidence in green exercise. This intervention aims to combine the two.
Affordability	Interventions often have an implicit or explicit budget. An intervention is affordable if within an acceptable budget it can be deliver to, or accessed by, all those for whom it would be relevant or of benefit.	The Mindful Walking programme is a free course available to anyone over 18 enrolled in the adult college. Funding for teaching is provided by the Borough Council.
Side-Effects / Safety	An intervention may be effective and practicable but have unwanted side-effects or unintended consequences. These need to be considered when deciding whether or not to proceed.	Concerns of side-effects from deep breathing during mindfulness was a concern, so coherent breathing at the most basic level was used for this programme, as the literature supports its effectiveness without the risk.
Equity	An important consideration is the extent to which an intervention may reduce or increase the disparities in standard of living, wellbeing or health between different sectors of society.	The programme was designed with equity in mind. Participants are assured that this is not a test of fitness, but a relaxation exercise that did not require exertion. In addition, the course was free of charge, reducing barriers for those wanting to attend.

The APEASE criteria was a useful source when designing and formulating the intervention. Application of the APEASE model, highlighted to me the strengths of the intervention when examining each of the stages of the model. Following application of the APEASE criteria, the next step was Stage 1. – Understanding the behaviour. For the purpose of this assignment and the limitation on word count, please see section 2.1a for a comprehensive evaluation of the problem, defined in behavioural terms, with specification of the target behaviour and identification of the behaviour to be changed.

Following on from stage 1, identifying intervention options is the next step in the process in intervention design. The behaviour change wheel (see Figure 2) illustrates the three elements of the wheel: sources of behaviour (the central hub), intervention functions and policy categories. For the purpose of this assignment, a matrix table was created to demonstrate the interaction between the sources of behaviour and functions of the intervention. See Table 5.

Figure 2: Behaviour Change Wheel (Michie et al, 2011)

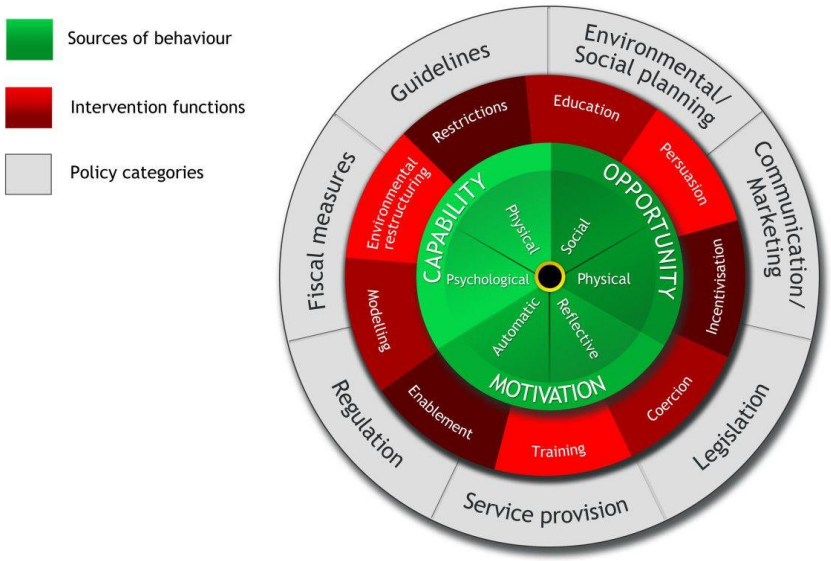


Table 5. Intervention functions

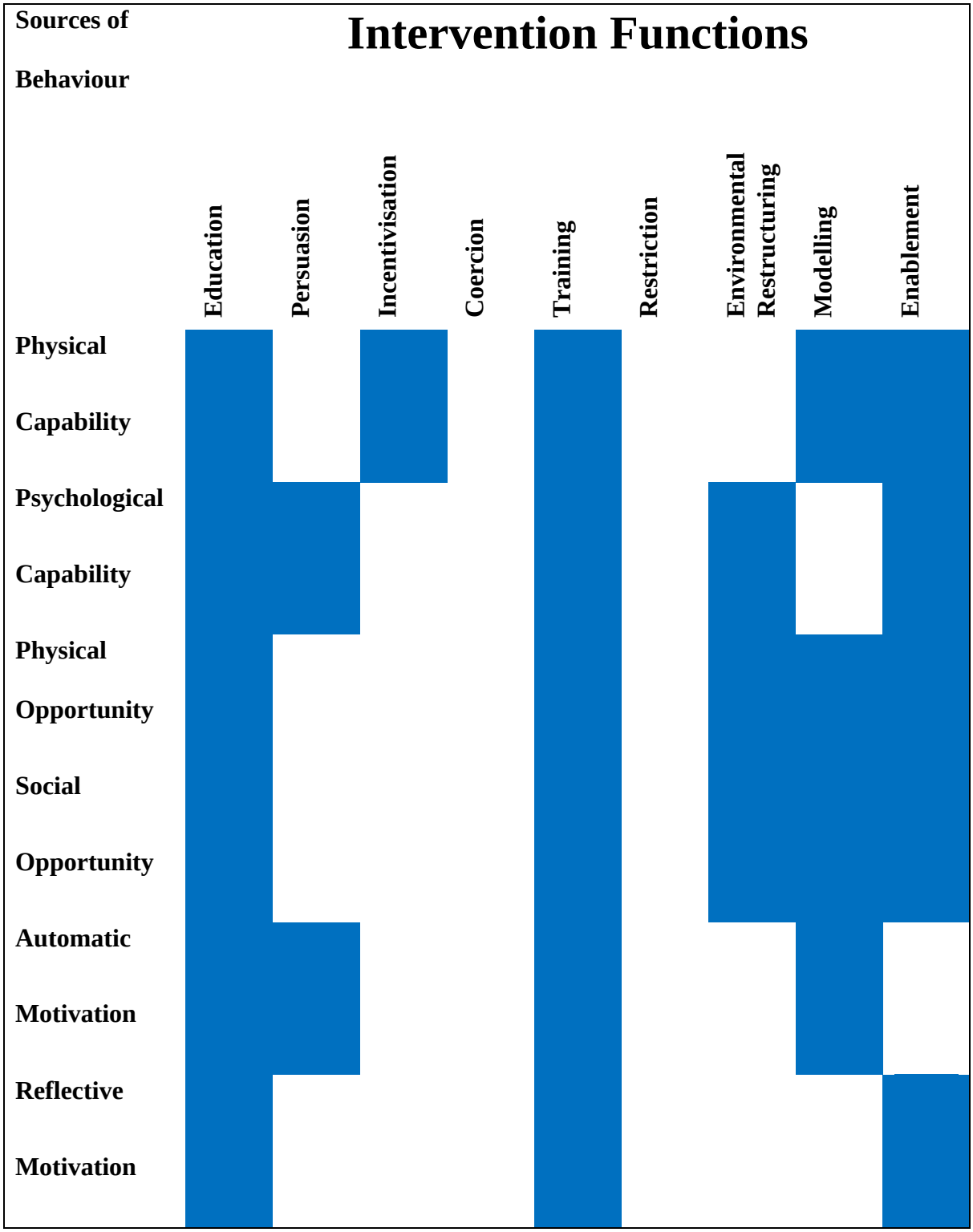


Figure 5 clearly outlines the functions of the intervention and how this interacts with the sources of behaviour. For example, the matrix highlights the enablement of all but 1 of the sources of behaviour. The mindful walking intervention enabled both psychological and physical capabilities, with the use of education and the practical application of mindful breathing in the classroom and using techniques outside together, as well as the physical and social opportunity. In addition, the intervention enabled reflective motivation - as a group we set ourselves goals, reflected on our progress, discussed barriers and made plans. Enablement was the key element of the intervention functions and provided opportunity for an immersive experience that provided both theoretical and practical elements. Though the intervention design does not meet any of the elements for the policy categories, on the completion of the course, if the objective outcome measures provide significant evidence for an effective intervention, the college will provide the course on a rolling timetable and therefore the service provision, of a free mindful walking course, accessible to all.

Reflection 2.1d-e

I really enjoyed delivering this intervention, even though I am experienced at teaching and training with learners at SACC, I am mindful of the impact that courses can have on people's lives and the richness that the diversity of learners can bring to a group. Every course that I teach is different but with an overarching ethos of acceptance, non-judgement and equity. I feel that teaching is a privileged position, particularly in a diverse community, where learners come from different backgrounds, ethnic groups and social circumstance. I was feeling quite confident following the pilot study, feedback had been positive overall with recommendations to make the course longer and include more theory in the classroom element of the course. I believe service user involvement is imperative in intervention design

and the advantage of small groups is the ability to be flexible throughout the course, tailoring activities and learning to the needs of the group, helping participants to feel they have an invested interest in the intervention and encourage engagement. As an example of this, for week 3, I had planned a self-efficacy exercise, where each member of the group circulates a piece of paper with their own name written at the top, and each learner writes a positive comment or attribute for that person. I was aware that one of the learners on the course suffered from social anxiety disorder and that this activity would be a great source of anxiety for him. Therefore, I adapted the activity and asked the group to complete the activity about me, rather than each other. I then expressed how I was surprised by the comments, and that they made me feel good therefore increasing my self-efficacy. We discussed how we could do the same by asking positive people in our lives to give us feedback and positive affirmation of our talents and strengths, and hence avoided doing the activity in the classroom setting and therefore exacerbating the social anxiety of a participant.

Participants engaged well, were supportive of each other and peer support was a strong element of the course. This was aided by the clear ground rules set at the beginning of the course, particularly around respect and confidentiality. During the walking activity in the local grounds of a medieval hall, the area is big enough to have space, but small enough for me to be aware of where learners are and approach anyone that I feel may be having difficulty applying the techniques in a real-life setting. In general, the weather was good and allowed us to enjoy the outdoors with ease, however one week we did have rain. This was an opportunity to take learners into the medieval hall and remind them that being mindful could be applied anywhere. The hall dating back to 1400, provided us with sights, sounds and smells not associated with our daily lives, and enabled us to engage the senses as we had previously done in the classroom with the aid of a mindfulness app. Participants reflected on

this day as being a highlight, and commented that they had noticed things that they would normally not have been aware of. This was a good talking point, and we recognised the implications of mindfulness in our everyday lives, and its application in different settings.

Conclusion

In summary, I feel that this intervention went well and was successful in its aim to reduce perceived stress following a 5-week mindful walking group. I feel that this course helped me to develop my professional skills and further develop as a health psychologist, challenging assumptions, and making me think on my feet.

Engagement continues to be a challenge, particularly with participants with mental health issues. Future plans could consider providing an ongoing course, on a rolling timetable, giving learners the opportunity to engage on an ad hoc basis. Learners described the course as valuable as a counselling session or appointment with their CPN, as a means of looking after their wellbeing and the benefits of belonging to a group in a safe and non-judgemental environment. For those learners with good mental health, they expressed the benefits of the course for general wellbeing and the rewarding feeling of altruism installed by the social cohesion of a diverse group.

Finally, being a tutor within the adult college, is a unique position to offer diverse, and effective courses and interventions, that can facilitate behaviour change, leading to better health and wellbeing for both a clinical and healthy population.

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Appendix

Feed Back Form – Mindful Walking

Date:___June / July 2019_____ W2W Topic:_____Mindful Walking__

Tutor's Name:_____Tiffany Palmer_____

Instructions: Please circle as appropriate.

(Rate from 1 – strongly disagree to 5 – strongly agree)

I found the course interesting	1 2 3 4 (5)
I could understand the sessions	1 2 3 4 (5)
The pace of the sessions were not too fast or slow	1 2 3 4 (5)
I enjoyed the classroom sessions	1 2 3 4 (5)
I enjoyed the outdoor sessions	1 2 3 4 (5)
I feel I have benefitted from this course	1 2 3 4 (5)
I felt relaxed during the sessions	1 2 3 4 (5)
I was able to use mindfulness between sessions	1 2 3 4 (5)
I plan to continue using mindfulness	1 2 3 4 (5)
The tutor was knowledgeable about the subject	1 2 3 4 (5)
I felt included	1 2 3 4 (5)
I feel confident to try mindfulness by myself	1 2 3 4 (5)
The tutor explained things clearly	1 2 3 4 (5)
I enjoyed being part of a group	1 2 3 4 (5)
I would recommend this course	1 2 3 4 (5)

[redacted]

How did you find this course? This course was benefical for increasing my knowledge of Mindfulness
What could have been improved? maybe handouts.
How will you use mindfulness in your routine? I will use Mindfulness Daily
Any other comments? Tiffany is knowledgable and approachable. Thank you.

[redacted]

Feed Back Form – Mindful Walking

Date:___June / July 2019_____ W2W Topic:_____Mindful Walking__

Tutor's Name:_____Tiffany Palmer_____

Instructions: Please circle as appropriate.

(Rate from 1 – strongly disagree to 5 – strongly agree)

I found the course interesting	1 2 3 4 (5)
I could understand the sessions	1 2 3 (4) 5
The pace of the sessions were not too fast or slow	1 2 3 (4) 5
I enjoyed the classroom sessions	1 2 3 (4) 5
I enjoyed the outdoor sessions	1 2 3 4 (5)
I feel I have benefitted from this course	1 2 3 4 (5)
I felt relaxed during the sessions	1 2 3 (4) 5
I was able to use mindfulness between sessions	1 2 3 (4) 5
I plan to continue using mindfulness	1 2 3 4 (5)
The tutor was knowledgeable about the subject	1 2 3 4 (5)
I felt included	1 2 3 (4) 5
I feel confident to try mindfulness by myself	1 2 3 4 (5)
The tutor explained things clearly	1 2 3 4 (5)
I enjoyed being part of a group	1 2 3 4 (5)
I would recommend this course	1 2 3 4 (5)

How did you find this course? HARP.
What could have been improved? PERHAPS MORE TIME WALKING
How will you use mindfulness in your routine? I WILL DO MEDITATION WEEKLY.
Any other comments? I MAY LOOK FOR MORE COURSES TO ATTEND.

[redacted]

Feed Back Form – Mindful Walking

Date:___June / July 2019_____ W2W Topic:_____Mindful Walking__

Tutor's Name:_____Tiffany Palmer_____

Instructions: Please circle as appropriate.

(Rate from 1 – strongly disagree to 5 – strongly agree)

I found the course interesting	1 2 3 4 5
I could understand the sessions	1 2 3 4 5
The pace of the sessions were not too fast or slow	1 2 3 4 5
I enjoyed the classroom sessions	1 2 3 4 5
I enjoyed the outdoor sessions	1 2 3 4 5
I feel I have benefitted from this course	1 2 3 4 5
I felt relaxed during the sessions	1 2 3 4 5
I was able to use mindfulness between sessions	1 2 3 4 5
I plan to continue using mindfulness	1 2 3 4 5
The tutor was knowledgeable about the subject	1 2 3 4 5
I felt included	1 2 3 4 5
I feel confident to try mindfulness by myself	1 2 3 4 5
The tutor explained things clearly	1 2 3 4 5
I enjoyed being part of a group	1 2 3 4 5
I would recommend this course	1 2 3 4 5

How did you find this course?
What could have been improved?
How will you use mindfulness in your routine?
Any other comments?

[redacted]

Feed Back Form – Mindful Walking

Date:___June / July 2019_____ W2W Topic:_____Mindful Walking__

Tutor's Name:_____Tiffany Palmer_____

Instructions: Please circle as appropriate.

(Rate from 1 – strongly disagree to 5 – strongly agree)

I found the course interesting	1 2 3 4 (5)
I could understand the sessions	1 2 3 4 (5)
The pace of the sessions were not too fast or slow	1 2 3 4 (5)
I enjoyed the classroom sessions	1 2 3 4 (5)
I enjoyed the outdoor sessions	1 2 3 4 (5)
I feel I have benefitted from this course	1 2 3 4 (5)
I felt relaxed during the sessions	1 2 3 4 (5)
I was able to use mindfulness between sessions	1 2 3 4 5
I plan to continue using mindfulness	1 2 3 4 (5)
The tutor was knowledgeable about the subject	1 2 3 4 (5)
I felt included	1 2 3 4 (5)
I feel confident to try mindfulness by myself	1 2 (3) 4 5
The tutor explained things clearly	1 2 3 4 (5)
I enjoyed being part of a group	1 2 3 4 (5)
I would recommend this course	1 2 3 4 (5)

How did you find this course? Interesting
What could have been improved? N/A
How will you use mindfulness in your routine? AT HOME .... when I'm walking
Any other comments?

SECTION C3

RESEARCH COMPETENCY

Contents

SECTION C3.1

SYSTEMATIC REVIEW

Why do people participate in Parkrun?

A systematic review

Contents

Abstract

Parkrun is a collection of 5-kilometre running events that take place every Saturday morning at over 1,400 locations in twenty-two countries across five continents (Parkrun, 2019). The number of Parkrun events has increased rapidly in the last five years. As a result of its growing popularity, the public health potential for Parkrun is beginning to be examined in the academic literature. The purpose of this review was to examine the reasons people participate in Parkrun. A systematic review was conducted Feb - June 2019 searching PubMed, PsychINFO, Web of Science, SPORTDiscus, and the Cochrane Database of systematic reviews. Backwards and forwards citation searching of reference lists was carried out to maximise the potential for retrieving all relevant papers. Primary studies written in English of full-length peer-reviewed journal articles that examined the reasons why people participate in Parkrun were included.

The search produced 4251 studies. After removing duplicates and screening for suitability, 9 studies met the inclusion criteria. 4 qualitative, 4 quantitative and 1mixed methods. Using thematic analysis (Braun & Clark, 2006) for qualitative papers, 3 themes were extrapolated with associative sub-themes; **liberated** with sub-themes *accessible* and *inclusive,* **sociability** with sub-themes *social capital, belonging and identity* and *the Parkrun movement;* and lastly the theme **health and wellbeing** with the sub-themes *support, objective measures* and *perceived psychological benefits.* Descriptive statistics of the quantitative papers provided insight and were mapped onto the qualitative themes where relevant. This review illustrated reasons for participation and continued engagement. Sociability features as a motivation for participation as well as the health benefits. Social capital is associated with initial engagement, however, there is still a need to increase uptake in lower socioeconomic groups.

Introduction

Non-communicable diseases (NCDs) are responsible for 70% of all deaths worldwide, World Health Organisation (WHO) (2019). This rise in NCDs is primarily driven by the four health behaviours that pose the biggest risk factors: tobacco use, physical inactivity, alcohol consumption and dietary habits (Ferretti, 2015). Preventing NCDs, such as stroke, heart disease, cancer and lung disease is a major focus for both the WHO and governments globally.

Physical inactivity is one of the most significant contributors to chronic disease and is now identified by the WHO as the fourth leading risk factor for global mortality and a global pandemic (Das & Horton, 2012) that creates financial burden on societies (Sharman et al, 2019). Sedentary behaviours are rising in many countries with major implications for the prevalence of NCDs and physical inactivity presents a global public health priority (Lee et al, 2012).

Despite sustained improvements in life-expectancy in developed societies, physical inactivity and its implications continue to present as a challenge for public health and are associated with social inequality (Baum & Fisher, 2014). Physical inactivity is therefore a focus for governments, and recommendations are aimed at primary prevention at population level, with the target audience for these recommendations being policymakers at national level.

In many parts of the developing world population wide campaigns have attempted to raise attention of the health risks associated with physical inactivity (For example; *Designed To Move* in the U.S, *Change4life* in the UK, *Get set 4 life* in Australia and *Eat Move Live* in New

Zealand). However, as well as failing to increase physical activity with any significance, these types of intervention attribute individual responsibility for lifestyle behaviours while ignoring barriers such as socioeconomic status (Piggin, 2012; Lee et al, 2012), and ignoring the social context of health behaviours in the real world (Blue et al, 2016). This gap in the academic literature has led for a need for practice-led research, that is both in context and in a real-world setting (Reis et al, 2016).

Within the UK, currently one in four women and one in five men do less than 30 minutes of moderate intensity physical activity a week and are classified as inactive (Public Health England, 2016). Physical inactivity is in the top 10 greatest causes of ill health nationally, with negative impacts on physical and mental health, wellbeing, and social and economic outcomes for individuals and communities (Public Health England, 2019).

Over the past decade the UK has seen a rise in participation in athletics pursuits, including track and field, cross country and ultra-marathon running. The significant growth in participation has seen an increase of 72%, over ten years with an estimated 2.4 million people running on a weekly basis (England Athletics, 2017). The majority of people that run every week in the UK are not affiliated to a running club, but informal running groups are emerging that are unstructured and informal (Hindley, 2018).

Parkrun began in Teddington, South west London in 2004, by a group of fellow runners who wanted to exercise together. They began organising a weekly, 5km timed run in a local park. Due to its popularity, this event grew until eventually a second event was scheduled in Wimbledon. These weekly 5km timed runs take place concurrently on Saturday mornings at 9am (Sundays for Junior Parkrun) in parks and open spaces (Parkrun, 2019).

More than 3 million people are now registered with Parkrun globally, in 1,800 locations worldwide. Over 2 million are registered in the UK alone, with Parkrun taking place in 672 locations around the UK. The Parkrun community continues to grow - but it's still based on the simple, basic principles formed from the start: "weekly, free, 5k, for everyone, forever".

Parkrun is set against a backdrop of rising interest in registered running events, that are less competitive in nature compared with previous trends, towards runs that are more fun and social such as; mud runs, colour races, etc. as well as a significant increase in charity races through mass-participation events (Herrick, 2015).

The impressive growth of Parkrun over the last 10 years saw a £3m investment in December 2018. Parkrun has partnered with Sport England to support the creation of 200 new Parkrun events in England. This funding aims to target those groups that have the most to benefit and is focusing on female participation and those from low socioeconomic groups. In addition, funding will be used to modernise Parkrun's digital platform for data, results and event information, in order that it may continue to grow (Sport England, 2018).

On 1st June 2019, Parkrun welcomed 1,000 General Practitioners. This "Pledge Day" was designed to enable GPs to experience Parkrun for themselves, so that they might have a better understanding of the Parkrun format. Following their experience, it was hoped that GPs would help to create the formation of Parkrun practices, that become champions for the campaign to improve physical inactivity in the population, through mass-community exercise programmes, such as Parkrun.

To date, academic literature has focused on competitive groups of elite runners (Hitchings & Latham, 2017) and despite this expansion of participation in more casual running events, there is relatively little research on the behaviours and motivation of the people taking part (Bell & Stevenson, 2014) and the experiences of casual runners has not been explored (Cook et al, 2016).

Articles on Parkrun have generally appeared in medical periodicals (McCartney, 2015), running magazines, national newspapers and academic commentaries (Wiltshire et al, 2016). There has been little empirical research examining the experiences of participants that attend Parkrun on a regular basis and its organisation (Wiltshire et al, 2018). Exploring reasons for participation will hopefully enable future intervention design to address barriers and target hard-to-reach groups to reduce sedentary behaviour.

This systematic review seeks to expand on the current literature, by examining the reasons why people attend Parkrun. A search of the Prospero and Cochrane databases has shown that this review will be the first to look at reasons for participation of Parkrun.

Review Question

This systematic review will seek to address one primary question: ‘Why do people participate in Parkrun?”

Methods

The protocol was registered with PROSPERO (registration number; CRD42019129604). A systematic review was conducted using PRISMA guidelines (Moher et al, 2009). PRISMA guidelines can be found in the Appendix.

Eligibility criteria

The PICO framework was adopted to help formulate the search strategy for this systematic review. See below.

1. **Participants**

The participants were adults (over 18)who have attended Parkrun.

2. **Types of Intervention**

Parkrun will be included as a type of intervention, but junior Parkrun (under 14's) will be excluded as an intervention.

3. **Comparator**

Given the nature of the review and the focus on Parkrun as a brand, a comparator was not feasible and therefore not necessary.

4. **Outcome**

The primary outcome will be reasons for participation. No criteria will be imposed on how participation reasons could be measured, and will include questionnaires, self-reported measures, other validated measured of self-report and interviews.

Information sources

Searches were conducted from 14th to 30th June 2019 on the following databases: PubMed, Web of Science, PsychINFO, SPORTDiscus, Cochrane. In addition, handsearching and backward and forward citations were conducted to ensure that relevant articles were not missed. Parkrun was contacted directly, requesting any links to ongoing research not yet published, for possible inclusion in the discussion.

Search Strategy

Searches included a combination of relevant search terms. Given that "Parkrun" has developed into a brand in itself, considerable thought was given to the search terms and guidance was sought from numerous professionals. The initial approach was to search for "Parkrun" alone, given the recency of the introduction of Parkrun (2004), peer-reviewed academic literature is limited, and this would ensure that every relevant article was captured and could then be screened for inclusion/exclusion criteria. However, the question raised by experts in the field, was whether using only 1 search term was sufficient to demonstrate the research skills required for the purpose of this review. Moreover, if an article had included Parkrun as a comparator but was not mentioned in the abstract, searching "Parkrun" exclusively would not pick this up. Though widening the search to include additional search terms such as "exercise", "intervention", "engagement" pulled an unmanageable number of articles, this would make it more likely that articles specific to Parkrun would be lost. Following on from advice and guidance, the decision was made in consultation with supervisors to include the following search terms.

1. parkrun
2. park AND run

Study Selection

Search results were imported into Zotero reference management software and duplicates were removed. Titles and abstracts were screened by T.P. with a random 10% screened independently for consistency in coding (S.S). Full texts of potentially relevant studies were assessed, and authors were contacted directly in the instances that information was missing to assess against eligibility criteria. Any disagreements would be resolved through discussion with a third reviewer (A.B) however this was not necessary. Details of the study selection process can be seen in Figure 1.

Study and participant characteristics

To fulfil the purpose of this review, studies were included if they met the following criteria.

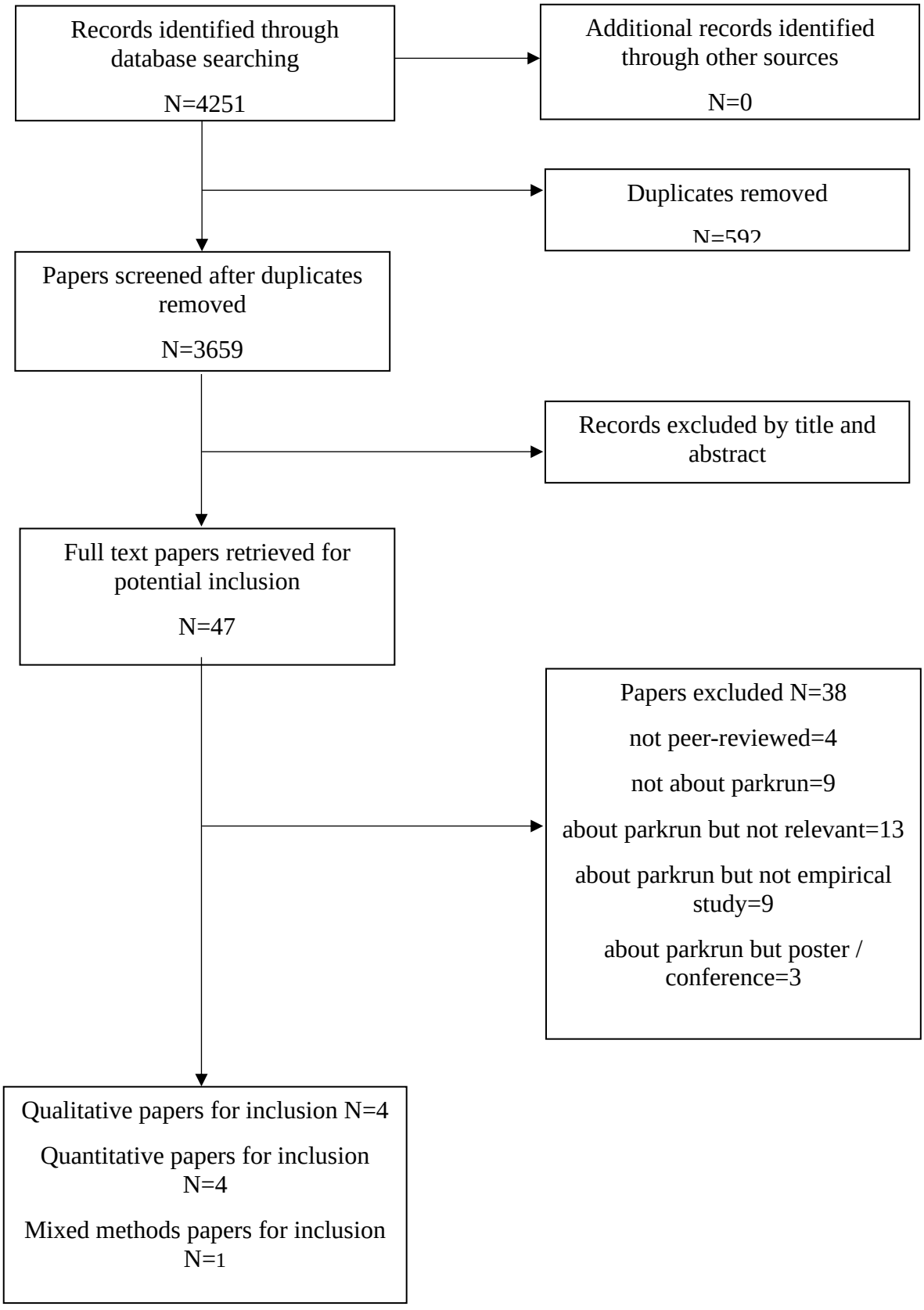
1. Studies published in English. Possibilities of language bias are recognised.
2. Studies that are peer-reviewed to ensure quality. It is acknowledged that the use of peer-reviewed literature may have excluded some interesting findings, however for the purpose of this review only peer-reviewed articles have been included for analysis.
3. Studies published since 2004 (creation of Parkrun)
4. Articles that are empirical studies.
5. Participants were adults (over 18).
6. Studies examined reasons for participation in Parkrun, as a primary or secondary outcome
7. Due to the limitations of available literature in this area, there were no restrictions placed on gender, ethnicity, age or running experience.

Studies were excluded if:

1. The article was not about participation in Parkrun (as either primary or secondary outcome)
2. It was a commentary, editorial or conference poster.
3. It was a review paper.

Zotero was used as an aid to catalogue, bookmark and organise articles, that were then further categorised into relevant folders and tag topics for sorting purposes. This allowed me to save my searches, order them by publication date, identify duplicates and keep specific notes that I could refer to.

Figure 1: PRISMA flowchart of literature search results



Quality ratings

Quantitative and qualitative studies were assessed for quality using the Standard Quality Assessment Criteria (Kmet et al, 2004) these two checklists were specifically designed for both types of data and therefore appropriate for this review. All studies explored reasons for participation in Parkrun. Given the limited amount of peer-reviewed studies in this area, qualitative, quantitative and mixed methods studies were included in this review. See tables 1 & 2 for extraction data and quality ratings.

Results

The search strategy produced 4251 potentially relevant studies, following the search strategy there were nine articles remaining for inclusion in the review. The final review examined findings from 4 qualitative papers, 4 quantitative papers and 1 mixed method. Due to the limited number or academic articles in this area, it was decided to include qualitative and quantitative.

Table 1: Qualitative papers

Author	Title	Research Aim	Country of origin	N	Design	Data analysis	Key Finding	Suggestion	Quality score /20
Hindley, D. (2018)	"More Than Just a Run in the Park": An exploration of Parkrun as a shared leisure space	To understand the meanings of participation for both runners and volunteer	UK	19	Case study – observation, participant observation, semi-structured interviews	Thematic analysis	Participation in Parkrun provides an inclusive leisure space for casual sociability	Parkrun as a "third" leisure space merits further investigation. Strategies to better engage those who experience greater health inequalities e.g. lower SES, black and minority ethnic groups, people with disabilities	18
Stevinson et al (2015)	Facilitating participation in health-enhancing physical activity: A qualitative study of Parkrun	This study was aimed at identifying factors contributing to initial and sustained engagement in Parkrun	UK	48	Semi-structured interviews	Thematic analysis	Two main themes; freedom and reciprocity	Future research could look at examining differences between those with and without prior exercise experience	20
Wiltshire et al (2018)	Exploring Parkrun as a social context for collective health practices: Running with and against the moral imperatives of	This paper examines how Parkrun comes to be understood as a health practice	UK	19	Interview	Thematic analysis	Two main themes emerged: Parkrun as a space for collective bodywork, secondly, Parkrun figures as a health practice	Future research might move beyond interview data to document the interrelated material, discursive and affective meanings in different contexts	17

	health responsibilisation								
Wiltshire & Stevinson (2018)	Exploring the role of social capital in community-based physical activity: qualitative insights from Parkrun	This study examines social capital as a key resource for the initiation and maintenance of physical activity	UK	20	Semi-structured interviews by telephone	Stages of analysis were similar to thematic analysis protocols and data was organised into 3 themes.	Participants draw on social ties, and invest and benefit from Parkrun community, participants benefit from the from the network of relations	Social capital operates in both reproductive and transformative ways and should be carefully considered in future health promotion programmes	20
Sharman et al (2019)	Health and broader community benefit of Parkrun – An exploratory qualitative study	The aim of this study is to examine the individual, social and environmental factors associated with Parkrun's broad appeal	Australia	10	Semi-structured interviews	Thematic analysis	4 key themes were established. 1. facilitators and barriers 2. PA gain and broader benefits 3. Importance of social connections 4. Organisational issues	'	19

Table 2: Quantitative papers

Author	Title	Research Aim	Country of origin	N	Design	Data analysis	Key Finding	Suggestion	Quality score / 14
Cleland et al (2019)	Exploring the Health-Promoting Potential of the "Parkrun" Phenomenon: What Factors are Associated with Higher Levels of Participation?	Aim to establish why people participate in Parkrun, identifying SES, health, behavioural, individual, social and environmental factors associated with higher levels of participation	Australia	372	Cross-sectional	Descriptive statistics	Parkrun attracts people previously inactive. Individual and social-level factors were associated with higher Parkrun participation	Parkrun's scalability and wide appeal requires more research to investigate its potential	14
Grunseit et al (2018)	Running on a high: Parkrun and personal well-being	Aim to establish overall wellbeing of Parkrun participants	Australia	865	Online survey, personal Well-Being Index (PWI)	Regression analyses	Australian parkrunners largely reflect the general population on wellbeing but have superior satisfaction with physical health. Women's personal well-being may benefit through improved mental health, whereas men from community connectedness.	Parkrun may offer support at critical times in the life-course where other sources of social connectedness and achievable physical activity may otherwise be lacking	14

							Parkrun may facilitate positive expression of identity, and health-enhancing activity and social interaction for non-athletes.		
Hindley, (2018)	"More Than Just a Run in the Park": An exploration of Parkrun as a shared leisure space	To understand the meanings of participation for both runners and volunteer	UK	235	Case study – observation, participant observation, semi-structured interviews		Participation in Parkrun provides an inclusive leisure space for casual sociability	Parkrun as a "third" leisure space. Strategies to better engage those who experience greater health inequalities e.g. lower SES, black and minority groups, people with disabilities	14
Stevinson & Hickson (2014)	Exploring the public health potential of a mass community participation event	This study explores the public health potential of Parkrun		7308	Self-reported	Quant	Parkrun is attractive to non-runners, with women, older adults and overweight people well-represented.	Scope for investigating the effectiveness of Parkrun as a cost-effective community-based intervention for improving public health	14
Stevens et al (2019)	Social identification, exercise participation and positive exercise experiences: Evidence from Parkrun	This study examines relationships between group identification, participation, two exercise-specific outcomes and a broad health indicator	UK	289	Questionnaires	Structural equation modelling	Group identification was significantly associated with greater participation satisfaction, group cohesion and life satisfaction.		14

Meta-synthesis of qualitative data

Data were analysed thematically, and NVivo 12 (QSR International) facilitated data management. Each paper was reviewed for meaningfulness regarding the key research question of why people participate in Parkrun. Braun and Clarke's (2006) guidelines for conducting a thematic analysis were followed.

Papers were read by the researcher a number of times to become familiar with the text. Initial codes were highlighted, examined and revised. Similar codes were merged and used to generate themes. Codes that were not relevant to the research question were discarded, in line with the process for thematic analysis (Braun & Clarke, 2006). The remaining codes were used to generate themes. Themes were mapped into overarching themes and sub-themes and relationships between them were examined. Once established the themes were defined and named. Three over-arching themes emerged each with associated sub-themes. See Table 3.

Table 3: Themes and sub-themes

Themes	**Sub-themes**	
Liberated	**Inclusive**	Everyone made to feel welcome, non-runners feel included, opportunity to run with spouse, children and family and friends, simple to sign up. 5km was perceived as an achievable distance
	Accessible	Free, local, consistent day and time, and various locations around the country
Sociability	**Social capital**	Existing social ties assist people with initial engagement and sustained attendance
	Belonging and identity	Sense of belonging and identity, the reciprocal opportunities to volunteer further facilitates the sense of belonging and contributing to society. The familiarity of Parkrun feels safe and familiar. People begin to identify as a runner, or as a parkrunner.
	The Parkrun movement	Feeling of belonging to a collective exercise activity, a mass-community event that for many has become routine and is closely associated with personal identity.
Health and wellbeing	**Support**	People are able to utilise the support of fellow runners for advice and support regarding injury, performance and health.
	Objective measures	Achievement of time is an objective measure for people to see their progress, as well as weight loss, and improvement in walking to running.
	Perceived psychological benefits	Include increased self-efficacy for PA. Enjoyment from participation, perceived mental health benefits.

Over-arching theme – Liberated

Inclusive

The theme of liberated was divided into two sub-themes: inclusive and accessible. This theme describes the freedom that participants associate with Parkrun which initiates attendance in the first instance and contributes towards sustained engagement. These two sub-themes are interlinked and not exclusive from one another and therefore will be discussed here as such.

All four of the qualitative studies and the mixed methods paper highlight inclusivity as a significant element for participants. The level of diversity in participants is evident, in terms of age, gender, running ability and contributes to the welcoming feeling that Parkrun emulates enabling families to exercise together with spouse, parents, children, friends and even the family dog (Sharman et al, 2019; Stevinson et al, 2015). Thematic analysis highlighted how this approach encourages initial attendance and also makes people feel inclined to return (Stevinson et al, 2015). Parkrun has developed into a culture that appeals to a diverse range of people and abilities (Wiltshire et al, 2018) and this inclusive feel is valued by participants (Wiltshire & Stevinson, 2018).

Hindley (2018) citied that participants highlighted this feel of inclusivity as helping them to feel relaxed and keen to return as the atmosphere was “non-threatening”. Moreover, the 5km distance is seen as achievable by even the non-runner and therefore not exclusive to those elite runners. Hindley’s study examines the experiences at Colwick Parkrun, Nottingham. Here, the organisers are willing to accommodate homogenous groups of runners, such as Nordic walkers and provide provision for the visually impaired, providing an inclusive environment. However, given that this is a case study, generalisations cannot be drawn regarding inclusivity at Parkrun as an organisation.

Importantly, Hindley reminds the reader that a degree of caution is needed when examining the inclusivity and friendliness of Parkrun, with a number of participants expressing their apprehension for initial attendance. The majority of first timers to Parkrun were encouraged through social ties, supporting the idea of social capital as playing a role in facilitating attendance. Many participants expressed their reluctance to attend Parkrun, had they been alone (Hindley 2018).

Accessible

The second sub-theme of accessibility was included in three out of the four qualitative studies and the mixed methods paper in this review.

Stevinson et al (2015) refer to the accessibility of Parkrun as a theme they label ”freedom” which they described as being particularly important for initial attendance, referring to the flexibility and approachability to participation that minimised some of the common barriers to physical activity. The simple set, no sign-up fee, convenient time and various locations, are factors associated with making Parkrun accessible. In addition to reducing barriers to physical activity, participants recognised the value of accessibility (Wiltshire & Stevinson, 2018); the attractiveness of the outdoor, community setting (Hindley, 2018), and the feeling of safety that Parkrun provided by exercising as a community (Sharman et al, 2019).

There has long been discussion around those in lower SES groups accessing opportunities to physical exercise and this has been a target group for public health initiatives and interventions for a long time (Wiltshire & Stevinson 2018). The provision of Parkrun, in local areas, free of charge is easy to get to for most people and therefore accessible. This breaks down barriers for

those with low SES and there is some evidence that this population is starting to engage (Hindley 2018).

Saying that, little data is collected by Parkrun on registration, apart from age, gender and postcode so records of ethnic groups is unknown at this point (Hindley 2018) and previous studies on Parkrun have illustrated that these groups of ethnic minorities and lower socioeconomic groups are underrepresented in the Parkrun statistics (Stevinson and Hickson, 2013), and therefore its success with those from lower socioeconomic groups is less clear (Wiltshire & Stevinson, 2018)

Lastly, a further topic to emerge in one out of the four qualitative papers and the mixed methods paper, was the element of Parkrun as being "non-pressurised". However, as this appeared in only two out of five papers, this was not enough to constitute a theme in itself, however, is worthy of discussion. The "non-pressurised" element is two-fold. Participants do not feel pressure to attend, and no previous commitment is necessary. The freedom to turn up when they pleased was an attractive characteristic that encouraged engagement, and relieved pressure (Hindley, 2018). In addition to this, there is no pressure to perform or to get an expected time. Tail-runners at the back of the event ensure that no-one ever comes last and walkers are welcome. This lack of pressure minimises barriers for attendance (Stevinson et al, 2015).

Over-arching theme – Sociability

The theme of sociability consists of three sub-themes: social capital, belonging and identity and the Parkrun movement.

Social capital

The idea of social capital is the web of connections and network in peoples' lives that inform, encourage and influence their decisions (Lin et al, 2008). The role of social capital is evident in three out of four qualitative papers examined for this review.

Sharman et al (2019) found that most people that attended Parkrun for the first time, had been introduced by someone in their social circle, and it was therefore the role of social capital that initiated engagement, and some participants expressed reluctance to attend if they didn't have anyone to go with (Wiltshire et al, 2018).

Wiltshire & Stevinson (2018) claim that social capital isn't just important for initial engagement but also has a role to play in sustainment of Parkrun attendance. Moreover, when it comes to engaging people from low socioeconomic groups, Wiltshire & Stevinson (2018) believe that social capital has a bigger role to play. Research has shown that there is a strong relationship between social capital and health inequalities. It is therefore suggested that social capital could be utilised in low socioeconomic groups to encourage uptake of physical activity events, such as Parkrun. It is therefore possible to build social capital (Sharman et al, 2019) and this should be a consideration in future research when trying to engage people from low socioeconomic groups.

Belonging and identity

The second sub-theme in sociability is "belonging and identity". All four of the qualitative papers used and the mixed methods paper examined in this review described belonging and identity as being significant elements of the Parkrun format. Wiltshire et al (2018) describe this social aspect of Parkrun as "collective bodywork" – that is a collective context whereby

participants describe their experience as belonging to a community and shared sense of responsibility. Wiltshire & Stevinsons' (2018) study suggests that people feel connected at Parkrun, and this social capital further develops once connections have been made. It is therefore no longer just about fulfilling individual goals of being more physically active, but also enabling participants to build social connections and a sense of belonging. According to Wiltshire et al (2018), one of the most important elements for sustained attendance was the social opportunities for interaction through Parkrun, these varied from casual acquaintances to lasting friendships.

Parkrun fosters involvement and encourages social interactions (Hindley, 2018) and the volunteer programme within Parkrun, goes further to help people feel like they belong (Sharman et al, 2019). This sense of identity, comes from the "collective emotional support" that parkrunners feel, which is further reinforced by the opportunity for participants to volunteer and contribute something back to the Parkrun community (Sharman et al, 2019; Wiltshire et al, 2018), and also linking directly to the sub-theme inclusive as discussed previously.

One of the primary benefits of attendance is often cited as the social support and community that emerges. It is this collective support that creates the inclusive atmosphere and participants of any ability feel comfortable to take part (Sharman et al, 2019) and Parkrun recognises the need for participants to be active, but emphasises that sociality as a key element to maintenance (Wiltshire et al, 2018), and research suggests that perhaps the social aspect of Parkrun is stronger motivation (Sharman et al, 2019).

The Parkrun movement

The final sub-theme here, has been described as "The Parkrun movement". Each of the five qualitative papers discussed in depth, the feeling of belonging to a collective exercise activity, a mass-community event that for many has become routine and is closely associated with personal identity.

Although the authors here may assign different terminology to this concept, the setting they describe can be encapsulated under the same label. Sharman et al (2019), describes the pattern of attending Parkrun becoming routine and for many an important part of their life, which has replaced other activities. This activity of exercising together in a supportive environment has been described as "collective bodywork" with the idea "all in this together" (Wiltshire et al, 2018). It has also been described as a "health practice" (Stevinson et al, 2018), "a third place" (Hindley, 2018), and a "social practice" (Wiltshire & Stevinson, 2018), all of which allude to the same idea of collective exercise in a support environment which by its very nature gives meaning to taking part in exercise and results in increased self-efficacy.

The Parkrun movement has provided people with the confidence and motivation to increase their physical activity, try new activities and even register with competitive events such as, 5k, 10k and half marathons (Sharman et al, 2019; Wiltshire et al, 2018) and for some, to transition from being inactive to active (Sharman et al, 2019) and others, begin to define themselves as a "runner" (Stevinson et al, 2015).

The collective experience of the Parkrun movement encompasses both individual and group responsibility for health outcomes and supports the theory of physical activity intervention as exploiting the social aspect of exercise in a collective environment (Wiltshire et al, 2018).

Over-arching theme – Health and Wellbeing

The theme health and wellbeing constitute three sub-themes: support, objective measures, and perceived psychological benefits.

Support

Of the four qualitative studies and one mixed methods study used in this review, all of them highlighted support as an important feature, and hence is emergence of a sub-theme here. Support in this context, takes different forms and is described by authors in varying ways. For some, the friendly competition that Parkrun provides is a nudge to keep going and "catch-up" with other parkrunners (Wiltshire et al, 2018). This is a commonality amongst parkrunners, and these friendly rivalries are greeted with mutual support (Stevinson et al, 2015).

Parkrun is also used as a resource to gain information on injury, performance, or health as well as emotional support (Wiltshire & Stevinson, 2018). Whilst this community support is the main appeal for many people, Parkrun is about both giving and receiving support (Sharman et al, 2019) and this social support is a form of social cohesion that opens up dialogues (Hindley, 2018).

Objective measures

The second sub-theme here is labelled objective measures. The barcode and computerised result system provided by Parkrun, allows participants to follow their progress, after initial set-up and being assigned a barcode. Parkrun volunteers load results onto the computer system and these are emailed out to participants an hour after the completion of Parkrun. This ability to

check progress and percentage comparisons to other people in your age group, is an incentive for people who want to record their improvement (Stevinson et al, 2015).

All four of the qualitative studies and the mixed methods paper in this review, cited improved fitness and health as an incentive for participants to engage with Parkrun over time. Attaining personal goals and friendly competition with other parkrunners, inspired people to make the effort to maintain attendance (Wiltshire et al, 2018). The ability to see improvement via the Parkrun results was an inspiration (Sharman et al, 2019) and they valued the opportunity to have their achievements week on week facilitating continuing participation (Wiltshire & Stevinson, 2018).

Objective measures of weight loss and improved time were a motivation to attend (Sharman et al, 2019) as was the feeling of physical and mental wellbeing that completing Parkrun gave people (Hindley, 2018) and that health and wellbeing benefits were significant influencers as well as achieving (Stevinson et al, 2015).

Perceived psychological benefits

The third sub-theme under the umbrella of health and wellbeing, was perceived psychological benefits. Three of the qualitative papers and the one mixed methods paper cited perceived psychological benefits as a reason for attendance. Regular attendance of Parkrun, increased participants general self-efficacy and encouraged them to seek out other races and opportunities (Sharman et al, 2019; Wiltshire et al, 2018). In addition, the opportunity to be able to run with family members including children and dogs improved perceived wellbeing (Stevinson et al, 2015).

As well as the perceived psychological benefits from running, equally valuable is the opportunity to volunteer, exploiting the mental health benefits from helping others (Hindley, 2018). Volunteering has a wealth of research describing its' positive effect on health and well-being (Musick and Wilson, 2003), it can help reduce symptoms of depression (Griep et al, 2015) and is associated with improved health behaviours (Morris and Scott, 2018).

Narrative of quantitative studies

Due to high heterogeneity of the outcome measures, it was not possible to conduct a meta-analysis; instead, a descriptive narrative of study characteristics, outcome measures, and results are reported.

Stevinson & Hickson (2014), found that of their study of 7308 participants, those with more regular attendance reported the most positive benefits. This study looked at the impact of involvement and rather than reasons for participation as a primary outcome, however, perceived benefits illustrate participants' reasons for sustained attendance and insight into why people attend Parkrun. This study found that a proportion of parkrunners were not regular runners prior to registering for Parkrun (25.3%) and report the benefits of wellbeing and a sense of community as reasons for sustained engagement. Those people that considered themselves "non-runners" obtained the largest increase in performance (15.8%) and were more likely to report health related benefits. Evidence from the demographics included in this study suggest that Parkrun is attractive to some target groups, such as non-runners, women, overweight and those with a disability. However, it is failing to attract those from ethnic minorities and low SES.

Similarly, a study in 2018, by Grunseit et al, looked at the personal wellbeing of 865 adult participants of Parkrun in Australia. The primary outcome in this study was well-being, and reasons for participation was a secondary outcome measure. However, their findings examine the perceived benefits of attending Parkrun and reasons for sustained engagement, making it relevant to this systematic review. Using the Personal Well-Being Index (PWI), Grunseit et al, designed their own questions using a Likert scale to examine if; 1. Parkrun helps increase their physical health, 2. Parkrun helps increase their mental health, and 3. Parkrun helps to connect with other community members. This study suggests those that are the most physically active are the most satisfied with life as a whole and 97.6% of participants agreed that Parkrun was beneficial to their physical health. They found gender differences indicating possible reasons for sustained participation, with women showing a positive association between attendance and psychological wellbeing compared with men, who were positively associated with community connectedness. Personal satisfaction with health was significantly higher than the general population, particularly for older and male runners. Both of the studies described above (Stevinson & Hickson, 2013; Grunseit et al, 2018) did not examine reasons for participation in Parkrun as a primary outcome, but perceived benefits from attendance contributed to sustained engagement.

A study by Cleland et al (2019) examined what factors were associated with higher levels of participation in Parkrun. Of the 372 people examined by individual, social and environmental demographics, they found that Parkrun attracts a broad range of runners, including populations that are normally associated with difficult to engage in physical activity. Participants were more commonly women (58%), the number of non-runners at registration was high (53%) and 44% were overweight or obese. This study revealed that relationship status, education level and location (outside Tasmania, Australia) were associated with

participation and perceived benefits of Parkrun included enjoyment, social factors, and the safe environment. In addition, cultural norms, social support, and self-efficacy for Parkrun and behavioural control (intentions) were all associated with participation. Cleland highlights the wide appeal that Parkrun has, and the accessibility and scalability potential, providing all the elements of an effective large-scale intervention with huge impact on public health requiring further empirical research.

The final quantitative paper examined how group identification was strongly associated with higher participation (Stevens et al, 2019). In a sample of 289 participants, reasons for Parkrun participation was the primary outcome, measuring exercise-specific satisfaction, group cohesion and life satisfaction. There was no significant relationship between participation and life satisfaction, however there was a significant relationship between group identification and life satisfaction in relation to Parkrun. A significant relationship between group identification and participation was observed. Stevens et al (2019) claim that strong social identities in exercise settings and their participation may be reciprocal, with social identity being both a cause and effect of greater participation and satisfaction.

Lastly, the mixed methods paper (Hindley, 2018) was an exploration of Parkrun, and results from a survey, cited “getting exercise” as the most significant characteristic for participation (78%), followed by “social togetherness” (31%), “fun” (29%) and enhancing well-being (29%), supporting the previous Stevinson & Hickson study (2013) that suggested that the perceived benefits from taking part in Parkrun consisted of social, physical and psychological elements.

Relating narrative from quantitative studies to themes from meta-synthesis

Interestingly, when examining findings from quantitative papers it is possible to find some overlap with the themes highlighted in the meta-synthesis of qualitative studies. For example, the study by Stevinson & Hickson (2014) illustrated some key points that mapped into a number of previously defined themes and sub-themes. They found that the majority of parkrunners felt *objective measures* were a reason for participation, and it was those that started out as non-runners, and therefore those that had seen the most progression that were more likely to express the *objective measures* of health outcomes as a reason for participation (16%).

Similarly, the gender differences found in the study by Grunseit et al (2018) can be linked to our themes of *perceived psychological benefits* for women and *belonging and identity* for men. Previous studies in this review had not highlighted gender differences and this potentially requires further research. In addition, the topic of "non-pressurised" was not developed as a sub-theme as it only appeared in two of the qualitative papers, but it is worthy of a mention. This topic appears again in this quantitative paper by Grunseit, et al (2018) who discuss the appeal of the non-demanding aspect of Parkrun.

In alignment with the theme, *social capital*, highlighted in this review, Cleland et al (2019) found that 30% of Parkrun attended with someone they knew, and that initial attendance had been facilitated through social ties. Furthermore, they found a positive association with having a partner (who is also attending parkrun), and higher attendance with Parkrun, and further support for the theme, *social capital.* In addition, the sociability of Parkrun was acknowledged, with *support*, and *belonging* being positively associated with attendance. In

addition, the *perceived psychological benefits* described in this article as; enjoyment and self-efficacy for Parkrun as being positively associated with participation. *Suppor*t was listed as being significantly associated with increased participation, from both their social circle as well as the Parkrun community. Lastly, Cleland et al (2019), describe "cultural norms" relating to Parkrun. This is evidence for the emergence of *the Parkrun movement*, as highlighted above.

Stevens et al (2019), suggest that this social identification could be exploited to promote physical exercise and encourage engagement, more importantly they describe this participation developing into what they describe as a "group norm" and supporting the emergence of the *Parkrun movement* sub-theme.

Additional Findings

The 9 studies examined for this review, present with a number of limitations. Firstly, those participants that took part in all 5 of the qualitative studies, self-selected to take part and three out of five studies used a positive sampling technique where they chose those participants to take part in the study utilised from previous study groups. This potentially created a positive bias towards those people that had had a positive experience of Parkrun. This does not take into consideration those participants that had perhaps not returned to Parkrun for various reasons or had not volunteered to take part in a study.

Secondly, few participants offered negative feedback, and this required probing from researchers (Stevinson et al, 2015). Some participants expressed frustration at parking, and

the increased busyness that makes it harder for faster runners to complete the course with a clear route (Sharman et al, 2019). Generally, barriers to Parkrun are more generic and not specific to Parkrun itself (such as childcare, work etc). Though the name of "Parkrun" was enough to put some people off, who would never consider themselves as "runners" (Sharman et al, 2019)

Furthermore, research illustrates that Parkrun is good for business as Parkrun tourism develops and brings people into towns with Parkrun (Sharman et al, 2019) and the evidence for the effectiveness of green exercise, defined as exercise in at outdoor environment, is extensive (Gladwell et al, 2013). Evidence from a study on Parkrun suggests that participation led to significant improvements in stress, mood, and self-esteem however, there is no significant difference in the type of outdoor location (Rogerson et al, 2016).

Discussion

This review has highlighted the potential for Parkrun as a public health intervention, with themes emerging in this review illustrating reasons for participation and continued engagement. The sociability that is provided by the Parkrun community, is a motivation for participation as much as getting fit. Parkrun appears to emulate the concept of what we have called here "the Parkrun movement" which illustrates the idea of a "collective bodywork" "health practice" – and with the use of social capital is beginning to engage those typically associated with difficult to engage in physical activity. However, there is still a way to go to engage more groups from low socioeconomic backgrounds and utilising social capital may be the way to do this.

When we look to theory and psychological models to examine the format of Parkrun as having potential public health impact, in decreasing sedentary behaviours, it could be said the format of Parkrun aligns well within the EAST framework as designed by the Behavioural Insights Team at PHE (The Behavioural Insights Team, 2014). The simplicity of the framework, that for interventions to be effective they need to be easy, attractive, social, and timely, embeds everything that Parkrun is about. The *easy* registration process and the accessibility with no joining fee; the *attractiv*e opportunities to exercise in the fresh air with no expectation or level or commitment; the *social* aspect from utilising social capital in the first instance, to the casual interactions, and developing friendships and alliances over coffee; and finally *timely*, from the ability to follow your progress objectively keeping track of your improvement, and the timely delivery of Parkrun in the same place at the same time, even on Christmas day should it fall on a Saturday.

Similarly, the Behaviour Change Wheel (Michie et al, 2011) recognises that behaviour is part of a system with the COM-B model at the hub, describing, capability, opportunity, and motivation as integral elements of behaviour. Findings from this review illustrate the application of the COM-B as well suited to the Parkrun format. The "capability" element of the model is met by the nature of Parkrun as a non-competitive event. Participants are welcome to walk or run at their own pace, and tail walkers ensure that no-one ever comes last, evidence suggests that Parkrun is attractive to non-runners (Cleland et al, 2019) and therefore supports the idea that people feel capable of taking part. Parkrun is on throughout the year, at the same time and place every Saturday morning at various locations throughout the country, providing the "opportunity" for people to be part of an exercise group. With no financial barrier (it's free) and a regular time and place, Parkrun provides the "opportunity" element of the COM-B model. Lastly, "motivation" for Parkrun is evident in a number of ways. Participants are timed and

receive a chip to monitor their progress week-on-week, for those people with goals and trying to improve their time, the objective measure serves as a motivator for attendance. The value of social connections and belonging has been documented in this review, and for some, it is the social aspect of Parkrun that motivates them to return. The COM-B model when applied to Parkrun is useful in examining sustained engagement through the lens of the behaviour change wheel.

With an emphasis on personalised care, the introduction of social prescribing (NHS, 2019) (also referred to as a community referral) enables GPs, nurses, and other healthcare professionals to refer patients to non-clinical groups and services within the community e.g. walking groups etc. With physical inactivity related to poor health outcomes (Howlett et al, 2018) the task of improving physical activity adherence is a local and national goal. Parkrun is in a position to continue growth and have an impact on sedentary behaviour with long term consequences of reducing pressure and burden on the NHS, as well as improving outcomes for patients (Tobin, 2018). Evidence for Parkrun's efficacy is still emerging in the academic literature and more empirical studies are required. Therefore, research is needed to gain a better understanding of reasons for participation, give insight into barriers, facilitators, and sustained engagement, and to inform and guide design and implementation for physical activity interventions.

Limitations

Many of the articles on Parkrun are produced by the same teams of prolific researchers who are passionate about its impact and can foresee the potential public health initiative on a large scale. Across the nine papers, there were a total of 15 different authors, with eight authors

appearing on only one paper. Four authors were on two papers, one author on three papers, and one author had a total of four papers that they had contributed to. This raises two points; firstly, the potential bias from teams of researchers that collaborate and work closely together. Secondly, there is a need for more empirical studies to assess the public health potential of Parkrun.

All studies in this review, were published in Australia or the UK. Given the far-reaching appeal that Parkrun now has and its presence in 20 countries around the world, there is a need for further peer-reviewed studies.

Future Studies

Supporting previous evidence, in support of research from Parkrun, this review highlights the need for further studies on Parkrun looking at different populations of homogenous groups, and from countries other than the UK or Australia.

There are many anecdotal stories highlighting reasons for participation including recovery from injury, mental health management, fitness measure, training opportunity for elite athletes, rehabilitation from chronic illness (Holmes, 2019), but with limited attention in the world of academia. There is a potential for more empirical studies in these areas, with different populations and patient groups (Wiltshire et al, 2018).

The studies included in this review offer suggestions for achieving successful uptake of physical activity in hard-to-engage populations, harnessing existing social capital, and

creating social capital where it is absent. The creation of a "buddy-system", facilitated through the use of technology**,** where experienced parkrunners arrange to meet with newcomers at an allotted point and share their first run with them so they are not alone, may be one method of facilitating social capital for initial engagement. A similar system has been set-up at one Junior Parkrun on a Sunday, where young volunteers, wear a high-vis vest and escort first-timers round the course for those children that feel anxious (Parkrun, 2017). Parkrun requires further research on barriers, inequalities, impact, and economic value (Hindley, 2018) to further examine its potential for real impact on public health and sedentary behaviours at local, regional and national level.

Reflections

As a keen parkrunner myself, it has been important for me to be mindful and reflexive throughout the writing of this review in order to avoid positive bias. I made a conscious effort throughout this review to be critically reflective in relation to my own positive attitude towards Parkrun and exercise in general. Subsequently, I feel that this approach, rather than be problematic in the process of analysis, enabled me to interpret and connect with the emerging themes and sub-themes and further affirmed the benefits of a community-led intervention for physical exercise, such as Parkrun.

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Appendix

PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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SECTION C3.2

RESEARCH PROJECT

Loneliness and Wellbeing Among Seafarers: The Mediating Role of Self-Efficacy

Contents **Page**

Abstract

Loneliness is a growing health problem and has been associated with mental and physical ill-health and mortality. Seafarers employed in the shipping industry, are socially isolated for long periods of time away from their families, separated from their loved ones. Loneliness resulting from extreme social isolation is one of the most significant factors impacting psychological wellbeing for seafarers. Self-efficacy has been found to have a significant impact on well-being in various populations and research suggest that self-efficacious beliefs enable a person to effectively cope with challenging situations. This study examines feelings of loneliness and explores this in relation to psychological general wellbeing in a seafaring population. Mediation analysis will look at the mediating role of self-efficacy in the relationship between loneliness and psychological general wellbeing.

Objectives

The aim of this study was to explore the relationship between loneliness and psychological wellbeing and examine whether perceived self-efficacy plays a mediating role in a seafaring population. Two hypothesis implicating mediation were examined.

Hypothesis

1. Model 1 hypothesised that loneliness would predict psychological general wellbeing and that this relationship would be mediated by self-efficacy.
2. Model 2 hypothesised that psychological general wellbeing would predict loneliness and that this relationship would be mediated by general self-efficacy.

Methods

Participants were seafarers (N = 100) from 27 countries. Among the respondents, the mean age of the sample was 41 years ranging from 22 to 76. Participants were asked to complete a questionnaire of demographic variables including; gender, age, nationality, religion, rank, type of ship, crew size, whether they were at sea or on shore leave at the time of completion, length of contract, marital status and number of dependents. Primary outcome measures examined loneliness, psychological general wellbeing and general self-efficacy. Loneliness was measured using the UCLA Loneliness Scale (Russell, 1978), while general self-efficacy was measured using the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1979) and the Psychological General Wellbeing Index (Dupuy, 2002) measured psychological wellbeing in respondents. T-tests and ANOVAs examined differences between groups and linear regression was run to examine whether significant associations predicted the outcome measures. Bivariate correlations then looked at the relationship between each of the outcome measures. Two mediation analyses models using bootstrapping were conducted, to investigate whether self-efficacy mediated the relationship between loneliness and psychological general wellbeing.

Results

Initial analysis examined the differences between different demographic groups and the outcome measures using t-tests and ANOVA's. A linear multiple regression was run to examine if loneliness is predicted from those variables that had significant associations between groups; age, nationality, marital status and dependents. The linear multiple regression significantly predicted loneliness. Nationality and marital status were the socioeconomic variables to add statistical significance to the prediction. For psychological general wellbeing, significant differences were found for marital status with those participants with a partner

scoring higher on wellbeing than those without. The 6 subscales of PGWBI were examined in relation to marital status and found that those people with a partner scored significantly higher (more positive) on the scales for anxiety and depression (less anxiety and depression), though not on the other subscales. There were no statistically significant differences found between any of the variable groups for scores on general self-efficacy.

Bivariate correlations revealed a significant positive correlation for self-efficacy and psychological general wellbeing, and both of these outcomes were significantly negatively correlated with loneliness. Two mediation models were explored. Model 1 hypothesised that loneliness would predict psychological general wellbeing and that this would be mediated by self-efficacy. Analysis was conducted using PROCESS software. After adjusting for demographic variables that were significantly correlated with the outcome being predicted, results indicated that self-efficacy did not mediate the effect of loneliness on psychological general wellbeing. The total and direct effects of loneliness on psychological general wellbeing were -1.036, $p< .05$ and -.966, $p<.05$ respectively. The difference between the total and direct effects was the total indirect through the mediator, general self-efficacy with a point estimate of -.070 and a 95% bias corrected and accelerated bootstrap confidence interval CI of -.258 and .061. Therefore, confidence intervals for this mediation model crossed the value of 1 indicating that this was not significant. However, the second mediation model, with psychological general wellbeing as a predictor of loneliness was examined. After adjusting for demographic variables, results indicated that self-efficacy did mediate the effect of psychological general wellbeing on loneliness. The total and direct effects of loneliness on psychological general wellbeing were -.434, $p< .05$ and -.370, $p<.05$ respectively. The difference between the total and direct effects was the total indirect through

the mediator, general self-efficacy with a point estimate of -.063 and a 95% bias corrected and accelerated bootstrap confidence interval CI of -.131 and -.020. Confidence intervals for this model were both in the negative, and therefore not crossing the value of 1, indicating mediation was significant.

Conclusion

Mediation effects for self-efficacy were tested for two mediation models. Total, direct and indirect effects were estimated using data from a representative multinational sample of seafarers by bootstrapping mediation analyses providing 95% bias corrected bootstrap confidence intervals. The first mediation model was not significant. The second mediation model indicated self-efficacy as a mediator of psychological wellbeing on feelings of loneliness. Academic literature and industry publications have focused on the significance of social isolation and loneliness as a key tenet of concern in a seafaring population, this study highlighted psychological general wellbeing in relation to loneliness and found psychological general wellbeing as the predicting factor in this relationship, with general self-efficacy having a mitigating effect. Real-life application within the shipping industry will be discussed and the implications for intervention design including the association between self-efficacy and social capital. Limitations of the research design will be examined. Suggestions are made for future research, including the design of a standardised measure tailored to the seafaring population.

Keywords: loneliness, seafarers, self-efficacy, psychological general wellbeing, social isolation.

Introduction

The implications of loneliness on health and wellbeing are well evidenced in the literature with associations with mental health and morbidity (Cacioppo & Patrick, 2008). For a seafaring population, social isolation is a central element of their lives, with long periods away from home in difficult working conditions (Sampson & Thomas, 2003). However, little attention has been given to examining feelings of perceived loneliness in this population and its relationship with psychological health.

Social isolation and loneliness

Social isolation has been studied in the academic literature with various populations but aligning theorists on both how to conceptualise and measure it, is still a challenge (Zavaleta et al, 2014). There has been disparity of a definition of what social isolation is, and without a clear definition, addressing issues around social isolation remains problematic. Many theories discuss the dilemma of inadequate quantity or quality of social connections being at the crux of the issue (Fine & Spencer, 2009; Hortulanus, et al, 2006). Social connectedness has been described as the quality and number of meaningful relationships (Brown, 2009). However, less clear are definitions for social isolation and loneliness. Within academia, social isolation and loneliness are often used synonymously, and many studies use the terms interchangeably making no distinction between them (Beller & Wagner, 2018).

For the purpose of this study, the literature will be reviewed in the first instance to examine the findings of studies that use the terms of social isolation and loneliness synonymously,

before focusing on loneliness as an extreme effect of social isolation as defined by Cacioppo & Patrick (2008) and its examination in the literature.

Social connections have significant impact on many aspects of life including health (Kok et al, 2013), wellbeing (Shankar et al, 2013), job opportunities (Potts, 2005), financial growth (Francassi, 2017) and happiness (Bartolini, 2013). People also attach intrinsic value to connections, and it is these intrinsic values as well as feelings of belonging and emotional attachment that enable us to participate in society successfully (Berkman et al, 2000). When these needs are not met, as described by Maslow in his hierarchy of needs people may experience loneliness, social anxiety or depression (Maslow, 1943) or feelings of subjective isolation. Loneliness is a part of life and everyone will experience it, however, when loneliness becomes chronic and creates a persistent loop of negativity, it becomes a cause for concern and it is loneliness that is used to measure the extreme effects of social isolation (Cacioppo & Patrick, 2008).

Seafarers

Seafarers spend months at sea with little or no contact with home for long periods (Mellbye & Carter, 2017). They present a complex and hard-to-reach population (Hjarnoe & Leppin, 2013), are predominantly male, from a variety of nations and speaking a multitude of languages (Mellbye & Carter, 2017). Their lifestyle is transient, often docking for less than 12 hours before the ship departs to its next destination (George, 2013). Seafarers live and work in cramped and hostile conditions, with limited space and a substantial pressure from noise, heat and vibration from the engine room. Working as a seafarer in the shipping

industry is challenging and exacerbated by the isolated nature of their lifestyle, and seafarers are amongst occupational groups with the highest risk for stress (McVeigh et al, 2019)

Shipping is an international industry with 90% of the worlds' goods being transported by ship (International Chamber of Shipping, 2019), with this figure increasing to 95% for the UK as an island nation. There are 1.5 seafarers worldwide and the import and export of manufactured and raw goods is extensive and complex. Within a seafaring population, there are clear hierarchies among the officers and crew, as well as between them. Europeans make up the largest percentage of officers and the "ratings" (lower-paid crew) are predominantly of Asian nationalities (Rail, Maritime and Transport Workers, 2018). Discrimination is endemic in the shipping industry, whereby seafarers originating from low and middle-income countries (LMIC's) with weaker financial power in international trade markets, are disadvantaged and exploited compared with seafarers from high income countries (Carter, 2005).

Turn-around times for ships in ports are faster than ever, with increased technology and a decrease in crew sizes, social isolation has become more prevalent on-board and changed both living and working conditions (Dimirova & Blanpain, 2010). Seafarers have been described by the International Transport Federation (2007) as "the most exploited and abused group of workers in the world but their plight is barely recognised by the mainstream media or public opinion." The conditions that seafarers endure can be traumatic and stressful, with long periods away from home, a confined physical environment, harsh working conditions, long working-hours, and significant levels of fatigue compared with other areas of employment (Jae-Kim & Soong-Nang, 2018). Seafarers can experience months, and sometimes years away from home,

loneliness, bullying and fatigue (Iverson, 2012). Fatigue has been well documented in the seafaring population, with consistently high workloads, insufficient rest times and limited manning on board some ships, meaning that the level of fatigue that some seafarers experience can be excessive (Jepsen et al, 2015).

It is therefore not surprising that seafarers are among the occupational groups most at risk for stress (Lipowski et al, 2014) and adverse mental health outcomes (Jezewska et al, 2006) with depression, anxiety, suicide and drug dependency being well-recognised health issues within the shipping industry (MacLachlan et al, 2013).

Academic literature on depression and suicide in a seafarer population has suggested that the psychological wellbeing of seafarers is suffering and has strong associations with morbidity and suicide mortality (Mellbye & Carter, 2017). The role of psychological stressors of working at sea have been slowly emerging in the empirical literature in the last two decades (e.g. Carotenuto et al, 2012; Carter, 2005; Bloor et al, 2000). The creation of "Mental Health on Board" (MENHOB) was set up by various professionals within the shipping industry, as a working group, whose aim is to establish psychological stressors for seafarers and to bring together relevant stakeholders to address issues. The purpose of MENHOB is caring for the physical, psychological, social and spiritual well-being of seafarers (Jezewska et al, 2013). Whilst a move towards a biopsychosocial model of health is emerging, there is a long way to go, and at present, research suggests it is the port chaplains that are at the forefront of care in relation to psychological and emotional health and wellbeing (Palmer & Murray, 2016; Winter-Pflander et al, 2013).

Risks of social isolation and loneliness

Research has examined the role of social isolation in the general population as discreet, and many researchers believe that it is necessary to explore these relationships in relation to behaviour and attitudes (Abbott & Freeth 2008). The impact of being socially disconnected has far-reaching consequences. Studies examining indicators for economic performance and progress made suggestions for social connections as having a vital role in both financial and social progress for all countries, with a primary focus on Europe (Stiglitz et al, 2009). The outcome of the study was that social connections should be included in the dimensions used to assess quality of life globally. It is argued that lack of social connectedness, or social isolation are a contributor to poverty (Sen, 2000) and that the sense of belonging to a group or society is instrumental for personal growth and economic progress (Basu, 2016). Further research highlights the self-fulfilling prophecy theory (when a person's false belief influences their behaviour) with people who feel like they don't belong or are marginalised over a period of time with a person's behaviour beginning to reflect the false belief.. This has been studied in refugees (Robinson, 2016), Latinos (Hayes et al, 2013) and indeed seafarers (Eldridge, 2009) and studies found that those people with false belief's had reduced productivity and their capability begin to erode, reinforcing feelings of marginalisation (Basu, 2016).

Attention to both social isolation and loneliness has been put on the agenda for governments globally and there are many projects and initiatives around the world designed to explore aspects of social connectedness and subjective loneliness. Projects such as the work on social isolation by the New South Wales Department of Disability, Ageing and Home Care in Australia (Fine & Spencer 2009) and the Working Group on Social Isolation of the Province

of British Columbia in Canada (Keefe et al, 2006) have all examined facets of social connectedness and its impact on reducing loneliness.

Within the UK, loneliness is on the rise and The Commission on Loneliness was set up by the late MP Jo Cox in 2016 to tackle the epidemic affecting nine million people across the UK (The Jo Cox Foundation, 2016). In January 2017, the UK appointed a Minister for Loneliness for the first time, and the UK government published a policy paper the following year, describing loneliness as, "one of our most pressing public health issues". The paper titled; "A connected society: A strategy for tackling loneliness" (UK Department for Digital, Culture, Media & Sports, 2018) sets out a vision for moving towards a more socially connected environment. There has been considerable effort to address isolation and reduce loneliness among older people in the UK, though the long-term effects have yet to be established (Steptoe et al, 2013). The Measuring National Wellbeing Programme (Office for National Statistics, 2019) released its most recent publication in 2019, looking at personal and family relationships, friendships and community, across the lifespan, including within that, an examination of loneliness, its' impact on health, and as a potential precursor to suicidal ideation and mortality. Loneliness has been highlighted as an indirect risk to suicide in a seafaring population (Mellbye & Carter, 2017) and a direct cause of suicide in vulnerable seafarers (Carotenuto et al, 2012).

Loneliness has been recognised globally as a growing problem and countries have set up support services to address this pandemic, in an attempt to mitigate its impact on health and mortality (Cacioppo & Cacioppo, 2018). Risk factors on mortality such as smoking and

physical inactivity are well established (Ezzati & Lopez, 2000; Rosenbaum & Ward, 2016), yet the effects of loneliness and social isolation are less understood (Valtorta et al, 2016). Social isolation and loneliness have been described as a bigger risk to health than obesity (Cacioppo & Patrick, 2008). The body of evidence on loneliness and social isolation as risk factors for health is growing, and those that are unhappy with social relationships, or feel lonely are at an increased risk of premature mortality (Steptoe et al, 2013). Researchers have identified three main pathways linking social relationships with health: behavioural, psychological and physiological mechanisms (Cacioppo & Hawkley, 2003).

Firstly, the feelings associated with being socially disconnected and lonely, result in people engaging in more negative health behaviours such as smoking, and over-eating of sugary foods, as it suppresses the ability to self-regulate (Cacioppo & Hawkley, 2003). Research shows that loneliness is also a risk factor for obesity (Holt-Lunstad et al, 2015) as well as an increased risk for alcohol abuse (Canham et al, 2015) and problem gambling (Hum & Car, 2018)

Secondly, psychological pathways linking social relationships and health have found that negative social expectations tend to elicit behaviours from others that confirm the lonely person's expectations, thereby setting in motion a self-fulfilling prophecy. One of the consequences of this perceived loneliness is a reduced capacity for self-regulation. The ability to regulate one's thoughts, feelings, and behaviour is essential for being part of a social group and building relationships (Cacioppo & Hawkley, 2003). Social isolation and loneliness have been linked to lower self-esteem and resilience (Steptoe et al, 2004), and has been linked to suicide (Lin et al, 2016; Bearman & Moody, 2004). Loneliness has been positively correlated with empty nest syndrome (the feeling of grief and loneliness that parents feel when their

children leave home) (Wu et al, 2010) and research indicates that feelings of isolation and loneliness have large negative consequences for psychological wellbeing (Rhode et al, 2016). There is emerging evidence for perceived loneliness as being a contributor to mental illness with links to personality disorders (Mustaq et al, 2014) and psychosis (Lim et al, 2018). In addition, studies evidencing loneliness as playing a part in the increase of depressive symptoms (Erzen & Cikrikei, 2018) and subjective loneliness have indicated there is an association with an increased risk of clinical dementia in later life (Holwerda et al, 2014). Subjective loneliness has been regarded as a risk to mental and physical health (Beutel et al, 2017) and is a stressful and frightening experience (Mahon, 2019). Loneliness is not just the feeling of being alone but has been described as "the social equivalent of physical pain, hunger and thirst" (Hawkley & Capioppo, 2010).

Lastly, evidence for physiological impact in relation to feeling socially disconnected and lonely has been the most researched pathway of loneliness. There is increasing evidence for being socially disconnected and experiencing feelings of subjective loneliness as having detrimental effects on physical health. Loneliness has been linked to worse cardiovascular health (Leigh-Hunt el al, 2017), arthritis, type 2 diabetes and dementia (Valtorta et al, 2016). In addition, loneliness has a strong association with coronary heart disease, raised blood pressure and stroke (James et al, 2011) and has also been likened to smoking 15 cigarettes a day (Holt-Lunstad et al, 2015). Being socially isolated decreases immunity, and this immune dysregulation has been linked to elevated inflammation and consequential health problems (Jaremka et al, 2013). Poor quality social relationships have been associated with poorer sleep quality and low energy (Hawkley et al, 2010). This is all the more poignant for

seafarers, where evidence suggests that fatigue and lack of sleep is already a significant health risk for this population working at sea (Allen et al, 2008).

The available evidence suggests that long periods away from home have a negative effect on psychological wellbeing for seafarers, having both direct and indirect effects (Mellbye & Carter 2017). Separation from family has been found to have a direct effect on wellbeing and identified as a stressor onboard ships, and studies have highlighted that preventive organisational measures such as avoiding long-time separation from family, among other factors (time-pressure, extremely long working days) should be considered for attention (Carotenuto, 2012; Oldenburg et al, 2009). Further evidence illustrates seafarers self-reporting dissatisfaction and lower wellbeing, associated with longer time away from home (Slišković & Penezić, 2015).

The disparities in studies that use the terms of social isolation and loneliness synonymously, illustrates the difficulties in defining and evaluating latent variables. Social isolation and loneliness have both been associated with poorer health outcomes (Leigh-Hunt et al, 2016) and social relationships and integration have been described as essential to human development and fulfilment (Beutel et al, 2017). Characteristics of social isolation and loneliness have a close relationship but also distinct differences (Steptoe et al, 2013). Social isolation is the physical presence of being disconnected, compared with loneliness which describes the emotional distress a person feels, when their desired social relationships and perceived social relationships are far from each other (Hawkley & Cacioppo, 2010). Loneliness is a psychological experience related to social isolation and perceived lack of

companionship and is relevant to health risk (Steptoe et al, 2004). Within the shipping industry, support for seafarers experiencing loneliness at sea is starting to emerge within organisations and charities providing online support and guidance (ISWAN, 2020; Crewtoo, 2016). However, there have been few empirical studies looking at loneliness in this population and its relationship with psychological general wellbeing.

Research on loneliness

Research and intervention in the general population have focused their attention on loneliness in older demographic groups with limited empirical research on a broader age group (Beutel et al, 2017). Research suggests that the personal networks decrease as we get older, after being relatively stable as a child and young adult (Wrzus et al, 2013). As people age, social networks decrease even more and are associated with cognitive decline (Aartsen et al, 2004). Though evidence from a social psychological perspective, suggests that it is social exclusion, discrimination and a decline in status that accelerates the cognitive decline in adults, rather than subjective loneliness itself (Burholt et al, 2017). Of the limited research on a broader age range, studies have found an association between loneliness and suicide ideation (Stickley & Koyanagi, 2016) and claim that loneliness is an antecedent to mental health problems (Lin et al, 2016). More recently, with the rise in technology and social media, research findings on loneliness have focused on internet usage and in particular, social media (Heiman et al, 2015).

Measuring loneliness and finding empirical data is difficult to assess, due to the subjective measuring of a latent variable and the variety of measures used (Steptoe et al, 2013). Social

relationships are fundamental to human existence, and impoverished relationships may have adverse health consequences. Health psychology often distinguishes between isolation, an objective indicator of social contact, and loneliness, a subjective experience of lack of companionship and intimacy (Menec et al, 2020). Many researchers believe that despite the synonymous use of the term's social isolation and loneliness, that although they share common features, they are unique concepts (Steptoe, 2013). It is therefore important to understand the subjective construct of loneliness, as this has been strongly associated with health outcomes and it is this subjective loneliness that impacts on health and not social isolation itself (Steptoe, 2013). If neglected, loneliness has serious consequences for cognition, emotion, behaviour and health (Beutel et al, 2017).

Loneliness and psychological general wellbeing

Loneliness as a predictor for psychological wellbeing is well established and there is a plethora of research as examined above illustrating how greater feelings of loneliness impacts wellbeing across populations. The majority of studies on loneliness have examined the potential for negative health outcomes but a more in-depth understanding of loneliness is complicated (Burholt et al, 2016). It has been suggested that loneliness has 3 distinguishing characteristics; loneliness is a universal phenomenon, it is a subjective experience, and it is multi-faceted (Rokach, 2011), perceived loneliness is therefore painful, distressing, and individualistic.

In addition, research indicates that the relationship with loneliness and psychological wellbeing may not be linear, and though there is a body of evidence that indicates loneliness predicts wellbeing, contrastingly some research studies show that psychological wellbeing may have a direct impact on feelings of loneliness. Research studies have identified 3

different types of loneliness; romantic, social and family, and that all 3 types are negatively impacted by subjective wellbeing (Hombrados-Mendieta, 2013).

Noreen et al (2006) found predictors of loneliness induced different elements of psychological wellbeing, including anxiety, depression, shyness, self-esteem and social support and the strongest of these predictors should be target outcomes for interventions in addressing loneliness. Similarly, Cheun et al (2019) found that a number of variables predicted loneliness, including depression, financial difficulty and living alone.

Social isolation is the significant factor that distinguishes life at sea from the majority of places of work. Seafarers are socially isolated by the very nature of their role, lifestyle, and working and living environments, though research examining feelings of loneliness in this population has been limited. For the purpose of this study, perceived loneliness is the research focus for the seafaring sample in this study rather than social isolation itself, however this research aims to examine their feelings of perceived loneliness as the extreme effect of social isolation and its relationship with psychological wellbeing and self-efficacy.

Self-efficacy

General perceived self-efficacy refers to people's beliefs regarding their own abilities. Self-efficacy theory has been studied in various populations and found to have a significant impact on wellbeing (Bandura, 1982). Self-efficacy beliefs are judgements about how effectively a person believes he or she can act, in order to meet a goal or to effectively cope with challenging situations (Di Giunta et al, 2010). It is these self-efficacious thoughts that impact how a person, thinks, acts and feels (Bandura, 1982). General perceived self-efficacy pertains

to optimistic beliefs about being able to cope with a large variety of stressors (Schwarzer et al, 1999). Theories of self-efficacy claim that it influences the amount of effort people put into a given task; is imperative for humans to remain in good health; and enables them to mediate negative effects of life stressors (Delahaij et al, 2010).

Exploring perceived self-efficacy in a seafaring population may therefore give an insight into any effect it may have as a mediating factor in the relationships between loneliness and psychological general wellbeing. Self-efficacy may help to mitigate the occupational stressors of extreme social isolation and loneliness and is the purpose of this study. Moreover, evidence for self-efficacy as a universal construct is illustrated in studies from different geographical areas with various populations and research suggests that it has meaningful relationships with other psychological components (Luszczynska, 2010).

A study looking at the relationships between occupational role stressors, general self-efficacy and burnout across nine different regions of the world, in the general population found that low self-efficacy may help to explain why occupational stressors have a positive association with burnout cross-nationally (Perrewe et al, 2002). Furthermore, a review on self-efficacy cross-culturally points to the collectivist vs individualistic element of self-efficacy as complex, and implications for self-efficacy to be lower in non-Western groups, though these lower self-efficacy beliefs were not predictors of performance (Klassen, 2004). Though some believe that it can be influenced by sociocultural factors, researchers recommend further research to explore individualist and collectivist cultural differences in self-efficacy (DiBenedetto & Schunk, 2018).

The role of self-efficacy in relation to daily stress and mental health across different populations (German, Russian and Chinese) found that self-efficacy helped to mitigate daily stresses across all countries in the study and provides evidence of the universal application of self-efficacy for aspects of mental health cross-culturally (Schonfeld et al, 2015). The application of self-efficacy theory as a universal construct is important for the population of seafarers employed in the shipping industry, as a multi-national population experiencing occupational stressors and extreme social isolation resulting in feelings of loneliness. Literature on self-efficacy is broad and has been discussed in relation to its mediating role in various functions and populations (William & Rhodes, 2016) This general, perceived self-efficacy, contributes towards the psychological effectiveness and psychosocial adjustment-styles of individuals in relation to their particular environments (Bandura, 2005).

Applications of self-efficacy theory to health have highlighted its function across a wide range of actual and potential health outcomes. Self-efficacy was found to partially mediate the relationship between depression and medication adherence in an older population (Son & Won, 2017) as well as mediating the relationship between physical activity and social support (Mudrak et al, 2016, Chang et al , 2015). In addition, self-efficacy has been found to mediate the relationship between stress and illness in college students (Roddenberry & Renk, 2010).

Self-efficacy is found to have a partial or complete effect for many aspects of health and wellbeing. Empirical research of adaption of wellbeing illustrates that those who believe they can deal effectively with stressors, are better at dealing with stress and adopt more effective

coping styles in a student population (Dwyer & Cummings, 2001). Further evidence has found it to mediate the relationship between emotional intelligence and job stress in nurses (Lee & Song, 2003). Academic research has examined self-efficacy in different populations, exploring its impact of health and wellbeing. The value of exploring self-efficacy in a seafaring population may have implications for the design of future interventions tackling loneliness in this population and improving psychological wellbeing for those working at sea.

Psychological concepts such as learned resourcefulness and self-efficacy are concepts taken from self-regulation models, and this cognitive-behavioural approach describes how these skills enable individuals to mitigate potential stressors and apply appropriate strategies (Erozkan & Deniz, 2012). Studies that focus on the mediating role of self-efficacy in relation to loneliness and wellbeing revealed mixed findings. Studies in relation to self-efficacy and gender differences have found women experience higher self-efficacy for social, emotional and interpersonal elements as a stronger predictor of loneliness, whereas for men, financial and physical self-efficacy were a stronger predictor (Fry et al, 2002). This could have implications for considering targeting self-efficacious beliefs in the form of an intervention to address loneliness in a population. In addition, academic self-efficacy partially mediated the effect of loneliness and hope in first-time undergraduates (Feldman et al, 2016) and a longitudinal study of students indicated that social self-efficacy mediated the association between attachment, anxiety and feelings of loneliness (Wei et al, 2005).

Seafarers, self-efficacy and psychosocial stressors

Research on seafarers' in relation to self-efficacy has been diverse. Studies on fatigue found that when examining the stressors present in seafaring, including time at sea, environmental stressors, and sleep and fatigue – it is the qualities of resilience, hope, optimism and self-efficacy that equip seafarers with the skills to cope in a stressful environment, and that these all come under the umbrella of psychological capital (Hystad & Eid, 2016). Self-efficacy has been found to play an important role in effect of fatigue on the quality of life of seafarers, having both direct and indirect effects (Kim & Jang, 2018).

Furthermore, studies on seafarers' self-efficacy have found that cultural homogeneity increased self-efficacy and improved organisational commitment (Young-Sub et al, 2006) indicating that seafarers report higher levels of self-efficacy when they are with peers from their own culture. This could have implications for multi-national crew that live and work together for months on end and requires further investigation. Self-efficacy has also been negatively associated with the use of social media in the lives of seafarers. Though an effective tool, enabling seafarers to stay in contact with home and cope with feelings of social disconnection, social media can also induce feelings of exclusion from social groups and instil negative feelings on; belonging, emotional wellbeing purpose, self-efficacy and self-worth (Barbu, 2016).

The study of self-efficacy in relation to the seafaring population has received some interest and academic focus of empirical studies. A study examining collectivism and self-efficacy found Asian men to have a more collectivist orientation compared with Caucasian men, in relation to sexual activity in a gay population (Mao & McCormick, 2004). However, the study of self-

efficacy in relation to feelings of loneliness and psychological wellbeing has not been examined in this population. Seafaring is perhaps lonelier today than it ever has been, increasingly longer hours, longer contracts, shorter docking times, reduced crew resulting in more workload, fatigue and lack of socialisation (Crewtoo, 2020). Seafarers by the very nature of their jobs are socially isolated and many of the stressors associated with seafaring are chronic, with working time and free time being spent in confined spaces (Hystad & Eid, 2016). The study of loneliness in the seafaring industry has had limited attention in the academic literature, and therefore been neglected by policy makers and practitioners (Sampson & Thomas, 2003).

Psychological wellbeing in a seafaring population is significant not only for productivity but also for the health and wellbeing of crew. There is considerable variation in the standards of accommodation and recreational facilities in the shipping industry (Sampson & Ellis, 2013). With growing emphasis on Corporate Social Responsibility (CSR) over the last 30 years, it is becoming apparent that there are benefits beyond the ethical reasons for adopting these policies. Studies have found that productivity and performance improve when companies adopt good CSR principles (Quartey and Puplampu, 2012), and in additional to the financial benefits, good CSR also contributes to both recruitment and retention in a seafaring population (Papachristou et al, 2015).

Furthermore, historically, the merchant navy had a bar onboard, where seafarers could socialise, drink, and spend time with their colleagues. The bar and alcohol has been phased out on large, commercial ships (with the exception of cruise ships, alcohol is present on cruise ships but crew are not permitted to partake), meaning that the merchant navy are now "dry". This has seen the decrease in socialisation on board ships, with more and more crew

spending time in their cabins increasing social isolation in an already isolating environment. Combined with this, long hours and fatigue and the social set-up of the current shipping industry and the life of the seafaring population can be very lonely (George, 2013).

Research indicates that the change of environment onboard ships is perpetuating the problem with social isolation and loneliness, as seafarers have less time in dock, work longer hours with little rest, and spend more and more time in their cabin. Therefore, building relationships and socialising is not at the top of the list of priorities. The concept of social capital is the web of connections and network in peoples' lives that inform, encourage and influence their decisions. It is centred round social relationships and its major elements include social networks, reciprocity, and trust (Bhandari & Yasunobu, 2009). Research has suggested that relating to others can help to alleviate the feelings of being isolated, this has been found in a population of inmates in prison (Fromm, 2001). These social relationships also have a purpose in the workplace and social groups (Stone et al, 2004).

Furthermore, the effects of long periods away from home highlight the significance of connectivity and internet access for seafarers serving at sea, to alleviate feelings of loneliness and enable seafarers to stay in touch with friends and family. Studies have shown that a major reason for leaving the industry is spending a long time away from home, and feelings of extreme isolation or loneliness among officers (Haka et al, 2011). Good internet connectivity at sea has been a contentious issue within the industry. Studies report that internet access is associated with life satisfaction, enabling seafarers to stay connected with family and friends at home and have contact with the outside world (Slišković & Penezić, 2016). Counter arguments cite seafarers' internet connectivity as having a detrimental effect on health and

wellbeing raising issues of; too much time spent in their cabin, receiving bad news from home or worrying about family and friends (Sliskovic & Juranko, 2019). There is continuing uncertainty about the mental health consequences of working as a seafarer and the impact of social isolation and loneliness on the health and wellbeing of this population (Iversen, 2012).

Careful consideration was given to the design of this study. Seafarers receive very little free time and engaging this population for the purpose of research is extremely difficult. Furthermore, due to the exploitation and harassment that many seafarers experience, blacklisting is a fear that is well-reported in the literature (Dutt & Manasi, 2015), therefore, seafarers may fear reprieve. Hence, the study was designed that it could be completed in the least amount of time possible using Likert scales (Joshi et al, 2015). Seafarers were reminded at the beginning and at the end of the questionnaire that their answers were in confidence and would not be passed on to a shipping company or manning agency and were for research purposes only. Furthermore, seafarers were able to complete the questionnaire in their own time and the availability spanned 5 months, giving seafarers opportunity to complete when it suited them.

Aims and Objectives

The implications of loneliness on health and wellbeing for mental health and morbidity is well evidenced in the academic literature. For a seafaring population, for whom social isolation is a central element of their lives, examining their feelings of perceived loneliness and how their scores on self-efficacy may mitigate this stressor is essential. Hence this study aims to explore feelings of loneliness in a seafaring population that are socially isolated spending months at sea, and examine how self-efficacy may mediate the relationship between loneliness and psychological wellbeing.

In the first instance, research will look at how self-efficacy may mediate the relationship that loneliness has on psychological general wellbeing. Research suggests that loneliness has negative consequences for psychological wellbeing (Rhode et al, 2016) and is a risk to both physical and mental health (Beutel et al, 2017). Studies indicate that seafarers report lower psychological wellbeing and that this is associated with long periods away from home (Slišković & Penezić, 2015). A large body of evidence suggests that loneliness predicts psychological general wellbeing, and that self-efficacy may have a mediating role as it does in other populations.

However, research is emerging that suggests psychological general wellbeing may predict loneliness and that self-efficacy may mediate this relationship. Evidence suggests that those people with lower psychological wellbeing reported more feelings of loneliness and this was particularly prevalent in a deprived population (Kearns et al, 2014) as well as in an older population (Windle & Woods, 2004). For this reason, considering the uniqueness of a seafaring population and the conditions of employment and long periods of social isolation,

psychological wellbeing may well be indicative of feelings of loneliness in this population. Therefore, this research approached with two mediation models.

The first mediation model, the X variable is loneliness (UCLA) predicting psychological general wellbeing (PGWBI) as the Y variable with M, the mediating variable of general self-efficacy (GSE). The second model examined psychological wellbeing (PGWBI) as the X variable, predicting loneliness (UCLA) as the Y variable, with general self-efficacy as the proposed mediating variable (M variable). This study will be the first to address the relationship between psychological wellbeing and loneliness and examine the proposed mediating role of self-efficacy in seafarers. Examining the potential benefits of self-efficacy in this population may add value and insight in the design and development of future interventions to tackle loneliness in this population.

Hypotheses

This study approached with two mediation models.

1. Model 1 hypothesised that loneliness would predict psychological general wellbeing and that this relationship would be mediated by general self-efficacy.
2. Model 2 hypothesised that psychological general wellbeing would predict loneliness and that this relationship would be mediated by general self-efficacy.

Participants

Seafarers spend months at sea often with little or no contact with home, living and working in difficult environments (Mellbye & Carter, 2017). Research has focused on Western European

seafarers, and this trend only began changing in the last decade where seafarers from East Asia have become a major part of the workforce and a focus of academic research (Bloor & Kahveci, 2004). Recruiting seafarers for the purpose of this research therefore aimed to have far-reaching engagement.

Recruitment

Recruiting seafarers for research is a challenging process and it was therefore necessary to utilise as many contacts in shipping as possible, to gain access to a far-reaching population of seafarers currently serving at sea. Previous experience in the maritime industry and seafarers' welfare gave me an insight into the issues surrounding recruitment, engagement and the challenges of this hard-to-reach group. Following on from my consultancy competency with the International Seafarers' Welfare and Assistance Network (ISWAN), I was invited to sit on an expert panel for the International Transport Federation (ITF) Seafarers' Trust. These workshops brought together experts in the field of seafarer help from different disciplines. The first workshop was entitled, Social isolation, depression and suicide" and the second was entitled "Health promotion". I was asked to present at the second workshop on; "What are the cultural and social aspects to consider when implementing HP (health psychology) initiatives in the maritime sector?". Presenting to a field of industry experts enabled me to introduce the practical application of health psychology theory in a seafaring population, introduce my research and establish relationships with professionals across disciplines. This enabled me to further build a network of contacts which I was able to utilise in the disseminating of my survey. Accessing the seafaring population is challenging and was attempted via various organisations, charities and companies to try to reach a wide audience currently serving at sea. See Table 1.

Table 1
Table of contacts used to disseminate survey

International Transport Federation (ITF)	The International Transport Workers' Federation (ITF) is an international trade union federation of transport workers' unions.
International Seafarers' Welfare and Assistance Network (ISWAN)	The International Seafarers' Welfare and Assistance Network (ISWAN) is an international NGO and UK registered charity that aims to assists seafarers and their families.
Crewtoo	Crewtoo is the world's largest online network of the seafaring community, with more than 112,000 members.
Spinnaker	Spinnaker Global are specialists in shore-based shipping recruitment.
Seafarers' Hospital Society (SHS)	The Seafarers Hospital Society is a long-established maritime charity dedicated to meeting the health, welfare and advice needs of seafarers.
HunterLink	Hunterlink's mission is to be part of the leading Australian and global network providers of psychosocial services and employee assistance programs for workers, their families and communities.
International Maritime Organisation (IMO)	The International Maritime Organization (IMO), is a specialised agency of the United Nations responsible for regulating shipping.

Cohen's (1992) power tables were used to estimate the sample size required for the present study. The power calculation was based on multiple regression analysis which would measure the strength of association between the variables. A priori power analysis using G power and an alpha level of 0.05, a small effect size of Cohen's *d* 0.15, and a power of 0.80 determined an appropriate sample size of at least 92 (Lenth, 2001). Data was collected from October 2017 to May 2018.

Exclusions

Respondents were a total of 119 seafarers of whom 18 provided incomplete data and were therefore excluded from analysis. Analysis included 101 seafarers. Two variables were excluded from analysis: gender and length of contract. Participants included 100 males and 1 female. The single female was excluded from analysis, as no meaningful data regarding gender differences could be extracted from her inclusion. The second variable to be excluded was length of contract. Participants had been asked how long their contract was and responses to this question were diverse. On reflection this question could have been interpreted in different ways, with some seafarers answering how long their current contract was, and others answering the total number of years they had been at sea, responses therefore varied from 10 months to 35 years. For this reason, this question was excluded from analysis. After exclusion of these two variables this brought the number of demographic variables to nine; age, nationality, religion, rank, type of ship, size of crew, whether or not the seafarer was at sea at the time of completing questionnaire, marital status and number of dependents.

Method

Variables

In the first model, loneliness was the independent variable and psychological general wellbeing was the dependent variable. For the second model loneliness was positioned as the dependent variable and psychological general wellbeing the independent variable. General self-efficacy was the proposed mediating variable in both models.

Materials

Respondents were first presented with an information sheet (See Appendix 1) prior to completing the survey. The information sheet invited them to take part in the study, explained why the research was being conducted and what it would involve. The information sheet also emphasised to participants that they did not have to take part in the study and reassured them that they could withdraw at any time. An email address was included, so should participants have any questions they were able to ask prior to taking part in the study. Corrupt and unscrupulous treatment within the seafaring population is widely acknowledged, and there is extensive evidence of discrimination (McLaughlin, 2010), trafficking (Surtees, 2013) and blacklisting* (Mack, 2010). This further compounds difficulties with recruitment and engaging this already hard-to-reach population. Given the seafaring population and fear of blacklisting, it was made clear, that the data given would be anonymous and confidential and would only be used for research purposes. Participants were reminded that by continuing with the questionnaire they were consenting to taking part in the study. See Appendix 1 for the information sheet.

*Blacklisting refers to the practice of seafarers being put on a list that are considered not good employees or "troublemakers" and this list is then circulated amongst recruitment agencies (known as manning agencies). Seafarers are often reluctant to speak up, complain or report malpractice and research implies that intimidation is easier at sea than other workplaces (Carey, 2017).

Following the online questionnaire, a debrief sheet was provided at the end. See Appendix 1. This debrief sheet was used to thank the participant for taking part in the study, once again explained the aims for the research and offered an email address should participants have any further questions. Given the nature of the study and the seafaring population, details of organisations that could offer help and support were provided. SeafarerHelp is a multi-lingual, international helpline available 24/7 provided by the International Seafarer Welfare and Assistance Network (ISWAN). HunterLink are an Employee Assistance Provider (EAP) that provide support in critical times and are recognised in the shipping industry for providing workshops and training, wellbeing solutions, critical incidence response and mediation. HunterLink operate a helpline that is available all year round, for seafarers concerned about their own, or a colleague's wellbeing. Lastly, the International Transport Federation (ITF) are the overarching organisation providing support across the shipping industry, including a 24-hour helpline. This is linked to SeafarerHelp run by ISWAN, who manage the helpline for ITF and by being affiliated to two international organisations has a wider-reaching audience.

Demographic Variables

A self-designed measure was developed for the purpose of this study to examine demographic variables. Initial data collection included 11 variables, however the variables gender and length of contract, were excluded from analysis for the reasons described above, leaving the remaining 9 variables; age, nationality, religion, rank, type of ship, crew size, at sea now, marital status and dependents. Table 2 displays initial groupings of variables, however for various reasons, raw data for some variables were not appropriate for statistical analysis, for this reason, variables were re-grouped. Justification for groupings can be found in the variable sub-headings below and the new groupings can be found in table 3.

Table 2:
Descriptive statistics for demographic variables

					Range	
	N	Mean	Median	SD	Min	max
Age	100	40.92	40.00	12.129	22	76
Nationality	100					
Africa	6					
Asia	60					
Europe	31					
North America	1					
Oceania	1					
South America	0					
Unknown	1					
Rank						
Captain	15					
Deck Officer	33					
Deck Crew	10					
Steward /	5					
Catering	26					
Engine Officer	7					
Engine Crew	4					
Other						
Religion						
Christianity	60					
Islam	13					
Hinduism	10					
Buddhism	0					
Sikhism	1					
Judaism	0					
Other	16					
Type of Ship						
Container	18					
Cruise Ship	15					
Bulk Carrier	12					
Tanker	28					
Ferry	3					
Gas Carrier	1					
Yacht	3					
Crew Size						
Small >50	83					
Medium 50-200	9					
Large 200+	8					
At sea now						
Yes	35					
No	65					
Marital Status						
Partner	76					
No Partner	24					

No of Dependents		2.50	2.00	2.023	0	8
0	19					
1	15					
2	21					
3	21					
4	7					
5	7					
6	5					
7	3					
8	2					

Age

Data for age was not normally distributed so for the purpose of this study, participants were split into two groups by median ≤ 40, >41.

Nationality

Seafarers were of 27 different nationalities, these were grouped together by continent, in line with the United States Central Intelligence Agency (CIA) World Factbook (2020). See Appendix 3 for groupings by continent. The sample in this study is consistent with the nationalities of seafarers that went to sea in 2018 and is illustrative of the current seafaring population (Department for Transport, 2019). Some groups of nationalities had only 1 or no respondents, for the purpose of descriptive analysis, this variable was also divided into 2 groups, Asian and non-Asian for the purpose of analysis.

Religion

Religious groups were also categorised according to the United States Central Intelligence Agency (CIA) World Factbook; Christianity, Islam, Hinduism, Buddhism, Sikhism, Judaism

or Other (for those that identified with another religion or did not identify with a given group). Some religious groups had only 1 or no respondents, for this reason, this variable was divided into 2 groups, Christian and non-Christian. The significance of dividing the sample into Christian and non-Christian is embedded in the history of the relationship between the Christian church and the seagoing population since medieval times (Miller, 2003). This long-established link is still evident today, though the presence of a priest is less common on board (though priests may be on some cruise liners) it was at the beginning of the 19th century, when Christian organisations began to appear in ports around Britain and across the British Empire (Atkinson, 2019), e.g. Mission to Seafarers, Apostleship of the Sea (AoS), Sailors' Society. The Mission to Seafarers currently serves in over 200 ports in more than 50 countries (Mission to Seafarers, 2020) indicating that the presence of the Christian church is still as significant today. Religion therefore plays an important role in the lives of many seafarers and is important to measure in relation to seafarers' wellbeing.

Rank

Participants were given multiple choice answers that best described their job role. The "other" option identified; crane operator, linen keeper, purser and floorman. Some categories had very few respondents and for this reason were divided into two groups. Seafarers on board seagoing vessels are categorised as officers or ratings in terms of their global demand and supply - and their pay (International Chamber of Shipping, 2020). Participants were made up of 74% officers, with ratings making up only 26% of the total population. Based on the data from the International Chamber of Shipping (2017) this is not representative of the current breakdown of officers to ratings that currently serve at sea, which is approximately

60% ratings and 40% officers. Possible reasons for this will be examined in the discussion section of this study.

Type of ship

Participants were categorised into 8 groupings for type of ship: container, cruise ship, bulk carrier, tanker, ferry, gas carrier, yacht and supply ship. There was a category for other in which people responded with, dredger, research vessel and military support. Types of ships vary greatly in their size and function, and some categories yielded small sample sizes. For this reason, the categories were re-grouped according to function and dead weight tonnage (DWT), a measurement used to assess the size of vessels. For the purpose of this study, all carriers were grouped together (bulk carrier and gas carrier) and vessels not carrying trade goods were put into one group, these included; ferry, yacht, supply boat and the category of other (all listings in the other category were non-trade vessels, such as, research, military, and support vessels etc.). In addition, vessels included in the non-trade category had an average dead weight tonnage of $<10{,}000m^3$.

Dead weight tonnage is a measure of the maximum weight a ship can carry including cargo, food, fuel, cleaning products, bedding, laundry, fresh water, ballast water etc and is used to assess the size of a vessel and does not include the weight of the ship itself just the maximum it can carry (the weight of the vessel is known as displacement). DWT reflects the type of function of a ship, with those with a DWT $>10{,}000m^3$ typically being vessels involved with import and export, in contrast vessels with a DWT $<10{,}000m^3$ generally associated with non-trade roles such as research. It is this unit of measurement that is used to categorise ships and vessels and is commonly used to calculate fees on commercial ships (Tchang, 2019).

Crew Size

Crew size ranged from 1-3000 and for the purpose of this study were divided into 3 groups: small (>50), medium (50-200) and large, (200+) as categorised in the International Chamber of Shipping Manpower Report (2018).

At sea now

Participants were asked to indicate whether they were currently at sea at the time of completing the questionnaire or on shore leave. Respondents indicated that 65% were currently on shore leave, with 35% currently onboard ship, this was despite the information sheet explicitly requesting that respondents were on board a ship at the time of completion. Reasons for this will be examined in the discussion section of this study.

Marital Status

Participants' marital status was examined by giving the options of; married, single, divorced, separated, co-habiting or civil partnership. These categories naturally fell into one of two groups: partner or no partner.

Number of Dependents

The number of dependents that relied on seafarers for financial support included children, parents, siblings, or anyone that a seafarer felt financially responsible for. This was then divided into two categories, those with dependents and those without.

Table 3:
Descriptive statistics for demographic variables – re-categorised

	N
Age	100
≤ 40	49
≤ 41	51
Nationality	
Asian	59
Non-Asian	41
Rank	
Officer	74
Crew	26
Religion	
Christianity	60
Non-Christian	40
Type of Ship	
Container	18
Cruise Ship	15
Carrier	12
Tanker	28
Non-trade	27
Crew Size	
Small >50	83
Medium 50-200	9
Large 200+	8
At sea now	
Yes	35
No	65
Marital Status	
Partner	76
No Partner	24
No of Dependents	
Dependents	81
No dependents	19

Measures

UCLA Loneliness Scale

The UCLA Loneliness Scale is a 20-item scale designed to measure participants' experience of loneliness (Russell et al, 1978). Using a 4-point scale (3=often, 2=sometimes, 1=rarely, 0=never), respondents indicated how they felt as described in each item e.g. "I have nobody to talk to". See Appendix 2 for full questionnaire. Respondents' possible total score ranges between 0-60 with a greater score indicating greater feelings of loneliness. Research supports the UCLA Loneliness Scale as being reliable with an internal consistency of Cronbach's α ranging from .89 to .94 (Russell, 2010). Findings are consistent and the UCLA Loneliness Scale produces comparable findings with other measures of loneliness covering a wider age range and was consistently reliable and valid (Office of National Statistics, 2018).

The UCLA loneliness scale does not stipulate low, moderate or high scores into categories, it merely states that the higher the score the more feelings of loneliness the respondent experiences. For this reason, it is necessary to make comparisons to other populations to compare mean scores on the UCLA loneliness scale. See the results section for comparison of scores on the UCLA loneliness scale in this population compared with previous studies.

Psychological General Wellbeing Index

The Psychological General Well Being Index (PGWBI) consists of 22 items rated on a 6-point Likert scale from 0-5, assessing psychological and general wellbeing of participants across 6 dimensions: anxiety, depressed mood, positive well-being, self-control, general health, vitality and raw index score (Chassany et al, 2004). See Appendix 2. The raw index

score for the PQWBI represents the sum of all items and ranges from 0 to 110, with a higher score indicating more positive wellbeing. Positive wellbeing is indicated by a score of 73-110, moderate psychological distress are scores between 61 and 72, and scores between 0-60 indicate severe psychological distress. For the purpose of this study the chosen standardised measure was the PGWBI, for three reasons; firstly because it has been used widely over a variety of conditions and population groups, with good internal construct validity (Nilsson et al, 2013); secondly, the PGWBI has been adopted as a global measure of wellbeing and distress, with application to different nationalities and ethnicities (Enck et al, 2009); and lastly, the PGWBI, has been conducted for a research study on seafarers as a measure of perceived stress in a shipping environment (Carotenuto et al, 2013). This study evaluated the suitability of the PGWBI as a choice of tool and found it to be a reasonable measure for obtaining an overall evaluation of psychological conditions for this particular population.

However, despite the PGWBI having good validity for the global score, research has suggested that validity is poor for the six subscales (Testa et al, 2016). For this reason, this study looked at the global score first and then examined the subscales in relation to demographic groups that had a significant difference between groups. The PGWBI has been reported to provide reference values for comparison across populations, countries, languages and cultures (Lobo-Luppi & Mouly, 2002) and has a good internal construct validity (Lundgren-Nilsson et al, 2013). Furthermore, the PGWBI has been previously used to assess stress in seafarers on board merchant ships. A study by Carotenuto et al (2013) found that the PGWBI was a reliable measure (using Cronbach's alpha) for obtaining a global evaluation of psychological conditions, and should be considered as a large-scale tool, for assessing the international population of seafarers.

General Self-Efficacy Scale

Lastly the General Self-Efficacy Scale (GSE) was designed to assess a general sense of perceived self-efficacy. See Appendix 2 for complete questionnaire. The scale is a 10-item questionnaire with respondents indicating their perceived thoughts on a given item (1=not at all true, 2=hardly true, 3=moderately true, 4=exactly true) e.g. "I can usually handle whatever comes my way." The 10 items are designed to examine perceived self-efficacy illustrated by components of: coping with adversity, goal setting, effort investment, persistence in the face of barriers and recovery from setbacks (See Appendix 2 for complete GSE measure). The sum of responses produces a final score between 10-40 with a higher score indicating a higher level of perceived self-efficacy. This scale has been examined for reliability and across 23 nations Cronbach's alphas α ranged from .76 to .90 (Schwarzer & Jerusalem, 1995).

Alternative well known measures for measuring self-efficacy include; the New General Self-efficacy Scale (NGSE) (Chen et al., 2001) and the Sherer General Self-efficacy Scale (SGSES) (Sherer et al., 1982), however research has had mixed findings regarding the reliability of the NGSE with findings across cultures reportedly having different outcomes has been found in a study comparing an Arabic and English population (Aamir, 2017). In addition, the SGSES scale has more items compared with only 10-items for the GSE scale. This was very important for the design of this study, as the population of seafarers are time poor and in order to encourage engagement and ensure the survey was user friendly it was imperative to be mindful of the time it took to complete. Though research reports both NGSE and the SGSES as having good validity and reliability the GSE has more support as a measure that is cross cultural. Furthermore, the GSE scale is used to assess perceived self-efficacy as it pertains to adaptation abilities and coping scales for both stressful events and daily activities. For these reasons described above

the GSE was therefore deemed the most appropriate measure of self-efficacy for the purpose of this study.

Self-efficacy has been examined in relation to its global application and cross-cultural differences and found to be a construct that is universal, and that the GSE is a reliable measure of this (Scholtz et al, 2002). Similar to the UCLA loneliness scale, the GSE gives an overall score but does not indicate levels of self-efficacy or differentiate between categories of scores, therefore comparisons need to be drawn from previous studies and other populations. See the results section of this study for population comparisons on GSE scores for self-efficacy.

The 3 standardised measure along with the demographic questionnaire designed for the purpose of this study, together totalled 38 items presented as a continuous questionnaire on SurveyMonkey.

Procedure

Ethical approval was sought and gained from London Metropolitan University, School of Psychology, Research Ethics Committee in June 2017 (See Appendix 1 for Ethics Application). A self-designed measure for demographic variables was used alongside the 3 standardised measures. Permission was obtained for the use of the UCLA Loneliness Scale and the PGWBI (See Appendix 2 for permission emails). Permission was not required to use the General Self-Efficacy Scale.

The standardised questionnaires chosen for this study were chosen carefully and the practical elements of the questionnaire design were considered. Seafarers lives can be stressful, and fatigue is a big factor in their lives (Smith et al, 2006) for this reason questionnaires that made up the survey were straightforward, only requiring the seafarer to tick a box on a Likert scale, and be could completed in a short amount of time as possible, Completion of the questionnaire took an average of 12 minutes.

Given the under-served population and the time constraints in relation to the lack of time in dock, gaining access to seafarers is extremely difficult. Due to the transient nature of the shipping industry a quantitative approach enabled research to be disseminated across a large sample collecting data from a geographically diverse population. Engaging respondents electronically allows participants to complete in their own time and reaches a wider and more diverse population. This enables researchers to examine data across a larger sample of seafarers across the world.

Design

A cross-sectional, correlational design was used for this study. There were 9 independent variables (after the removal of gender and length of contract) ; age, nationality, religion, rank, type of ship, size of crew, whether or not seafarer was at sea at the time of completing the questionnaire, marital status, number of dependents. Given the nature of this hard-to-reach and transient population, reasonable access can only be gained remotely with the use of technology. For the purpose of this study, a survey was designed using SurveyMonkey, in an attempt to collect quantitative data, including both demographic questions and standardised measures; UCLA loneliness Scale and Psychological General Well-being Index (PGWBI), General Self-efficacy Scale (GSE). See Appendix 2.

Analysis

Initial analysis using T-tests and ANOVA were conducted to examine associations and differences between the demographic variables and loneliness (UCLA), psychological general wellbeing (PGWBI), and general self-efficacy (GSE). Linear multiple regression was then carried out for each of the measures with demographic variables that had a positive association in baseline analysis. The only demographic variable at baseline to have a significant difference between groups for psychological general wellbeing was marital status (see table 6 in Results). For this reason, the six subscales that make up the PGWBI were examined in relation to marital status.

Bivariate correlations were then used to examine the relationships between the loneliness, psychological general wellbeing and general self-efficacy. Following on from bivariate correlations it was possible to then conduct mediation analysis.

Mediation

A mediation model seeks to identify and explain the mechanism or process that underlies an observed relationship between an independent variable and a dependent variable via the inclusion of a third mediator variable. Rather than a direct causal relationship between the independent variable and the dependent variable, a mediation model proposes that the independent variable influences the mediator variable, which in turn influences the dependent variable. Thus, the mediator variable serves to clarify the nature of the relationship between the independent and dependent variables (MacKinnon, 2007). In the instance where a variable X is assumed to cause another variable Y, this is called the direct effect. Path c in this model indicates a total effect. See Figure 1.

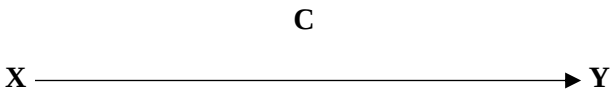

Figure 1: Total effect model

However, the effect of X on Y may be mediated by a third variable or process, this is known as a mediating variable. See Figure 2.

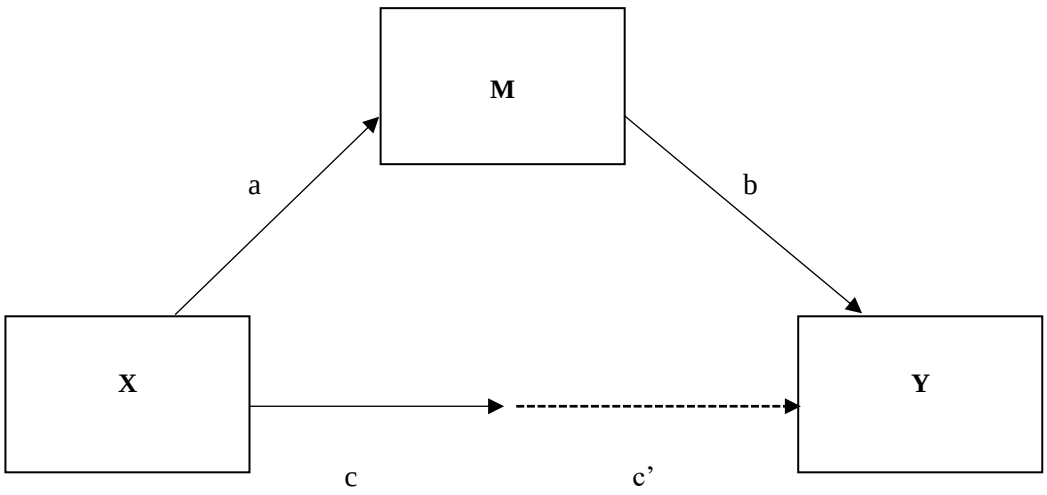

Figure 2: Example of mediation model

Mediation analysis in research has relied on the 4 steps of Baron & Kenny (1986) who state that to establish mediation has taken place the following conditions must be met. Baron & Kenny's mediation model has been the most widely and is arguably one of the most influential models in psychology to date (Field, 2013), however, a body of research suggests that this tends to have low statistical power compared with more recent research methods for mediation (Wu et al, 2012). For this reason, the mediation design tested in the present study is based on analogous figures presented by Hayes & Preacher (2004) using bootstrapping. For this purpose, analysis used PROCESS v3.5 in SPSS (Hayes, 2020).

In the first mediation model, 'path a' represents the effect of loneliness on the proposed mediator of general self-efficacy , and 'path b' represents the effects of the mediator (general self-efficacy) on the outcome variable (psychological general wellbeing). The total effect of loneliness on psychological general wellbeing is represented by path c, and path c' is the direct effect of loneliness on psychological general wellbeing controlling for the mediator, general self-efficacy. The indirect effects are exerted on psychological wellbeing *through* the proposed mediating variable, general self-efficacy.

The second mediation model follows the same fomat as above, but in this case path a represents the effect of psychological general wellbeing on the proposed mediator of general self-efficacy, and path b represents the effects of the mediator (general self-efficacy) on the outcome variable (loneliness). The total effect of psychological general wellbeing on loneliness is represented by path c, and path c' is the direct effect of psychological general wellbeing on loneliness controlling for the mediator, general self-efficacy. This statistical procedure resamples a single dataset to create many simulated samples. This process allows

the researcher to cauculate standard error, construct confidence intervals and perform hypothesis testing for numerous types of samples statistics. All mediation analyses were conducted while adjusting for demographic variables that were significantly associated with the outcome being predicted.

Results

Measures

In this study, scores for the UCLA loneliness scale ranged from 0-60 (M = 22.21, SD = 13.02) and had good internal consistency (Cronbach's a = .94). As previously mentioned the UCLA measure does not stipulate scores and give an indication of how these compare with other populations. In order to establish meaning and application of these scores they need to be compared to previous studies. In this study, with a total possible score of 60, a mean score of 22 falls in the lower end of the scale indicating a lower score in loneliness. Initial research in a healthy population reports a mean of 39 in a control sample (Russell, 1978) suggesting that the sample if this study is less lonely than the general population. Comparisons with more recent studies presents challenges as the loneliness scale has been revised and the more recent version uses a different scoring system making comparisons difficult. Using the midway point of each scale offers some way to comparing studies. However more recent research in young and adult offenders in UK prisons, a mean score of 43 and 48 respectively on the UCLA loneliness scale out of a possible score 20-80, indicating that young offenders also fall into the lower half of the possible scoring scale (Ireland & Power, 2004). In comparison, studies of vulnerable populations such as the older chronically ill Appalachians in North America, scored a mean score of 52 for loneliness (Theeke & Mallow, 2011), with a total possible range of 20-80 the sample in this study fell into the upper half of the possible total score. These studies indicate seafarers are scoring similar to those in a prison environment, but neither of these groups is as lonely as older people with chronic illness.

This study yielded a mean global PGWBI score representing the sum of all items and ranges from 0-110. Higher scores indicate greater psychological wellbeing. Seafarers' scores ranged from 18-109 (M = 72.74, SD = 19.20) and had good internal consistency (Cronbach's a = .941). According to the scoring system for the PBWBI global scores indicated that seafarers experience moderate psychological distress (severe scores on PGWBI are categorised 0-60, moderate scores are between 61-72 and scores between 73-110 points to positive psychological wellbeing), however within the sample there was a wide range of scores (18-109) with one participant scoring almost the total number possible (110) and a median score of 71. Studies using PGWBI in varying patient groups have found differing median scores for participants in a sample being treated for stress-related exhaustion (median score = 76) (Lundgren-Nilsson et al, 2013) as well as a study with patients with lung cancer (median score = 68) (Barlési et al, 2006). Consistent with this study, Carotenuto et al (2013) found that seafarers scored in the moderate range (61-72) for psychological wellbeing.

General self-efficacy (measured using GSE scale), generated scores between 16-40 (M = 31.50, SD = 4.45) with good internal consistency (Cronbach's alpha a = .81). The mean scores of GSE found in different populations of heterogeneous adults, German and American has been validated as a scale in 31 countries and the overall mean score was found to be 29 (Kusurkar, 2013). Therefore, the mean score in this study is similar to the average score found in previous studies. Thus, it can be inferred that seafarers were average on self-efficacy compared with other populations. Initial analysis examined each of the measures and the demographic variables to establish associations. T-tests and ANOVA were conducted to examine the differences between groups for each of the measures.

Loneliness (UCLA)

T-tests conducted for loneliness and demographic variables all met the necessary assumptions; there were no outliers in the data, as assessed by inspection of a boxplot. Loneliness scores for each of the variables were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$). there was homogeneity of variances, as assessed by Levene's test for equality of variances for; age ($F(1,98) = 1.685$, $p=.197$), nationality ($F(1,98) = .301$, $p=.585$), religion ($F(1,98) = .118$, $p=.732$), rank ($F(1,98) = .474$, $p=.493$), at sea ($F(1,98) = .702$, $p=.404$), marital status ($F(1,98) = 6.898$, $p=.510$) and dependents ($F(1,98) = 1.122$, $p=.292$).

For scores on loneliness, t-tests revealed that there were significant differences for age, nationality, marital status and whether or not seafarers had dependents. See Table 4. Younger seafarers were significantly more lonely than older seafarers as were non-Asian seafarers more lonely than Asian seafarers. Those without a partner or dependents were significantly lonelier than those with.

A one-way ANOVA was conducted to determine whether scores for loneliness (UCLA) were different for seafarers on different types of ships, and with different crew sizes. The assumptions were met for running ANOVA. There were no outliers, as assessed by boxplot examination; data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$); and there was homogeneity of variance, as assessed by Levene's test of homogeneity of variance for type of ship ($F(4,95) = 1.972$, $p = .105$) and crew size ($F(2,97) = 2.525$, $p = .085$). There were no significant differences for scores on loneliness for seafarers on different types of ship, ($F(4,95) = .256$, $p = .905$) or for crew size ($F(2,97) = .063$, $p = .939$

Table 4
Prevalence of loneliness (UCLA) by demographic variables for seafarers.

Variable	*N*	*M*	*SD*	*t(98)*	*p*	95% CI	
						LL	UL
Age				2.105	.038	.309	10.472
40 and under	49	24.96	13.566				
41 and over	51	19.57	12.019				
Nationality				2.438	.017	1.173	11.427
Asian	41	19.63	12.344				
Non-Asian	59	25.93	13.214				
Religion				1.124	.264	-2.284	8.250
Christian	60	21.02	13.413				
Non-Christian	40	24.00	12.356				
Rank				-1.113	.269	-9.182	2.585
Officer	74	23.07	12.643				
Ratings	26	19.77	14.007				
At Sea				-1.233	.221	-8.759	2.047
Sea	35	20.03	12.229				
Shore leave	65	23.38	13.371				
Marital Status				3.133	.002	3.356	14.951
Partner	76	20.01	11.475				
No-Partner	24	29.17	15.293				
Dependents				2.706	.008	2.322	15.093
Dependents	81	20.56	12.122				
No Dependents	19	29.26	14.643				

A linear multiple regression was run to examine if loneliness is predicted from those variables that had significant associations at baseline; age, nationality, marital status and dependents. Results show that 14.5% of the variance in loneliness can be accounted for by the predictors of nationality and marital status $F(4,95) = 5.202$, $p = < .01$, adj. $R^2 = .145$. Predicted scores on loneliness for non-Asian seafarers were significantly higher than Asian seafarers. In addition, predicted scores on loneliness for those seafarers without a partner were significantly higher than for those seafarers with a partner. These results indicate that non-Asian seafarers are lonelier than Asian seafarers, and seafarers without a partner are lonelier than those with a partner. A chi-square test for association was conducted between nationality and marital status for scores on loneliness. There was no statistically significant association between nationality and marital status, $\chi^2(1) = .160$, $p = .439$. Regression coefficients and standard errors are in Table 5 (below).

Table 5
Linear multiple regression for loneliness and demographic variables

	B	95% CI for B		*SE B*	*β*	R^2	R^2_{adj}
		LL	*UL*				
Model						.180	.145**
Constant	35.635	29.073	42.197	3.305			
Mean age (<39,>40)	-3.062	-8.297	2.173	2.637	-.118		
Nationality (Asian, non-Asian)	-6.239*	-11.299	-1.180	2.549	-.237*		
Marital Status	-7.238*	-13.404	-1.072	3.106	-.239*		
Dependents	-3.310	-10.134	3.513	3.437	-.100		

Note. Model = "Enter" method in SPSS statistics; B = unstandardized regressions coefficient; CI = confidence interval; *LL* = lower limit; *UL* = upper limit; *SE B* = standard error of the coefficient; *β* = standardised coefficient; R^2 = coefficient of determination;AR^2 = adjusted R^2.
*p < .05, **p <.01, ***p<.001

Psychological general wellbeing (PGWBI)

Those seafarers with a partner scored significantly higher on psychological general wellbeing than those without a partner. For all the other demographic variables there were no significant differences for scores on psychological general wellbeing. See Table 6.

Table 6
Associations of psychological general wellbeing by demographic variables for seafarers.

						95% CI	
Variable	*N*	*M*	*SD*	*t(98)*	*p*	LL	UL
Age				-1.567	.120	-13.538	1.593
40 and under	49	69.694	19.969				
41 and over	51	75.667	18.144				
Nationality				-.035	.972	-1.381	3.923
Asian	41	72.797	19.154				
Non-Asian	59	72.796	19.501				
Religion				-.515	.608	-9.831	5.781
Christian	60	73.550	18.668				
Non-Christian	40	71.525	20.148				
Rank				-.121	.904	-9.262	8.197
Officer	74	72.878	19.031				
Ratings	26	72.346	20.046				
At Sea				.797	.427	-4.789	11.216
Sea	35	74.828	17.270				
Shore leave	65	71.615	20.200				
Marital Status				-2.567	.012	-19.905	-2.546
Partner	76	75.434	17.653				
No-Partner	24	64.208	21.689				
Dependents				-.252	.802	-10.996	8.519
Dependents	81	72.975	19.059				
No Dependents	19	71.737	20.286				

A one-way ANOVA was conducted to determine if scores for psychological general wellbeing (PGWBI) were different for seafarers on different types of ships, and with different crew sizes. The assumptions were met for running ANOVA. There were no outliers, as assessed by boxplot examination; data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$); and there was homogeneity of variance, as assessed by Levene's test of homogeneity of variance for type of ship ($F(4,95) = 2.998$, $p = .105$) and crew size ($F(2,97) = 2.536$, $p = .090$). There were no significant differences for scores on psychological general wellbeing for seafarers on different types of ship, ($F(1,42) = 2.341$, $p = .71$) or for crew size ($F(2,97) = 2.740$, $p = .103$.

A linear regression was run to predict psychological general wellbeing from marital status as this was the only demographic variable found to have an association at baseline. Although the regression model did statistically significantly predict psychological general wellbeing $F(1,98) = .6.588$, $p < .05$, adj. $R^2 = .063$, this was quite small with only 6.3% of the variance explained by marital status. Scores on psychological wellbeing for those seafarers with a partner were significantly higher than for those seafarers without a partner. Regression coefficients and standard errors can be found in Table 7 (below).

Table 7:
Linear regression for psychological general wellbeing (PGWBI) and demographic variables

	B	95% CI for B		*SE B*	*β*	R^2	R^2_{adj}
		LL	*UL*				
Model						.063	.053*
Constant	64.208	56.642	71.775	3.813			
Marital Status	11.226*	2.547	19.905	4.374	.251*		

Note. Model = "Enter" method in SPSS statistics; B = unstandardized regressions coefficient; CI = confidence interval; *LL* = lower limit; *UL* = upper limit; *SE B* = standard error of the coefficient; *β* = standardised coefficient; R^2 = coefficient of determination;AR^2 = adjusted R^2.
*$p < .05$, **p <.01, ***p<.001

Psychological General Wellbeing Subscales

The psychological general wellbeing index is made up of six subscales, including 3-5 items for each dimension. All the subscales had adequate internal consistency as measured by Cronbach's α; anxiety (.799), depression (.824), positive wellbeing (.774), self-control (.714), general health (.537), vitality (.835).

The six subscales of the PGWBI are scored in the same direction, i.e. low scores are always the more negative score and high scores represent the more positive option. For example, a high score on anxiety represents low anxiety. A bi-variate correlation was conducted to examine associations between each of the sub-scales. Table 8 illustrates the coefficient indicating that each subscale is strongly positively correlated with all other subscales.

Table 8
Pearson correlation for subscales of PGWBI

	Anxiety (ANX)	Depression (DEP)	Positive Wellbeing (PWB)	Self-Control (SC)	General health (GH)	Vitality (VT)
Anxiety (ANX)	-					
Depression (DEP)	.764**	-				
Positive wellbeing (PWB	.693**	.730**	-			
Self-control (SC)	.601**	.660**	.528**	-		
General health (GH)	.559**	.680**	.519**	.513**	-	
Vitality (VT)	.761**	.685**	.729**	.613**	.567**	-

Note. N = 100. *p< .05, **p< .01, ***p< .001

Measures at baseline indicated that marital status was the only demographic variable to have a significant difference for psychological wellbeing. For this reason, the 6 subscales were examined futher in relation to marital status. Scores obtained in the 6 scales by marital status were compared using t-tests. Across all 6 of the subscales, those seafarers with a partner scored higher (more positive) than those seafarers without a partner.

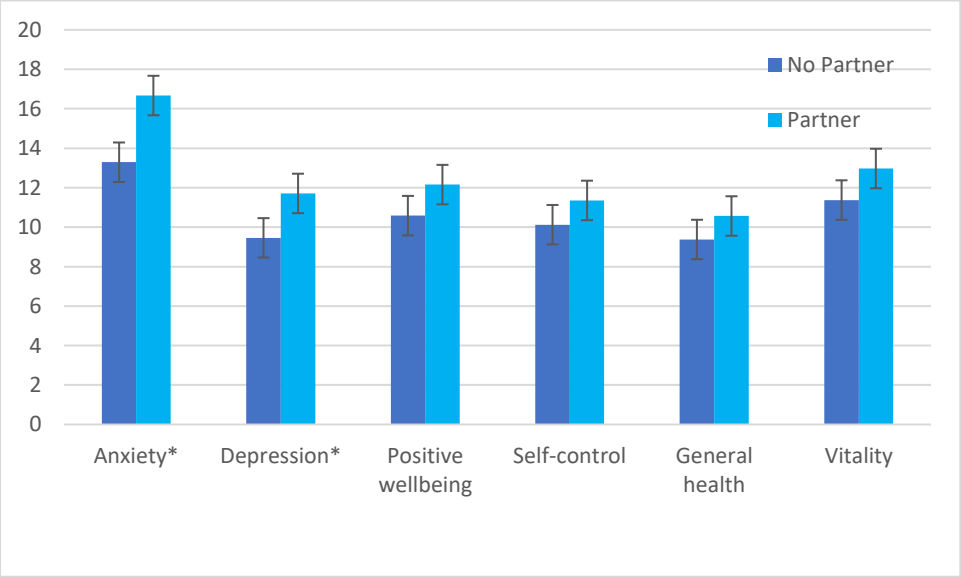

Figure 3
Mean scores obtained in the subscales for PGWBI by marital status

Subscales for *anxiety and depression* showed a significant difference for seafarers with a partner scoring significantly higher (less depression and anxiety) than for those seafarers without a partner. For *anxiety*, those seafarers with a partner scored higher (less anxiety) (M = 16.67, SD = 4.81) than those without a partner (M = 13.29, SD = 6.63), a statistically significant difference M = -3.38, 95% CI [-6.36, -.396], $t(98) = -2.310$, $p = .028$. Similarly, an independent samples t-test was run to determine if there was a difference in *depression*. Seafarers with a partner scored higher (less depression) (M = 11.71, SD = 3.17) than those

without a partner (M = 9.46, SD = 3.82), a statistically significant difference M = -2.25, 95% CI [-3.804, -.700], t(98) = -2.879, p = .005.

There was no statistically significant difference for marital status on the remaining subscales of; positive wellbeing (M = -1.574, 95% CI [-3.293, .144], t(98) = -1.819, p = .072), self-control (M = -1.230, 95% CI [-2.678, .218], t(98) = -1.686, p = .095), general health (M = --1.191, 95% CI [-2.448, .067], t(98) = -1.878, p = .063), or vitality (M = -1.598, 95% CI [-3.503, .305], t(98) = -1.666, p = .072),.

General self-efficacy (GSE)

There were no significant differences for any of the demographic variables for seafarers' scores on general self-efficacy. See Table 9.

Table 9
Scores on self-efficacy for demographic variables for seafarers

Variable	*N*	*M*	*SD*	*t(98)*	*p*	95% CI	
						LL	UL
Age				-1.013	.314	-2.664	.863
40 and under	49	31.04	4.528				
41 and over	51	31.94	4.361				
Nationality				1.122	.264	-.778	2.803
Asian	59	31.08	4.629				
Non-Asian	41	32.10	4.146				
Religion				-1.431	.155	-3.082	.499
Christian	60	32.02	4.497				
Non-Christian	40	30.73	4.303				
Rank				-.614	.541	-2.641	1.393
Officer	74	31.66	4.361				
Ratings	26	31.04	4.728				
At Sea				1.691	.094	-.271	3.392
Sea	35	32.51	4.189				
Shore leave	65	30.95	4.512				
Marital Status				-.367	.714	-2.458	1.690
Partner	76	31.59	4.714				
No-Partner	24	31.21	3.526				
Dependents				-.715	.476	-3.066	1.441
Dependents	81	31.65	4.500				
No Dependents	19	30.84	4.246				

A one-way ANOVA was conducted to determine if scores for general self-efficacy (GSE) were different for seafarers on different types of ships, and with different crew sizes. The assumptions were met for running ANOVA. There were no outliers, as assessed by boxplot

examination; data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$); and there was homogeneity of variance, as assessed by Levene's test of homogeneity of variance for type of ship ($F(4,95) = 1.732$, $p = .149$) and crew size ($F(2,97) = .209$, $p = .811$). There were no significant differences for scores on general self-efficacy for seafarers on different types of ship, ($F(4,95) = .476$, $p = .753$) or for crew size ($F(2,97) = .346$, $p = .708$**.**

There were no statistically significant differences between groups and general self-efficacy, therefore it was not necessary to run a multiple regression.

Correlational analysis

Bivariate correlations were run to determine if the outcome variables of loneliness, psychological general wellbeing, and general self-efficacy were significantly related to each other. See Table 10 (below).

Table 10
Correlation matrix of outcome measures

Correlations			
Measure	GSE	UCLA	PGWBI
GSE	-		
UCLA	-.432**	-	
PGWBI	.390**	-.673**	-

*p< .05, **p< .01, ***p< .001

Self-efficacy and psychological general wellbeing had a strong positive correlation indicating that a high score on self-efficacy was associated with positive psychological wellbeing and the strength of this relationship was medium according to Cohen's effect size (1998). Loneliness had a negative correlation with both self-efficacy and psychological general wellbeing, indicating that the lonelier seafarers felt the lower they scored on both self-efficacy (medium effect) and psychological general wellbeing (large effect).

Mediation Analyses

This study has previously highlighted the justification for approaching this research with two mediation models.

Mediation Model 1

The first mediation model hypothesised that loneliness would predict psychological general wellbeing and that this relationship would be mediated by self-efficacy. See Figure 4.

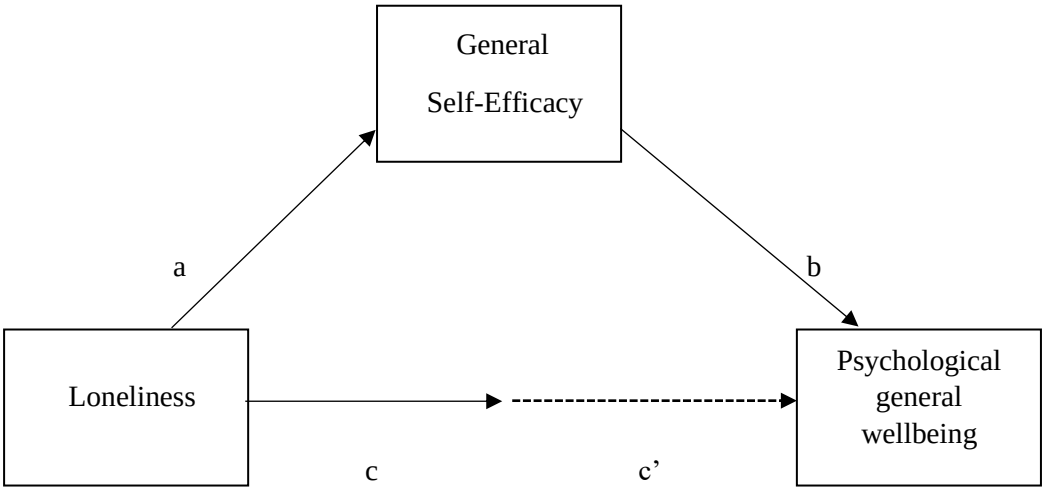

Figure 4
Mediation Model 1

The mediation design tested in the present study is based on analogous figures presented by Hayes & Preacher. Path a represents the effect of loneliness on the proposed mediator of general self-efficacy, and path b represents the effects of the mediator (general self-efficacy) on the outcome variable (psychological general wellbeing). The total effect of loneliness on psychological general wellbeing is represented by path c, and results indicated that 48.1% of the variance in psychological general wellbeing is explained by loneliness. Finally, path c' is the direct effect of loneliness on psychological general wellbeing controlling for the mediator, general self-efficacy. The indirect effects are exerted on psychological wellbeing *through* the proposed mediating variable, general self-efficacy. The direct and indirect paths can be seen in Table 11, along with the results of bootstrapping tests of indirect effects.

Table 11
Direct and indirect effects and of loneliness on psychological general wellbeing through the mediating variable of general self-efficacy.

Pathways	B	95% CI for B		SE B	β	R^2	AR^2
		LL	UL				
Direct Paths							
Loneliness (IV) – general self-efficacy (MV	-.181***	.851	1.513	.966	-.133***	.252	.228
General self-efficacy (MV) – Psychological general wellbeing (DV)	1.684***	.787	2.521	.402	.390***	.152	.143
Loneliness (IV) – Psychological general wellbeing (DV)	1.036***	1.000	1.652	.118	-.703***	.481	.464
Indirect paths							
Loneliness (IV) – Psychological general wellbeing (DP) *through* General self-efficacy (MV)	-.070	-.014	.003	-081			

Note. Model – "Enter" method in SPSS Statistics; *B* = unstandardised regression coefficients; CI = confidence interval; *LL* = lower limit; *UL* = upper limit; *SE B* = standardised error of the coefficient; β = standardised coefficient; R^2 = coefficient of determination; AR^2 = adjusted R^2
*p< .05, **p< .01, ***p< .001

Analysis was conducted using PROCESS software. After adjusting for demographic variables that were significantly correlated with the outcome being predicted, results indicated that self-efficacy did not mediate the effect of loneliness on psychological general wellbeing. The total and direct effects of loneliness on psychological general wellbeing were -1.036, $p< .05$ and -.966, $p<.001$respectively. The difference between the total and direct effects was the total indirect through the mediator, general self-efficacy with a point estimate

of -.070 and a 95% bias corrected and accelerated bootstrap confidence interval CI of -.258 and .061.

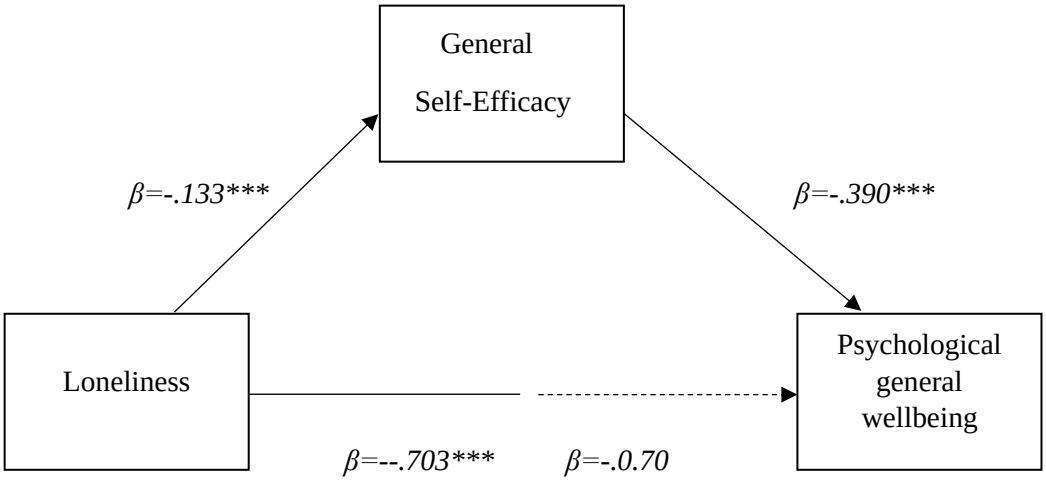

Figure 5
Standard regression coefficients for the relationship between psychological general wellbeing and loneliness as mediated by general self-efficacy.
Note. N = 100 *p<.05, **p<.01, ***p<.001

When the total direct effect was examined, the directions of the a and b paths were consistent with the interpretation that loneliness predicted general self-efficacy and that general self-efficacy predicted psychological general wellbeing. However, when the indirect effect was examined, there was no mediating effect after controlling for demographic variables that were significantly correlated with the outcome being predicted. See Figure 5.

Mediation Model 2

Owing to the non-significance of mediation model 1, this study explored a second mediation model. For this model, path a represents the effect of psychological general wellbeing on the

proposed mediator of general self-efficacy, and path b represents the effects of the mediator (general self-efficacy) on the outcome variable (loneliness). See Figure 6.

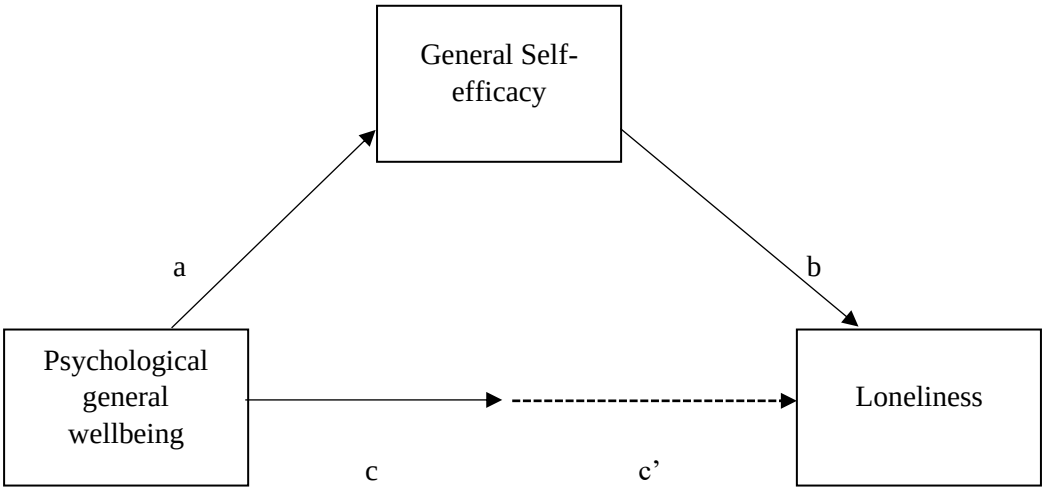

Figure 6
Mediation Model 2

The total effect of psychological general wellbeing on loneliness is represented by path c with results indicating that 55.8% of the variance in loneliness can be explained by psychological general wellbeing. Path c' is the direct effect of psychological general wellbeing on loneliness controlling for the mediator, general self-efficacy. The indirect effects are exerted on loneliness *through* the proposed mediating variable, general self-efficacy. The direct and indirect paths can be seen in Table 12, along with the results of bootstrapping tests of indirect effects.

Table 12
Direct and indirect effects and of loneliness on general self-efficacy through the mediating variable of psychological general wellbeing.

Pathways	B	95% CI for B		SE B	β	R^2	AR^2
		LL	UL				
Direct Paths							
Psychological general wellbeing (IV) – General self-efficacy (MV)	.096***	.043	.148	.022	.413***	.185	.141
General self-efficacy (MV) – Loneliness (DV)	-1.296***	-1.735	-.826	.243	-.442***	.370	.337
Psychological general wellbeing (IV) – Loneliness (DV)	-.434***	-.531	-.342	.048	-.640***	.558	.535
Indirect paths							
Psychological general wellbeing (IV) – Loneliness (DP) *through* General self-efficacy (MV)	-.064***	-.131	-.020	-028			

Note. Model – "Enter" method in SPSS Statistics; *B* = unstandardised regression coefficients; CI = confidence interval; *LL* = lower limit; *UL* = upper limit; *SE B* = standardised error of the coefficient; β = standardised coefficient; R^2 = coefficient of determination; AR^2 = adjusted R^2
*p< .05, **p< .01, ***p< .001

After adjusting for demographic variables, results indicated that self-efficacy did mediate the effect of psychological general wellbeing on loneliness. The total and direct effects of psychological general wellbeing on loneliness were -.434, p< .05 and -.370, p<.001 respectively. The difference between the total and direct effects was the total indirect through

the mediator, general self-efficacy with a point estimate of -.063 and a 95% bias corrected and accelerated bootstrap confidence interval CI of -.131 and -.020.

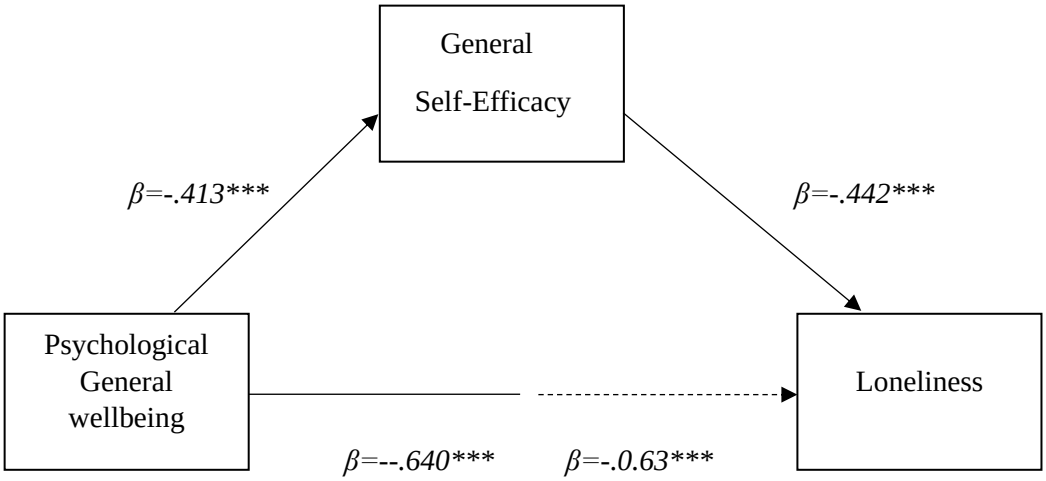

Figure 7
Standard regression coefficients for the relationship between psychological general wellbeing and loneliness as mediated by general self-efficacy.
Note. N = 100 *p<.05, **p<.01, ***p<.001

When the total direct effect was examined, the directions of the a and b paths were consistent with the interpretation that psychological general wellbeing predicted general self-efficacy and that general self-efficacy predicted loneliness. When the indirect effect was examined self-efficacy had a mediating effect, indicating that self-efficacy mediates the relationship between psychological general wellbeing and loneliness. See Figure 7.

Discussion

Summary of results

The aim of this study was to determine whether self-efficacy mediated the relationship between loneliness and psychological wellbeing. This study approached with two mediation models. Owing to the first mediation model being insignificant, a second mediation model was examined.

This model was supported in this research indicating that psychological wellbeing did predict loneliness and that this relationship was mediated by self-efficacy in a seafaring population. In other words, self-efficacy may mitigate the effects that poor psychological wellbeing may have on feelings of loneliness in a seafarer.

Addressing Hypotheses

This research approached with two hypotheses.

1. Model 1 hypothesised that loneliness would predict psychological general wellbeing and that this relationship would be mediated by general self-efficacy.
2. Model 2 hypothesised that psychological general wellbeing would predict loneliness and that this relationship would be mediated by general self-efficacy.

Mediation Findings

The first model examined loneliness as the X variable, predicting psychological general wellbeing (PGWBI) as the Y variable, with general self-efficacy as the proposed mediating variable (M variable). This model was not significant indicating that although loneliness predicted psychological general wellbeing and had a direct relationship, this was not mediated by self-efficacy. This was unexpected as literature discussed in the *Introduction* of this study suggested that it would be loneliness that predicted wellbeing, and this would be mediated by self-efficacy, however this was not supported in this study. Interestingly, loneliness scores were not as high as expected and reasons for this are examined below in the *Population of seafarer's* section of this study.

The second mediation model was examined with the variables positioned differently, the X variable was psychological general wellbeing (PGWBI) predicting loneliness (UCLA) as the Y variable with M, the proposed mediating variable of general self-efficacy (GSE). This model was found to be significant and indicated that self-efficacy may mediate the relationship between psychological wellbeing and loneliness.

Wellbeing has long been associated with health outcomes (Loffredo, 2011; Deiner, 1984) and is used to indicate quality of life (Adolfsson et al, 2010). Adopting measures of assessing feelings of wellbeing and stress has been used in various sample groups, of both patient and healthy populations (Nilsson et al, 2013). Wellbeing is a broad construct with multiple dimensions to it, and standardised measures have sought to capture perceived wellbeing as a research methodology attaining to quality of life. Psychological wellbeing in this study indicates that seafarers suffer from moderate psychological distress and that this predicts

their feelings of loneliness, and this relationship is mediated by self-efficacy. Results highlighted that self-efficacy scores for a seafaring population were similar to populations for other studies, and therefore representative of the general population. Comparison studies examining loneliness highlighted that respondents in this study scored lower than previous studies on a healthy population, indicating that they were less lonely, reasons for this will be discussed later on. On scores for PGWBI seafarers scored in the moderate range indicating that their levels of wellbeing and score on self-efficacy (GSE) were similar to those of a health population. Mediation analysis illustrated that psychological wellbeing was perhaps the significant factor in this study and this will be examined further in the *Implications* section below. The sample of seafarers used for this study highlights the challenge of research with this sample and the many covariates and challenges of studying a seafaring population. To further make sense of these research findings it is necessary to look at this sample in more detail.

Population of Seafarers

This research initially examined demographic data across eleven variables. However, two of the variables were excluded from analysis. Female seafarers make up approximately 1-2% of seafarers worldwide, according to the International Chamber of Shipping (2019). In this study, from the original sample of 101 (after exclusion of the missing data), only one of the respondents was female. Although this is representative of the seafaring population, she was excluded from analysis as no meaningful data into gender differences could be extrapolated from her inclusion.

The second variable to be excluded from analysis was the length of contract, as answers indicated that seafarers had interpreted this question in different ways. It was the intention for

seafarers to indicate the length of the contract they were currently on as this differs for ships and nationalities from 3 weeks to 9 months, however, issues around repatriation and pay can sometimes mean that seafarers are onboard ship longer than their 9 month contract. Seafarers interpretation indicated that some seafarers answered the question as intended and gave the number of months of their current contract, however some seafarers gave answers indicating the number of years they had been at sea (e.g. 37) rather than their current contract. Therefore, this data could not be included for analysis. See the Limitations section for more discussion on this area.

The variable of age for the seafarers used in this sample was not normally distributed with a peak of seafarers in their 20's. This is not surprising in the shipping industry as the growth of cadet training and qualifications since the 1970's has encouraged young cadets to begin a career in the shipping industry thus boosting numbers for younger seafarers (Ship Safe Training Group, 2018). In addition, a proportion of seafarers continue in employment beyond the average retirement age of 63-68. As the variable for age was not normally distributed, it was divided into two groups using the median age of seafarers. Using the median age (40) meant the groups were evenly split between 39 and under (49 respondents) and 40 and over (51 respondents). Initial analysis examining the differences between groups on standardised measures, found a significant difference for age on scores of loneliness but not on the other measures of psychological general wellbeing and self-efficacy. Those seafarers 39 and under were significantly lonelier than their older colleagues. This will be discussed further in relation to the UCLA loneliness scale.

Seafarers were of 27 different nationalities, grouped together by continent, in line with the United States Central Intelligence Agency (CIA) World Factbook (2020). These figures can be considered as an approximate representation for the number of people that went to sea in 2018 and therefore the sample in this study is illustrative of the current seafaring population (Department for Transport, 2019). Seafarers were divided into groups; Asian and non-Asian as some nationalities had only 1 or 2 respondents in groups for nationality. Dividing nationality in to Asian (59 respondents) and non-Asian (41 respondents) is a common categorical divide in the shipping industry. East Asia has a strong maritime history with prosperous trade routes since the 1500's, and Southeast Asians still make up a high proportion of multinational crews (Progoulaki & Roe, 2011). This study found that non-Asian seafarers scored significantly higher on scores on loneliness than Asian seafarers, though there were no significant differences between these groups for psychological general wellbeing or self-efficacy. This was a surprising finding as Asian seafarers are more likely to be employed as ratings (rather than officers) and are therefore exposed to higher levels of physical stress (Fotteler et al, 2018).

Reasons for this could maybe be attributed to the collectivist culture of the Asian population as previously mentioned. Asian crew members have strong cultural ties and need for contact (Sampson & Thomas, 2003). If seafarers are working on a contract with other seafarers from the same nationality and culture, this may reduce the feelings of loneliness as seafarers gain from the collectivist concept of social capital.

Religion within this sample was reflective of religious groups in the general population and there were no significant differences on any of the measures for religion in a seafaring

population. As described in the *Method* section of this study, religious groups were categorised according to the United States Central Intelligence Agency (CIA) World Factbook; Christianity, Islam, Hinduism, Buddhism, Sikhism, Judaism or Other (for those that identified with another religion or did not identify with a given group). However, due to some religious groups only having 1 or 2 this variable was divided into 2 groups, Christian (60 respondents) and non-Christian (40 respondents). Further to the discussion of religion in the *Method* section of this study, due to the large number of Christian seafarers and the historical significance of the Christian church in the maritime industry using Christianity as a grouping for the purpose of this study was the most sensible division of religion.

However, rank position held among seafarers is a crucial element of defining job roles and perpetuating the hierarchy that is synonymous within the shipping industry. For the purpose of this study, rank was divided into two categories, officers and ratings. Within the shipping industry, the percentage of international seafarers, is 47% officers and 53% ratings (International Chamber of Shipping, 2020). This differs slightly from country to country, for example, within the UK, 47% officers, 38% ratings, 7% uncertified officers and 8% officers in training (Department for Transport, 2015). Respondents that took part in this study were from 74% officers and 26%, this sample was therefore not reflective of the seafaring population currently serving on merchant vessels and there are a number of reasons why this may have been the case.

Firstly, working conditions of seafarers differ for those of officers and crew. Crew onboard merchant vessels work long hours and have less free time than officers onboard and therefore may have less free time to complete a survey (Jepsen et al, 2015). Similarly, fatigue is well

researched in the academic literature with evidence that seafarers work long hours, with little rest and inadequate support, as a result of restricted manning, excessive working hours, and frequent port turn-around time (Allen et al, 2008). Particularly concerning, is the common falsifying of audited work hours, so on paper, seafarers are abiding by the Maritime Labour Convention (MLC) that outlines recommended hours, conditions etc. but in reality, many are being bullied into signing worksheets with inaccurate work hours recorded (Allen, Wadsworth, & Smith, 2006). Finally, officers are more likely onboard ship to have access to the internet and therefore online research such as this study would only be accessible to seafarers of a certain rank. This shall be discussed further in the *Limitations* section of this study.

The Maritime Labour Convention (MLC) stipulates fair working and living conditions for seafarers and minimum working rights covering, contractual agreements, rest hours, conditions of employment, health protection, medical care, accommodation, food etc for both officers and ratings. Included in the MLC employment conditions is the contractual agreement that repatriation to a country of residence for a seafarers should be free (Gov.UK, 2020), however reports from industry and academia indicate that this is not the case and many seafarers experience abandonment after companies refuse to pay repatriation costs (Bernal & Piniella, 2015) further contributing to feelings of extreme isolation and loneliness. The seafaring industry is problematic with issues of corruption, bullying and discrimination not uncommon. For this reason, seafarers feel vulnerable and in fear of being "blacklisted" if anything they do or say is deemed as not appropriate. Blacklisting involves being listed as not suitable for employment and risks seafarers not being able to secure future contracts. Conditions for seafarers can be harsh, and seafarers are usually recruited by manning agencies in labour supply countries, such as the Philippines. One in 5 seafarers are Filipino,

and the Philippines has been the main supplier of seafarers since 1987 (Consolidated Training Systems Incorporated, 2014). Being blacklisted means a seafarer will not work again, sometimes for the same shipping company, or in many instances for any other shipping company. Port chaplains have described the "palpable fear" of seafarers for being black-listed (Palmer & Murray, 2016), as this risks of unemployment, and uncertainty for the seafarer and their whole family, often for families from third world countries that can least afford it. For this reason, seafarers are often afraid to speak out and is quite possibly the case for the increased number of officers taking part in this study compared with ratings.

The type of ship that seafarers sailed on and the size of crew revealed no significant differences against any of the measure of self-efficacy, loneliness or psychological general wellbeing. However, the questions of whether or not seafarers were at sea at the time of completing the questionnaire added a level of complexity to the analysis. The information sheet that preceded the questionnaire clearly indicated that this research was aimed at those seafarers currently serving onboard a vessel. However, despite this only 35% of respondents were onboard ships at the time of completion and 65% were on shore leave. There may be a number of reasons for this being the case, such as no internet access whilst onboard, insufficient time, too fatigued whilst onboard etc. It is, however, impossible to establish whether participants answered the questions in real time or reflected on periods of time at sea and answered accordingly. Whether or not seafarers were at sea at the time of completion showed no significant differences in their scores of loneliness, psychological wellbeing or self-efficacy. However, since the large proportion of respondents were on shore leave at the time of completion, it may not have yielded the same results if seafarers had been at sea.

Loneliness

Findings are consistent and the UCLA Loneliness Scale produces comparable findings with other measures of loneliness covering a wider age range and was consistently reliable and valid (Office of National Statistics, 2018).

As was previously discussed in the *Method* section of this study, comparing means for UCLA scores is difficult due to their being different versions of the scale with differing scoring systems. However, previous research cited indicated that seafarers scored lower than a healthy population indicating that they are less lonely and similar to those in a prison setting. These results are interesting as scoring below the results of a "healthy population" indicates perhaps that there is an additional coping mechanism going on, however maybe the respondents being majority rather than crew as well as being on shore leave are stronger indicators of the low loneliness scores in this population.

Further examination of the sample who completed the questionnaire may go some way to explaining this anomaly. Given the emphasis in the literature review on social isolation and loneliness in this particular population, it was the expectation that seafarers would score very high on loneliness, scores were below that of a normal population and therefore were not as high as was expected. It may be the case that owing to the number of officers that completed the questionnaire compared with ratings, that this may play a part in the lower than expected loneliness score. Officers experience better working conditions, higher wages, more privileges, greater access to internet connectivity than ratings on board a ship and this may account for the scores on the loneliness scale. Similarly, as described in the *Population* section above, as well as the majority of respondents being officers, there was also a high

proportion of seafarers on shore leave at the time of completion and therefore not on a ship. Even for those seafarers who may have chosen to complete the questionnaire whilst reflecting on their time aboard and feelings they would have had, they may still have answered the questionnaire in a more positive frame of mind.

Psychological general wellbeing

The Psychological General Well Being Index (PGWBI) consists of 22 self-administered items rated on a 6-point Likert scale from 0-5, assessing psychological and general wellbeing of participants across 7 dimensions: anxiety, depressed mood, positive well-being, self-control, general health, vitality and raw index score (Chassany et al, 2004). Seafarers in this study scored in the *moderate* range on the raw index score for psychological wellbeing. This was a surprising finding, as it was anticipated that seafarers would have scored in the range for severe psychological distress.

Reflecting on the scores of the UCLA scale, a similar story may be reflected in the scoring for the PGWBI. The majority of respondents were officers and were on shore leave at the time of completion. These factors are likely to have an effect on the scoring of the outcome measures. However, bivariate correlations illustrated that the UCLA scale and the PGWBI were negatively correlated, indicating that the lonelier someone felt the lower they scored on their psychological wellbeing, as would be expected.

General self-efficacy

The General Self-Efficacy Scale (GSE) was designed to assess a general sense of perceived self-efficacy. For general self-efficacy (measured using GSE scale), respondents had a mean

score of 31. The mean scores of GSE found in different populations of heterogeneous adults, German and American was found to be 29 and has been validated as a scale in 31 countries (Kusurkar, 2013). Therefore, the mean score in this study is similar to the average score found in previous studies. Thus, it can be inferred that seafarers were average on self-efficacy compared with other populations. Self-efficacy has been examined in relation to its global application cross-cultural differences and found to be a construct that is universal, and that the GSE is a reliable measure of this (Scholtz et al, 2002).

Measures that are used for the calculation of a latent variable and answered in a self-administered manner, could affect the validity of the measure (Scholz et al, 2002). The general self-efficacy scale (GSE) has been a focus of research and whether it is applicable across cultures. Findings indicate that the psychometric properties of the measure are equivalent cross-culturally and though the underlying construct can be administered worldwide, there are cross-cultural differences that would benefit from further research (Dona et al, 2002). However, conflicting research claims it is not possible to universalise GSE and that measures using cross-cultural populations must proceed with caution (Barahona et al, 2018). In relation to this study, GSE was positively correlated with PGWBI and negatively correlated with UCLA. In other words, the higher a respondent's self-efficacy, the more positive their psychological general wellbeing and the less lonely they felt, as we would expect to find.

In sum, scores on the outcome measures indicated that seafarers scores on GSE were average compared with other populations. For loneliness, seafarers scores were lower than expected, though similar to a prison population by comparison. For psychological general wellbeing,

seafarers' scores were moderate in terms of psychological distress and all 3 of the outcome measures were correlated in the expected direction.

A correlation matrix identified psychological general wellbeing and self-efficacy as having a strong positive correlation, that is, the higher a person scored on psychological wellbeing, the higher they scored on self-efficacy. As social relationships form an integral part of wellbeing and it would be expected that a high score on general self-efficacy would indicate higher self-reported wellbeing, this finding is therefore unsurprising. This study illustrates that general self-efficacy was similar to other populations, and therefore seafarers' self-efficacy was reflective of people in the general population.

This research indicates that the poorer a seafarer's psychological wellbeing the more lonelier a seafarer will feel, however self-efficacy may help to cope with the feelings of loneliness and mitigate its impact. Self-efficacy contributes towards the psychological effectiveness and psychosocial adjustment-styles of individuals in relation to their environments (Bandura, 2005). Empirical research of adaption of well-being illustrates that those who believe they can deal effectively with stressors, are better at dealing with stress and adopt more effective coping styles (Holden 1991) and is related to coping (Dwyer & Cummings, 2001). There is convincing evidence that self-efficacy is associated with alleviating stress in different populations, including; parenting (Spielman et al, 2009), anxiety and depression (Soysa & Wilcomb, 2013), as well as acting as mediator against various conditions that impact our health (Bandura, 2005). Studies in a seafaring population have shown that self-efficacy equips seafarers with coping skills and enables them to deal with stressful environments (Hystad & Eid, 2016). In addition, it has been associated with playing an important role in the

effect of fatigue in seafarers (Kim & Jang, 2018). In this study, self-efficacy was found to and mediate the relationship between psychological general wellbeing and loneliness. Self-efficacy in this study of a seafaring sample was found to be comparable to other populations and therefore not appropriate to target as an intervention in itself, however psychological general wellbeing fell in the moderate range indicating that seafarers experience moderate distress, their self-efficacy could therefore be utilised to improve aspects of psychological general wellbeing.

Implications

These findings illustrate the multi-faceted and complex nature of these relationships, particularly in a hard-to-reach population. Studying the population of seafarers is complex and challenging. Seafarers are exposed to several stressors, both physical and psychological, and the nature of these stressors in the working and living environments of a seafaring population make this occupation unique when compared with most other workforces. The long-term risk of many conditions as a consequence of chronic psychological stress is well-documented, as a major risk factor for cardiovascular disease, diabetes and stroke. (Ponholzer et al, 2005). The stressors most cited by seafarers are separation from family, loneliness, fatigue and contracts with multi-national crew (Carotenuto et al, 2012).

Despite the many covariates and possible factors attributing to the findings in this study, it remains the case that seafarers scored in the category for moderate distress and it's this element that would perhaps benefit the most from intervention. Evidence from this study suggest that self-efficacy is at a level comparable with the general population. Therefore, the

implications are that self-efficacy may be utilised to enable seafarers to be better able to cope with psychosocial stressors and mitigate the negative effects of poor wellbeing. It may therefore be beneficial to target psychological general wellbeing rather than loneliness as a consideration for intervention and policy makers.

Improving the health and wellbeing of seafarers' onboard ships and enabling seafarers with the autonomy to improve their own wellbeing are limited in the seafaring population. Within the shipping industry, seafarers are provided with little freedom to make their own decisions. Their work hours are in shifts, they have no choices over rest time or meals, as well as little time to go ashore and contact home. Seafarers have few choices and lack control over many elements of their life (Westenhoefer et al, 2018). The implications of findings for this study indicate that interventions with this population requires careful thought and a robust evidence base. This study implies that seafarers' self-efficacy is already in line with the general population and therefore targeting this as an intervention may not be beneficial, though can be utilised to mitigate the impact of psychological distress.

A number of interventions targeting psychological general wellbeing and loneliness are already in place with varying degrees of success for seafarers. Charities and organisations have attempted to provide support and advice to seafarers regarding their wellbeing and helping to reduce stress and loneliness at sea. There are a number of sources of support and guidance to support mental health, such as MENHOB (Jeżewska et al, 2013), a Mental Health on Board working group that meet to discuss current issues and guidelines. In addition, ISWAN, Hunterlink and SeafarerHelp all offer 24-hour helplines for people to make contact if they have any issues concerning them. Various organization such as Apostleship of

the sea (AoS), Crewtoo, Seafarers Hospital Society (SHS), Nautilus, Mission to Seafarers all offer support and guidance to seafarers in distress in various forms, e.g. helpline, online leaflets, support forums etc.

Improving psychological general wellbeing being at sea is not as straightforward as designing interventions that target individual health. Current legislation is led by the Maritime Labour Convention, that came into force in 2006, and sets out the minimum working and conditions for seafarers. However, enforcing rules and regulations in an offshore vessel proves challenging. These challenges often prevent seafarers having adequate rest times and exacerbates feelings of extreme isolation and loneliness. Similarly, a vessel must abide by the laws of the country whose waters they are sailing in, until 12 miles offshore at which time a vessel is in international waters. Though there is a certain amount of regulation from the United Nations regarding international waters, vessels are bound by the laws that the vessel is registered under or the flag they have paid to fly under (Flags of Convenience). Enforcement of rules and regulations is therefore a challenge and with a lack of enforcement on many vessels and a constant flow of maritime traffic, many vessels and shipping companies flout the rules resulting in seafarers suffering as a consequence (Emmanuel, 2010).

Many risks factors to health and psychological general wellbeing are out of control of the seafarer. Decisions regarding their sleep, rest time, diet and exercise are all out of their control and dependent on their contract, as well as the management hierarchy and the Captain onboard the ship they are serving. Therefore, designing any interventions or policy that attempts to improve psychological general wellbeing needs to consider the implications of what this means to a seafarer, with no control in decision making. Supporting the psychosocial wellbeing of seafarers, has benefits for both seafarers themselves and their

employer by increasing productivity and increasing wellbeing (McVeigh & MacLachlan, 2019).

Improving the psychological wellbeing of people working at sea, is challenging and complex, however, this study suggests that self-efficacy in this population is comparable with a "normal population" therefore utilising this self-efficacy could be considered in designing interventions aimed at improving psychological wellbeing. Previous research as highlighted in this study has suggested that the collectivist concept of social capital increases self-efficacy and has an important role to play on the psychological wellbeing of seafarers in the shipping industry (Requena, 2003). Possible interventions could focus on the element of social capital and a shared sense of identity within the crew. This could mean examining the make-up of international crew on contracts and placing like-minded crew together on ships, thereby using social capital and self-efficacy to mitigate the effects of poor psychological wellbeing.

Strengths and Limitations

A strength of this study is the experience and understanding of the shipping industry and awareness of the challenges facing seafarers and the need for evidence-based approaches. It was necessary to be aware of the barriers to engagement and in this population and break down as many of these barriers as possible. Living and working conditions are extremely challenging for seafarers and they have limited free time, therefore designing a questionnaire that was simple and straightforward to complete was essential. Research was designed being mindful that seafarers are time poor and the survey was therefore designed to be quick and easy to complete. With issues around fatigue and long working hours, the measures were

chosen, and the questionnaire designed using robust measures to gain the maximum amount of data for the least amount of time taken to ensure engagement.

Fear of reprisal and blacklisting is very real for this population, therefore informing and reminding seafarers that their participation would be completely anonymous and was for research purposes only was imperative. A strength of this study was the emphasis of anonymity reassuring seafarers that their answers were confidential and therefore enable them to be speak out truthfully about their feelings. The information sheet given to seafarers at the beginning of the research emphasised that the data collected was purely for research purposes only and would remain anonymous and would not be passed on to their Captain, shipping company or manning agency. This was emphasised by the various organisations and charities that helped to disseminate the questionnaire for recruitment, and many made explicit reassurances on their websites. Though this was a strength of the research design, this could also have led to the problem of seafarers being more likely to complete the survey once on shore leave rather than onboard ship. The fear of reprisals could well be the reason that people did not complete until they were in the safety of their own home on shore leave.

This study collected data on 3 different standardised measures as well as demographic variables, providing the research with rich data on feelings of loneliness, psychological wellbeing and self-efficacy, enabling analysis and a depth of exploration not previously studied in this population.

The range of sample that engaged with this research were on the whole representative of the demographic groups that go to sea in relation to, gender, age, nationality, rank, religion. This

study and empirical research on this population contributes to the evidence base of seafarers and the difficulties and challenges they face. Building an evidence base highlighting issues and providing data that tells a story about the seafaring population is essential. The need to improve conditions for this population and bring their plight into the mainstream media is a strength of research and a necessity.

Limitations

Research with a seafaring population is complex. Beyond the practical and psychological barriers to engagement, this population is laden with many covariates. They are difficult to reach practically and hard to engage psychologically, creating barriers to access and engagement. Recruiting a sample within this population is extremely difficult and there are a number of variables that need to be taken into consideration. In order to understand why engaging seafarers is so challenging, it is helpful to examine the factors influencing life at sea.

Seafarers provide the UK for 90% of all imports, to sustain life and the flow of goods. However, given the demand on goods and the global pressure for imports and exports, the shipping community has been in the background, an industry under pressure and seafaring crew suffering. Those ships flying under the less scrupulous flag states or Flags of Convenience (FoC) have fail to provide support, employment contracts and problems with labour supply have exposed weaknesses and corruption (Nautilus International, 2020). The variable, *length of contract*, may have offered some insight into seafarers length of time away from home and allowed research to explore potential links with loneliness and psychological wellbeing for those that have been forced to be onboard ship longer than their contractual agreement. Furthermore, shipping companies do not always adhere to their contractual terms

of agreement. Seafarers may experience abuse and corruption in terms of shipping companies breaking their contracts, extending their length of time at sea and secondly, repatriation issues with seafarers returning to their country of origin following completion of their contract. For those seafarers waiting for repatriation, may be on an extended contract (sometimes without pay) and therefore the question included in this research hoped to indicate how long seafarers had been at sea.

For the reasons described above research design is important if seafarers are to take part and engage with a study. Though careful consideration was given to the measures used and the length of time completion would take, the variable of "length of contract" had to be excluded from analysis. Correct wording is crucial in the design of questionnaires and particularly in a sample with multiple languages (Robinson-Pant, 2016). The purpose of this question was to establish the length of time a seafarer was at sea on their current contract and whether this was associated with their scores on psychological wellbeing or loneliness. Unfortunately, due to the design of this question, this was open to interpretation and was not explicit enough to indicate to seafarers the information that was required. This issue could have been resolved with more explicit wording to avoid confusion.

Further limitations of this study include social desirability bias (that is, participants' tendency to respond favourably especially when self-reporting) participants responding favourably is a common challenge in research that is tackling personal issues (Grimm, 2010). It would have been possible to include a socially desirable scale into the research, however, due to the

challenges as described above, introducing another measure for seafarers to complete was not considered ideal.

In addition, languages barriers can be a limitation in research on a seafaring population. Though English is considered “the language of the sea” and a requirement of seafarers to complete an English test prior to signing a contract. However, enforcing this requirement worldwide in shipping companies and manning agencies that recruit seafarers is a challenge. There is anecdotal evidence that many seafarers do not speak English and that some have fraudulently had a relative to sit the English exam for them. Therefore, perhaps language was a barrier in this study, and participants did not fully understand some questions (for example, the question regarding length of contract could have been due to a language barrier). This would be difficult to measure, as seafarers are required to have a level of English before employment and therefore the assumption is made that language would not be a barrier. However, if anecdotal evidence is accurate and a number of seafarers are fraudulently gaining employment, there is no way to establish this within the limitations of a research project.

Furthermore, fatigue is commonplace in the industry, increasing the risk of accidents (Jepsen et al, 2018) and remains a concern in shipping, being a focus of both industry and academic literature (Grech 2016). Sleep and rest, therefore, become a priority for seafarers in their free time, and engagement in completing a questionnaire for research purposes may not be a consideration. In addition, the lack of free time for seafarers, increases the amount of time spent alone as they try to catch up on rest time further intensifying social isolation and subjective loneliness. Fatigue may go some to explaining why less ratings completed the questionnaire compared with officers. Ratings work longer hours and with less rest times

(Michelle et al, 2013) and extra-curricular activities such as taking part in research may not be possible or realistic.

An alternative explanation for more officers taking part in the study compared with ratings may be access to the internet and the limitations of this while at sea. Providing easy access to a survey online enabling seafarers wherever they are in the world to take part is essential to reaching a wide sample – but only if they have internet access. Having access to the internet has been a contentious issue at sea. There has been ongoing debate as to whether access to the internet is of benefit to seafarers' welfare. A report by the Seafarers' International Research Centre (SIRC) examined the benefits of internet access and particularly email, and whether this was a positive step for the welfare of seafarers away from home with only 6% of people at sea having good enough connectivity for video calls (The Maritime Executive, 2017). For many, access to the internet is their link to the outside world and contact with their friends and family back home helps to alleviate feelings of loneliness. More recently, research has focused on issues of retention, with younger cohorts of seafarers, stipulating internet access as a term in their contract before taking employment (Papachristou et al, 2015). Many people believe that this is a fundamental right in the virtually connected world we live in, with technology playing a vital role in seafarers' regular contact with home and loved ones, however, many researchers believe that this access to WIFI is perpetuating the issues of social isolation with seafarers' being inclined to stay in their cabins (especially since the phasing out of bars onboard). Seafarers may be inclined to watch films in their cabin, browse social media for news of home and spend even less time socialising with their crewmates. However, it is not clear how much access ratings have to internet connectivity compared with officers, adding another layer of complexity to the issue. A lack of internet connectivity at sea may have further implications for psychological wellbeing and subjective loneliness as well as act as a barrier for conducting

research on this population. Furthermore, the use of social media in this population has been negatively associated with self-efficacy in the lives of seafarers. Though an effective tool, enabling seafarers to stay in contact with home and cope with feelings of social disconnection, social media can also induce feelings of exclusion from social groups and instil negative feelings on; belonging, emotional wellbeing, self-efficacy and self-worth (Barbu, 2016). Social media or internet usage or accessibility was not examined in this study and has potential impact for both feelings of loneliness and psychological general wellbeing.

As well as internet connectivity, some demographic variables were not included in this study, such as education level, SES and nationality of colleagues (i.e. an all Filipino crew for example or mixed nationalities). This may have implications for socialisation or relationships onboard, particularly for those on longer contracts e.g. 9 months, and studies examining social capital have suggested maybe this is the crucial element of the shipping community, that social capital improves wellbeing and is a better predictor of quality of life at work than the organisation (Requena, 2003) and may have implications for loneliness and psychological wellbeing in a seafaring population.

Future Research

Overall, seafarers' cultural background could be a consideration for future research including their personal circumstances, education level and SES. Current academic and industry literature does not examine who goes to sea. The diversity of seafarers from the multitude of countries is well known but the literature fails to address the reasons that people seek a career at sea, particularly from countries in Asia, where shipping is a big employer of working age men. The plethora of risk factors for working at sea for many are well known, however

despite this many people are attracted to a career at sea. Establishing the reasons for this presents with a gap in the literature and raises questions. Perhaps the lifestyle is associated with people seeking solitude or escaping poverty. For many Asian sea-going nations such as the Philippines, seafaring is a well-paid profession and for those with many dependents financially dependent on the sole breadwinner, a career in seafaring may be a lucrative option. Alternatively, growing up in a small village where 80% of working men are employed in the shipping industry, may instil a feeling of pressure from both family and society to follow in the footsteps of their fathers and forefathers into a career in seafaring. This has not been included in the current study and would inform the academic literature filling a current gap in research. Seeking employment in shipping because it is financially lucrative or a family tradition, may affect the wellbeing of seafarers compared with those that wish to spend a career at sea.

It has been suggested that the relationship between loneliness and psychological well-being may be more salient in some Asian populations in which the collectivist culture places a strong emphasis on family togetherness, often living together with extended family and dependent on each other financially. Thus, living apart from family may arguably have a strong negative effect on the well-being of the Asian population as well as placing financial pressure on those that bring home a wage. Under the influence of the traditional values such as filial piety which still underlies the family support system of collectivist societies today, adult children are expected to support their parents financially, physically, and emotionally. This traditional practice and attitude are the cultural norm for many Asian societies and thereby reduces any feelings of loneliness (Lim & Kua, 2011) in a traditional family setting. However, in the case of the seafarer, long periods away from home, and sometimes against their will (in the case of extended contracts) may further contribute to poor wellbeing and subjective loneliness. Asian

seafarers were found to be less lonely in this study supporting this, but it did not look at the nationality of the rest of the crew to establish if crew were with others from the same societal values or with different nationalities.

Cultural differences have been found in relation to individualism and collectivism. Asian cultures are defined as collectivist cultures, promoting social cohesion with family at the focal point of the social structure (Chadda & Deb, 2013). In a seafaring community, social capital and collectivism have been examined, they have been found to be have a positive influence on safety behaviour (Lu et al, 2016). Studies have shown that Filipino seafarers score very high on collectivism compared with other nationalities (Lu et al, 2012). This is an interesting concept and future research exploring Asian seafarers and collectivism in relation to loneliness and wellbeing in a seafaring population would give an insight into this population further. This was not explored in the current study and may have had an impact of the findings, a suggestion for future research would therefore to be to explore the concept of collectivism and its association with psychological wellbeing, loneliness and self-efficacy.

Furthermore, studies on seafarers' self-efficacy have found that cultural homogeneity increased self-efficacy and improved organisational commitment (Young-Sub et al, 2006) indicating that seafarers report higher levels of self-efficacy when they are with peers from their own culture. Respondents in this study had normal self-efficacy levels when compared with other populations. However, it is unknown whether this self-efficacy was affected by seafarers being on a ship with peers from their own culture. This could have implications for multi-national crew that live and work together for months on end and requires further

investigation. This study did not look at the make-up of crew, it could be that those seafarers that were sharing a contract with like-minded people and from a collectivist background therefore gained from social capital, were less lonely than others who felt they were unrelated or had nothing in common. An idea for future research would be to examine social capital among crew and the effect this has on psychological wellbeing as a predictor of loneliness.

Research on inequality in the shipping industry has highlighted problems relating to equity in both working and living conditions for seafarers. Asian seafarers often serve on longer contracts, for less pay and harsher working conditions than those of non-Asian nationalities (McVeigh & MacLachlan, 2019). This is an area for future research, to further examine the inequality and treatment of seafarers depending on their nationality. This study revealed that Asian seafarers were less lonely than non-Asian, however given that the majority of respondents were officers this may be the reason, and further research that engaged more ratings as respondents may tell a different story.

This study did not assess or explore reasons for loneliness and poor psychological general wellbeing but looked at patterns in data. There is a culture of abuse and discrimination that is prolific in the shipping industry and it is this combined with longer contracts that contributes to low scores on wellbeing (Slišković, 2017). This may well be a factor in the psychological wellbeing scores in this sample and further research on discrimination in the industry would provide valuable insight. Since most respondents in this study were on shore leave at the time of completion, it raises the question as to whether seafarers waited to take part in the study for fear of reprisal whilst onboard the ship. In addition, the culture of abuse in the shipping industry calls for future research to develop a method of whistle blowing to enable

seafarers to report incidents of discrimination or bullying without fear of reprisals or blacklisting. By giving seafarers the means to speak out and providing a method to report malpractice may give seafarers a sense of wellbeing and increased self-efficacy as well as ensuring accountability to those that are flouting rules and not adhering to the guidelines of the Maritime Labour Convention (MLC) (2006).

Commonly reported anecdotal evidence cites overwork and lack of rest time as being prolific in the shipping industry. Empirical evidence on fatigue and its effects has been emerging in the literature in the last decade or so. Fatigue is an issue across the industry and is associated with poor sleep quality, high job demands, high stress and poor wellbeing (Smith et al, 2006). This study did not look at fatigue as a variable and future research gathering data on psychological wellbeing would be do well to include fatigue as a covariate. Future studies in relation to fatigue, loneliness and psychological general wellbeing specifically would give an insight into the role fatigue plays and the impact on seafarers' psychological health and wellbeing.

Psychological general wellbeing was the outcome measure where seafarers scored in the moderate range for wellbeing. Issues highlighted in this study have illustrated the profound difficulties and challenging aspects of life as a seafarer. Empirical research in recent years has focused on social isolation and loneliness as a focus for research studies and interventions. However, this study indicates that psychological general wellbeing as a target outcome measure may be more appropriate as it is wellbeing that predicts feelings of loneliness in this population. Future interventions that target psychological general wellbeing

should be the aim for guiding future research, intervention and policy design and a key aspect for relevant stakeholders and ship owners. Aspects of seafarers' lifestyle particularly round fatigue, living conditions, discrimination, diet and exercise, sleeping conditions, contact with home, internet connectivity, rest hours, and the multinational crew are all considerations for improving the psychological wellbeing of those at sea.

Examining the various limitations of this study and researching a seafaring population in general highlights the many confounding variables and challenges in gaining rich and accurate data in this population. Future research could focus on the design and implementation of a Quality of Life measure designed specifically for the seafaring population. Collecting data that is specific to seafarers without a standardised measure has its challenges as measures are not specific to the needs and lifestyle of the seafarer. Despite the size of the industry and worldwide impact, a standardised measure has not been developed for this population. There are 1.5 million seafarers currently serving on vessels, and suggestions for future research would be to develop a measure to establish Quality of Life that is industry specific, is tailored to seafarers' needs and is applicable to the issues concerning them and their lifestyle. Collaboration between appropriate organisations and expertise in order to formulate a standardised measure for the seafaring population would enable researchers to compare data sets and improve validity and reliability in order to build on an empirical evidence base to improve health outcomes for seafarers. A measure around Quality of Life including issues and questions relevant to a seafaring population such as, psychological wellbeing, loneliness, fatigue, self-efficacy, social capital etc, would enable researchers to collect comparable data to inform policy and intervention design.

A standardised measure for this population will allow comparisons to be made between different groups of seafarers and different researchers, as well as comparisons over time in longitudinal studies, allowing researchers to obtain big data and build an accurate picture of issues and needs at sea. Moreover, an internationally comparable indicator that measures specific aspects of social isolation, loneliness and quality of life as relevant to the seafaring population enabling a more accurate measure of behaviour and quantifiable outcomes.

Conclusion

Research suggests that loneliness may be a potential antecedent to emerging mental health symptoms (Lim et al, 2016) and data from this study has highlighted that loneliness may be predicted by psychological wellbeing. Self-efficacy mediated the relationship between psychological general wellbeing and loneliness in a seafaring population indicating that it may help to mitigate the impact of poor psychological general wellbeing on feelings of loneliness. The collectivist concept of social capital is discussed and how the association between social capital and self-efficacy may be a contributing factor in mitigating poor psychological wellbeing in this population.

This paper has discussed the confounding variables in this study, and the many covariates to consider, when studying a complex and challenging population such as seafarers. Recommendations are made for future research including the role of social capital and its association with self-efficacy in a seafaring population as well as the development of a standardised measure tailored for use with a seafaring population.

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Appendix Contents **Page**

APPENDIX 1

Institution: **London Metropolitan University**
166-220 Holloway Road
London
N7 8DB

Lead investigator: **Tiffany Palmer**

Contact email address: **TIP0078@my.londonmet.ac.uk**

PARTICIPANT INFORMATION SHEET

- You are invited to take part in a study.
- You do not have to take part – it is your choice.
- This information sheet will help you to decide.
- You can change your mind at any time

STUDY TITLE: Loneliness and Well-Being Among Seafarers: The Mediating Role of Self-Efficacy

WHAT IS THE PURPOSE OF THE STUDY?

The ITF described seafarers as

"The most exploited and abused group of workers in the world."

However, there is very little research on how seafarers think and feel about their experiences of living onboard over periods of time.
The purpose of this study is to examine the experiences of seafarers. By understanding seafarers' thoughts and feelings about being at sea, this knowledge can be used to help improve the mental health and wellbeing of seafarers.

WHAT WILL MY PARTICIPATION IN THE STUDY INVOLVE?

- You have been chosen to participate because you are a seafarer currently working on a ship.
- You will be asked a number of questions about your health and wellbeing.
- It will take 10-15 minutes to complete.
- Please answer every question.

— It does not cost you anything.

WHAT ARE THE POSSIBLE BENEFITS AND RISKS OF THIS STUDY?

— If any of the questions make you feel uncomfortable or unhappy, you will be given a telephone number at the end of the study that you can call for support and advice.
— By taking part in this study, you are helping to increase awareness of the issues that concern seafarers in an area which has not seen much research.
— It is hoped that more research can help to improve the health and wellbeing of seafarers by understanding their needs and concerns.

WHAT ARE MY RIGHTS?

— You do not have to take part in this study, and you can change your mind at any time.
— Your answers are completely confidential.
— Your answers **WILL NOT** be shared with your shipping company / manning agency / superior officers or anyone else, except for the researchers involved in this study.

WHO DO I CONTACT FOR MORE INFORMATION OR IF I HAVE CONCERNS?

If you have any questions, concerns or complaints about the study at any stage, you can contact:

Name, **Tiffany Palmer**
Position: **Lead Investigator**
Emai: **TIP0078@my.londonmet.ac.uk**

Your letterhead

PARTICIPANT CONSENT FORM

Please tick to indicate you consent to the following *(Add or delete as appropriate)*

I have read, and I understand the Participant Information Sheet.	Yes ☐	No ☐
I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time.	Yes ☐	No ☐
If I decide to withdraw from the study, I agree that the information collected about me up to the point when I withdraw may continue to be processed.	Yes ☐	No ☐
I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.	Yes ☐	No ☐
I know who to contact if I have any questions about the study in general.	Yes ☐	No ☐
I understand my responsibilities as a study participant.	Yes ☐	No ☐
I wish to receive a summary of the results from the study.	Yes ☐	No ☐

Declaration by participant:
I hereby consent to take part in this study.

Participant's name: _____

Date: _____

PARTICIPANT DEBRIEF SHEET

STUDY TITLE: Loneliness and Well-Being Among Seafarers: The Mediating Role of Self-Efficacy

Thank you for taking part in this study. The purpose of this study was to examine the experiences of seafarers, in order to gain knowledge with regard their mental health and wellbeing. We hope that by taking part in this study we can examine how social isolation can impact on mental health and well-being and how our self-belief may act as a way of coping. The questions you answered were looking specifically at areas around depression, anxiety, vitality, positive well-being, self-control and general health.

If any of the questions made you feel uncomfortable or unhappy, please contact SeafarerHelp for support and guidance.

"Free, confidential, multilingual helpline for seafarers and their families
available 24 hours a day, 365 days per year."
dial +44 20 7323 2737
email help@seafarerhelp.org

When the study is finished, the results will be written up in a thesis for a Professional Doctorate in Health Psychology and published in an academic journal. If you have any questions or feedback please feel free to contact Tiffany Palmer from London Metropolitan University, by email to tip0078@my.londonmet.ac.uk.

I would also like to take this opportunity to remind you that your responses are confidential and all results that are published are completely anonymous. Again, I would like to thank you for taking part in this research, your contribution is very valuable.
Tiffany Palmer

APPENDIX 2

(GENERAL SELF-EFFICACY SCALE – ADDED FOR PURPOSE OF PROPOSAL BUT TO BE REMOVED IN ACTUAL PROJECT)

I can always manage to solve difficult problems if I try hard enough
Not at all true
Hardly true
Moderately true
Exactly true

If someone opposes me, I can find the means and ways to get what I want.
Not at all true
Hardly true
Moderately true
Exactly true

It is easy for me to stick to my aims and accomplish my goals.
Not at all true
Hardly true
Moderately true
Exactly true

I am confident that I could deal effectively with unexpected events.
Not at all true
Hardly true
Moderately true
Exactly true

Thanks to my resourcefulness, I know how to handle unforeseen problems.
Not at all true
Hardly true
Moderately true
Exactly true

I can solve most problems if I invest the necessary effort
Not at all true
Hardly true
Moderately true
Exactly true

I can remain calm when facing difficulties because I can rely on my coping abilities.
Not at all true
Hardly true
Moderately true
Exactly true

When I am confronted with a problem, I can usually find several solutions.
Not at all true
Hardly true
Moderately true
Exactly true

If I am in trouble, I can usually think of a solution.
Not at all true
Hardly true
Moderately true
Exactly true

I can usually handle whatever comes my way.
Not at all true
Hardly true
Moderately true
Exactly true

(UCLA LONELINESS SCALE – ADDED FOR PURPOSE OF PROPOSAL BUT TO BE REMOVED IN ACTUAL PROJECT)
Indicate how often each of the statements below is descriptive of you.

I am unhappy doing so many things alone.
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I have nobody to talk to
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I cannot tolerate being so alone
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I lack companionship
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I feel as if nobody really understands me
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I find myself waiting for people to call or write
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

There is no one I can turn to
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I am no longer close to anyone
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

My interests and ideas are not shared by those around me
I often feel this way.

I sometimes feel this way.
I rarely feel this way.
I never feel this way.
I feel left out
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I feel completely alone.
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I am unable to reach out and communicate with those around me
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

My social relationships are superficial
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I feel starved for company
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

No one really knows me well
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I feel isolated from others
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

I am unhappy being so withdrawn
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

It is difficult for me to make friends
I often feel this way.
I sometimes feel this way.
I rarely feel this way.

I never feel this way.
I feel shut out and excluded by others
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way.

People are around me but not with me.
I often feel this way.
I sometimes feel this way.
I rarely feel this way.
I never feel this way

(PSYCHOLOGICAL GENERAL WELL-BEING INDEX – PGWBI – ADDED FOR PURPOSE OF PROPOSAL BUT TO BE REMOVED IN ACTUAL PROJECT)

How have you been feeling in general? (DURING THE LAST MONTH)
In excellent spirits
In very good spirits
In good spirits mostly
I've been up and down in spirits a lot
In low spirits mostly
In very low spirits

How often were you bothered by any illness, bodily disorder, aches or pains? (DURING THE LAST MONTH)
Everyday
Almost everyday
About half of the time
Now and then, but less than half the time
Rarely
None of the time

Did you feel depressed? (DURING THE LAST MONTH)
Yes – to the point that I felt like taking my life
Yes - to the point that I did not care about anything
Yes – very depressed almost every day
Yes – quite depressed several times
Yes – a little depressed no and then
No – never felt depressed at all

Have you been in firm control of your behavior, thoughts, emotions, or feelings? (DURING THE LAST MONTH)
Yes, definitely so
Yes, for the most part
Not too well
No, and I am somewhat disturbed
No, and I am very disturbed

Have you been bothered by nervousness or your "nerves"? (DURING THE PAST MONTH)
Extremely so – to the point where I could not work or take care of things
Very much so

Quite a bit
Some – enough to bother me
A little
Not at all

How much energy, pop or vitality did you have or feel? (DURING THE LAST MONTH)
Very full of energy – lots of pep
Fairly energetic most of the time
My energy level varied quite a bit
Generally low in energy or pep
Very low in energy or pep most of the time
No energy or pep at all – I felt drained, sapped

I felt downhearted and blue DURING THE PAST MONTH
None of the time
A little of the time
Some of the time
A good bit of the time
Most of the time
All of the time

Were you generally tense – or did you feel any tension? (DURING THE LAST MONTH)
Yes – extremely tense, most or all of the time
Yes – very tense most of the time
Not generally tense, but did feel fairly tense several times
I felt a little tense a few times
My general tension level was quite low
I never felt tense or any tension at all

How happy, satisfied, or pleased have you been with your personal life? DURING THE PAST MONTH
Extremely happy – could not have been more satisfied or pleased
Very happy most of the time
Generally satisfied – pleased
Sometimes fairly happy, sometimes fairly unhappy
Generally dissatisfied, unhappy
Very dissatisfied or unhappy most or all of the time

Did you feel health enough to carry out the things you like to do or had to do? (DURNG THE PAST MONTH)
Yes – definitely so
For the most part
Health problems limited me in some important ways
I was only healthy enough to take care of myself
I needed some help in taking care of myself
I needed someone to help me with most or all of the things I had to do

Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile? (DURING THE PAST MONTH)
Extremely so – to the point that I have just about given up
Very much so
Quite a bit
Some – enough to bother me
A little bit

Not at all
I woke up feeling fresh and rested DURING THE PAST MONTH
None of the time
A little of the time
Some of the time
A good bit of the time
Most of the time
All of the time

Have you been concerned, worried, or had any fears about your health? (DURING THE PAST MONTH)
Extremely so
Very much so
Quite a bit
Some, but not a lot
Practically never
Not at all

Have you had any reason to wonder if you were losing your mind, or losing control, over the way you act, talk, think, feel or of your memory? (DURING THE PAST MONTH)
Not at all
Only a little
Some – but not enough to be concerned or worried about
Some and I have been a little concerned
Some and I am quite concerned
Yes, very much so and I am very concerned

My daily life was full of things that were interesting to me DURING THE PAST MONTH
None of the time
A little of the time
Some of the time
A good bit of the time
Most of the time
All of the time

Did you feel active, vigorous, or dull, sluggish? (DURING THE PAST MONTH)
Very active, vigorous every day
Mostly active, vigorous – never really dull, sluggish
Fairly active, vigorous – seldom dull, sluggish
Fairly dull, sluggish – seldom active, rigorous
Mostly dull, sluggish – never really active, vigorous
Very dull, sluggish every day

Have you been anxious, worried, or upset? (DURING THE PAST MONTH)
Extremely so-to the point of being sick or almost sick
Very much so
Quite a bit
Some – enough to bother me
A little bit
Not at all

I was emotionally stable and sure of myself DURING THE PAST MONTH?
None of the time
A little of the time

Some of the time
A good bit of the time
Most of the time
All of the time

Did you feel relaxed, at ease or high strung, tight, or keyed-up? (DURING THE PAST MONTH)
Felt relaxed and at ease the whole month
Felt relaxed and at ease most of the time
Generally felt relaxed but at times felt fairly highly strung
Generally felt high strung but at times felt fairly relaxed
Felt high strung, tight, or keyed up most of the time
Felt high strung, tight, or keyed up the whole month
I felt cheerful, lighthearted DURING THE LAST MONTH
None of the time
A little of the time
Some of the time
A good bit of the time
Most of the time
All of the time

I felt tired, worn out, used up, or exhausted DURING THE PAST MONTH
None of the time
A little of the time
Some of the time
A good bit of the time
Most of the time
All of the time

Have you been under or felt you were under any strain, stress or pressure? (DURING THE PAST MONTH)
Yes, almost more than I could bear to stand
Yes, quite a bit of pressure
Yes some – more than usual
Yes, some – but about usual
Yes, a little
Not at all

Permission to use PGWBI

Date: 9 June 2016 12:52:07 BST

From: dupuyhj@aol.com

To: tiffpalmer@me.com

Subject: Re: Permission to use PGWBI

You have my permission to use the PGWBI.

Best wishes,

Harold J Dupuy, PhD

-----Original Message-----

From: Tiff Palmer <tiffpalmer@me.com>

To: dupuyhj <dupuyhj@aol.com>

Sent: Thu, Jun 9, 2016 6:48 am

Subject: Permission to use PGWBI

I am a professional doctorate student studying at London Metropolitan University. My thesis is looking at the social isolation of seafarers and how this impacts on their psychological well-being. I would like permission to use the PGWBI for this purpose.

Thank you

Regards

Tiffany Palmer

Best Wishes

Tiffany Palmer

Permission to use UCLA

From: "Russell, Daniel W [HD FS]" <drussell@iastate.edu>
To: Tiffany Palmer <tiffpalmer@me.com>
Subject: RE: UCLA Loneliness Scale Permission Request
Date: 1 June 2016 15:40:21 BST

You have my permission to use the UCLA Loneliness Scale in your research. I have attached a paper on the latest version of the loneliness scale that includes a copy of the measure with scoring instructions. Also included is a discussion of how to interpret scores on the measure.

Daniel W. Russell, Ph.D.
Professor, Department of Human
Development & Family Studies
Iowa State University
Palmer Building
2222 Osborn Drive
Ames, IA 50011-1084
(515) 294-4187
Fax: 294-2502

-----Original Message-----
From: Tiffany Palmer [mailto:tiffpalmer@me.com]
Sent: Tuesday, May 31, 2016 3:33 PM
To: Russell, Daniel W [HD FS] <drussell@iastate.edu>
Subject: UCLA Loneliness Scale Permission Request

Dear Sir / Madam,

I am enrolled on the Professional Doctorate in Health Psychology at London Metropolitan University. May I please request permission to use the UCLA Loneliness Scale for my thesis?

I am in the planning stages but intend to examine the relationship between loneliness and mental well-being in seafarers.

Thank you

Regards

Tiffany Palmer

APPENDIX 3

Table 2: Groupings of countries into continents in accordance with the United States Central Intelligence Agency (CIA) World Factbook

Continent	Total	Country	Total
Africa	6	Egypt	2
		Ethiopia	1
		Nigeria	2
		South Africa	1
Europe	31	Bulgaria	3
		Finland	1
		Germany	2
		Ireland	3
		Netherlands	2
		Norway	1
		Poland	2
		Portugal	2
		Romania	2
		UK	11
		Ukraine	2
Asia	60	Bangladesh	1
		China	1
		Philippines	25
		Georgia	1
		India	16
		Indonesia	2
		Pakistan	7
		Russia	4
		Sri Lanka	1
		Turkey	2
North America	1	Honduras	1
Oceania	1	New Zealand	1
South America	0		0
Unknown	1		1
Total	100		

SECTION C4

CONSULTANCY COMPETENCY

Contents

Introduction

According to British journalist and author, Rose George (2013), the UK rely on seafarers for 90% of their goods, imported via trade routes around the globe. Seafarers themselves, present a complex and hard-to-reach population. They are both international and transient, often docking for less than 12 hours before the ship departs to its next destination. There are clear hierarchies within the Officers and Crew, as well as between them. Europeans make up the largest percentage of Officers and the "ratings" (lower-paid crew) are predominantly of Asian nationalities.

Conditions and treatment of seafarers differs greatly depending on their nationality and ranking. The majority of ratings are of Asian descent and experience the harshest treatment; often working more than a 91-hour working week, with long periods away from home, a confined physical environment, tough working conditions, and limited access to home. They are socially isolated, have limited access to fresh drinking water, and in many cases unpaid salary and the worry of repatriation are not uncommon (repatriation is when a seafarers contract may end when they are 1200 km's from home – a "repatriation clause" is written within a contract that the company will pay a seafarers flight home, but in reality this doesn't always happen). Seafarers were recently described by the International Transport Federation (ITF) as:

> "The most exploited and abused group of workers in the world. But their plight is barely recognised by the mainstream media or public opinion."

Anecdotal evidence and research in the academic literature reports a multitude of issues for seafarers around health and wellbeing. The conditions that seafarers endure can be traumatic and stressful, and seafarers as a population experience high rates of suicide. Within the UK, and worldwide, the industry has adopted a biomedical model of health. This is apparent from empirical research and from the "Pre-existing Medical Examination" (PEME) that seafarers are required to have before they take up employment, which focuses largely on physical health.

The needs of seafarers are many, and there is a plethora of research on the dangers, risks and effects on health of working at sea (Carter, 2005; Oldenburg et al, 2010; Roberts, 2010; Stand & Mitu, 2010). However, according to Pietsch (2013), the biopsychosocial model of health is completely neglected in the world of seafaring.

More recently, the psychological stressors of working at sea have been emerging in the empirical literature (Carotenuto, 2012; Carter, 2005; Bloor et al, 2000), and has seen the creation of "Mental Health on Board" (MENHOB). The purpose of MENHOB is the physical, psychological, social, and spiritual well-being of seafarers (Jezewska et al, 2013). Whilst a move towards a biopsychosocial model of health is emerging, at present it is still very much in its infancy. Historically, it has been the port Chaplains that are at the forefront of care in relation to psychological health and well-being (Winter-Pflander & Flannelly, 2013) and this is still very much the case today (Palmer & Murray, 2016).

4.1 Assessment of requests for consultancy

The International Seafarers Welfare and Assistance Network (ISWAN) is an

> "international charity dedicated to the relief of need, hardship or distress amongst seafarers of all nationalities, races, colour or creeds irrespective of gender"

ISWAN promotes welfare for seafarers by providing a 24- hour helpline. The helpline "Seafarer Help" is available 24/7 with multi-lingual speakers providing help, emotional support, and guidance for seafarers via email, live chat, Facebook, telephone or post.

Aim of Consultancy

The number of issues raised via Seafarer Help are often complex and diverse. All contact is recorded using a software package that is transferred onto excel. ISWAN wanted to establish the health needs for seafarers, both physical and psychological by examining contacts made to the "Seafarer Help". This would enable ISWAN to identify the real needs of seafarers and work towards designing and implementing effective intervention.

My role in this consultancy was to establish those health needs concerning seafarers, both physical and psychological. This required me to examine the spreadsheet in detail, reading through the narrative of each contact made to ISWAN and with three main aims.

- Establish issues around all health and well-being that arise from communications (encompassing the biopsychosocial model of health)
- Categorise and group issues as they arose, in order to perform descriptive statistics and be able to produce quantitative data. This would then provide ISWAN with quantitative data that they could use as evidence to secure funding for intervention.

- To make recommendations and suggest interventions regarding health and well-being based on findings and analysis of data.

For the purpose of this consultancy competency, I looked at various models and theories before I adopted a consultancy approach and model that was most appropriately applicable to such an organisation with such wide-reaching goals and audience. For this reason, I decided upon the 7 C's framework (Cope, 2010) to guide my consultancy process, as I felt it best incorporated the comprehensive approach needed. See Figure 1. In order to assess the request for the consultancy, it was imperative to establish the amount of detail that the ISWAN management staff wanted extracted whilst taking into consideration the timescale. Throughout this assignment I will discuss each section of the process along with the stage of the consultancy model I have adopted.

4.2 Consultancy plan

Cope defines the 7 C's of consulting in a very clear, easy-to-follow format. See Figure 1.

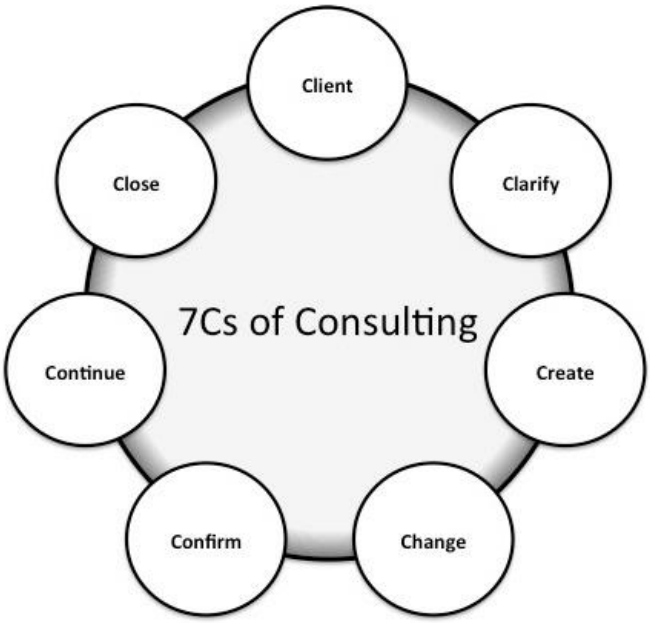

Figure 1. 7 C's of Consulting

Each of the seven stages of the cycle were worked through in methodical succession. I followed this in the design of my consultancy plan and applied the seven stages to the needs of my client.

1. **Client -** I was already familiar with the client and their orientation as I had previously worked with them throughout my MSc. I was familiar with their mission statement and the history of the organisation.
2. **Clarify -** The detail of the problem was clarified in a face-to-face meeting with the Executive Director and the Head of Operations, we collaborated on refining SMART goals for the consultancy proposal, discussed an appropriate fee and how we could build on experience from last year to make minor improvements. See Appendix for the consultancy proposal.
3. **Create -** I created a comprehensive excel spreadsheet with filters enabling search for specific cases easily. I added a column for assigning cases with a priority number 1, 2

or 3. This enables the client to give a priority to a case and act on it accordingly. See section 4.4.

4. **Change -** The convoluted change process involved both short and long-term goals. Some of which are achievable with the organisation and others which involved collaboration from external agencies and organisations. The industry of shipping and the welfare of those that work on ships is multi-faceted and complex. Many of the issues surrounding seafarer's health and well-being is beyond individual control, and a model that encompasses the broad factors that play a role, are illustrated well by the Wheel of Change Model. For this reason, this is the model I adopted to guide intervention and recommendations as it goes well beyond the behaviour of the individual. See section 4.5.
5. **Confirm -** Ensuring that changes have taken place, and my recommendations have been adopted is a lengthy process, and not one that saw concrete changes by the close of the consultancy. See section 4.6.
6. **Continue -** Though changes had not taken place by the consultancy end, the intention to change was evident and positive feedback from the management team around plans for the future. See section 4.6.
7. **Close -** The consultancy closed with the presentation of findings, the completion of a report summarising findings and recommendations for intervention. See section 4.6.

4.3 Establish, develop, and maintain working relationships with clients.

Initial contact and ideas were made via email, though the client was not new to me as I had worked with them during my MSc. The detail was discussed face-to-face to establish their final outcome in a meeting with the Executive Director and the Head of Operations (fulfilling the **clarify** stage of the 7c's model).

During face-to-face meetings, we discussed the consultancy details with reference to the amended consultancy plan (See appendix, pg. 17). A good working relationship was established early on and by following the consultancy plan, we all had a clear indication of the route the consultancy would take. When discussing the inclusion criteria for contact made to SeafarerHelp there was some disagreement. Contact made regarding non-payment would not be considered a "health" issue and would therefore not be included in the analysis. There was some debate around this, as I felt that non-payment of wages is potentially very stressful and therefore would impact on health and wellbeing. After some discussion is was decided that although there were reasons for including these cases, there were time restraints that did not allow for subjective inference and only seafarers that explicitly stated a health and wellbeing issue would be included in analysis. It was therefore decided that these would not be included in analysis, though would be discussed in the PowerPoint presentation and again in the written report.

During the consultancy, regular contact was through the Head of Operations, at their request. I remained in contact with the client throughout the process and gave an update every few weeks so that they were kept informed.

4.4 Conduct consultancy

In the initial stages of the consultancy it was important that the data was cleansed before I could begin any binary coding. Contact made to SeafarerHelp includes all manner of issues that concern seafarers, however for the purpose of this consultancy I was only concerned with

issues around health and well-being. This meant that any contact made, not of that nature e.g. non-payment of wages, needed to be excluded. This was discussed in the initial consultation meeting when we examined the detail of the consultancy and the criteria for elimination. We agreed that to eliminate a case is a subjective decision and The Executive Director and Head of Operations said they trusted my judgement on this. Prior to beginning any elimination of cases I defined my own criteria for inclusion into each category for health and well-being. There were 5 main categories: living conditions, psychological, physical illness and injury, humanitarian and other. Each of the main categories had sub-categories within it. See category tables in the appendix.

Once the process of data cleansing was complete, all of the cases I was left with were concerned with health and well-being. I then began the task of reading the narrative for each and converting the narrative to binary - in order for the data to be analysed. For an example of binary coding please see the PowerPoint presentation attached in the appendix of this assignment.

Following the binary coding of all the narratives, I was left with an excel spreadsheet with a code for every category and sub-category for every contact made to SeafarerHelp, this enabled me to begin analysis. I sought the advice of Dr Joanna Pashdag, given her expertise in quantitative data. I showed her the database of binary coding and asked her advice on the most appropriate statistical tests to run given the huge volume of contacts made and the amount of missing data.

Dr Pashdag reassured me that I was making the right decision in utilising descriptive statistics for the most accurate story. Finding correlations e.g. between nationality and illness, or type of ship and psychological health was just not possible because of the amount of missing data. This gave me confidence to continue with descriptive statistics as I had planned. Please refer to the appendix for the PowerPoint presentation and written report for a full detailed examination of findings (fulfilling the **create** stage of the 7c's model).

4.5 Monitor the process of consultancy

The process of the consultancy was constantly monitored, by reflecting on decisions I made, questioning my thought process, and re-evaluating my criteria for exclusion. There were many confounding variables that had the capability to impact on the outcome of my data analysis, and I was mindful that I needed to be consistent to ensure my process was reliable and valid. For example, for many of the people that make contact with SeafarerHelp, English is not their first language. This is also the case for many of the international staff at ISWAN that take the calls and various methods of communication. The communications are then typed onto a spreadsheet and it is from this that I am interpreting and binary coding issues around people's health and well-being. From very early on in the process, I was aware that someone could be quite critical of this process as much of the meaning and interpretation could be lost, going through so many channels.

This was discussed in the initial meeting with the Executive Director and the Head of Operations, they both understood my concerns and felt that it was a case a making the best of what we have. I was mindful throughout the consultancy of the difficulties with obtaining accurate statistics and the significance of interpretation. My presentation and written report

reflected on this, the importance of remaining mindful and of informing the client of considerations throughout the process.

One key aim of the consultancy assignment was to make recommendations and suggest interventions around health and well-being. To monitor the process of the consultancy, I required the framework of a health psychology model. Due to the complex and diverse world of shipping and seafarer health, the Behaviour Change Wheel (Michie et al, 2011) was chosen as the most appropriate tool for guiding interventions and monitoring the process of the consultancy. See appendix, Figure 2, pg. 21). The BCW can be used as an aid to design intervention, including categories of policy that could enable interventions to occur (fulfilling the **change** stage of the 7c's model).

4.6 Evaluate the impact of the consultancy

The consultancy was brought to an end with a PowerPoint presentation presented to the Executive Director, the Head of Operations, the Project Manager and the Office Administrator, fulfilling the **close** stage of the 7c's model. This was followed by questions and answers and brainstorming of many of the ideas I had presented them with for change. Recommendations for improvements and interventions based on the findings from the content analysis were taken into consideration using the framework of the behaviour change wheel. The presentation was very interactive and relaxed with discussion around priorities for change and the process of implementation. Feedback from the management team was positive, and I have been asked to come back and present the findings to the rest of the ISWAN staff in September 2016. In addition, I have been asked to present to the Board of Trustees in November 2016.

The consultancy had 3 main aims; to establish issues around all health and well-being that arise from communications (encompassing the biopsychosocial model of health), categorise and group issues as they arose - in order to perform descriptive statistics and be able to produce quantitative data, and lastly to make recommendations and suggest interventions regarding health and well-being based on findings and analysis of data. Measuring the impact of the consultancy is therefore problematic as I was asked to highlight the *needs* for intervention rather than the designing and implementing of an intervention itself, meaning the **confirm** and **continue** stage of the 7c's model is not fulfilled in this instance. This is not within the remit of this consultancy and I have therefore completed the consultancy and fulfilled the requirements of the proposal. See Appendix for email feedback.

Having worked on a similar project before for ISWAN whilst on my MSc, I was aware that they are familiar with the way I work and made changes based on the findings I presented to them. Staff were given extensive training from a counselling psychologist on providing "emotional support" for seafarers based on my recommendations. This gives me confidence that suggestions and recommendations will be put into practice on the basis of this consultation.

Reflection

As a reflective practitioner, there were three significant areas where I felt I was being particularly challenged and my health psychology training became imperative in helping me overcome those challenges.

Firstly, there were times during the reading of the narratives that I questioned my ability to make the correct judgement call. The content analysis using descriptive statistics was open to much subjective interpretation. Eliminating calls around non-payment felt uncomfortable, as an issue of this kind may impact on health and well-being by the stress and anxiety it induces but would be excluded from the data. From my previous experience with quantitative data, I was mindful that my criteria for inclusion and exclusion had to be clear and consistent, in order for the findings to tell an accurate story. Secondly, as a charity, ISWAN have a limited budget and my recommendations and suggested interventions needed to be mindful of what could realistically be achieved given the funds available. This was further convoluted by a sticky relationship with the International Transport Federation (ITF), who as well as being a large influential organisation in the industry, are also the main funder of ISWAN and its work. It became apparent that any recommendations I gave as a result of this consultancy had many channels to go through before it could be implemented. I had underestimated the influencing factors within this sector, and this has been a great learning point for me, illustrating the difficulties in implementing changes and the often, political climate of organisations.

Lastly, having previously worked with ISWAN as a student on a work placement, and now working with them as a paid consultant, I felt the need to deliver a more comprehensive analysis than I had previously. However, I reminded myself that ISWAN employed me on the basis of my previous work, and therefore had confidence in my ability, and that I should have the same confidence in myself. This was further reaffirmed when I was asked to attend the Board of Trustees Meeting in November 2016, and a year later was asked to repeat the project again with a new set of data.

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Appendix Contents **Page**

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11th May 2016

Consultancy Proposal - Establishing health and well-being needs of seafarers. ISWAN

Objective: To analyse data for the ISWAN helpline for the year 2015. Examining patterns and themes in the data to establish health and well-being needs of seafarers.(To replicate work carried out last year examining data for the period of 2014).

Project Review data set and plan.

- To meet with stakeholders, including Executive Director and Head of Operations, to review and discuss data and desired outcomes.
- To read through the database of relevant contacts made to ISWAN whether telephone, email, live chat or SMS. Data cleanse and analysis
- To eliminate contact unrelated to health i.e. contractual issues, repatriation etc.
- To binary code issues round health and well-being in preparation for analysis.
- To establish correlations and trends in data set. Review and report
- Make recommendations for future data collection.
- Make recommendations for health interventions based on findings.
- Present data findings back to ISWAN.
- Prepare powerpoint presentation for delivery to stakeholders.

Timescale Approx 12-14 days. To be completed by August 1st, 2016.

Fee £300 per day.

Consultant signature.....

Client signature.....

Date:.....

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20th May 2016

Consultancy Proposal - Establishing health and well-being needs of seafarers. ISWAN

Objective	To analyse data for the ISWAN helpline for the year 2015. Examining patterns and themes in the data to establish health and well-being needs of seafarers. (To replicate work carried out last year examining data for the period of 2014).
Project	Review data set and plan. • To meet with stakeholders, including Executive Director and Head of Operations, to review and discuss data and desired outcomes. • To read through the database of relevant contacts made to ISWAN whether telephone, email, live chat or SMS. Data cleanse and analysis • To eliminate contact unrelated to health i.e. contractual issues, repatriation etc. • To binary code issues round health and well-being in preparation for analysis. • To establish correlations and trends in data set. Review and report • Make recommendations for future data collection. • Make recommendations for health interventions based on findings. • Present data findings back to ISWAN. • Prepare powerpoint presentation for delivery to stakeholders.
Time-Scale	Approx 12-14 days. To be completed by August 1st 2016.
Fee	£25 per hour up to and not exceeding £2000.

Consultant signature……

Client signature……..

Date:……

Category Tables

Living Conditions	Definition
food	food out-of-date / repetitive / lack of fruit and veg / not enough
fatigue	working long hours / being denied rest hours
physical abuse	hit by another crew member and / or officer
fighting	involves two or more people
physical environment	cabins / toilet facilities / a/c not working
drinking water	not supplied / tank is rusty / water is brown
refused medical attention	not permitted by Captain for 1st or 2nd time

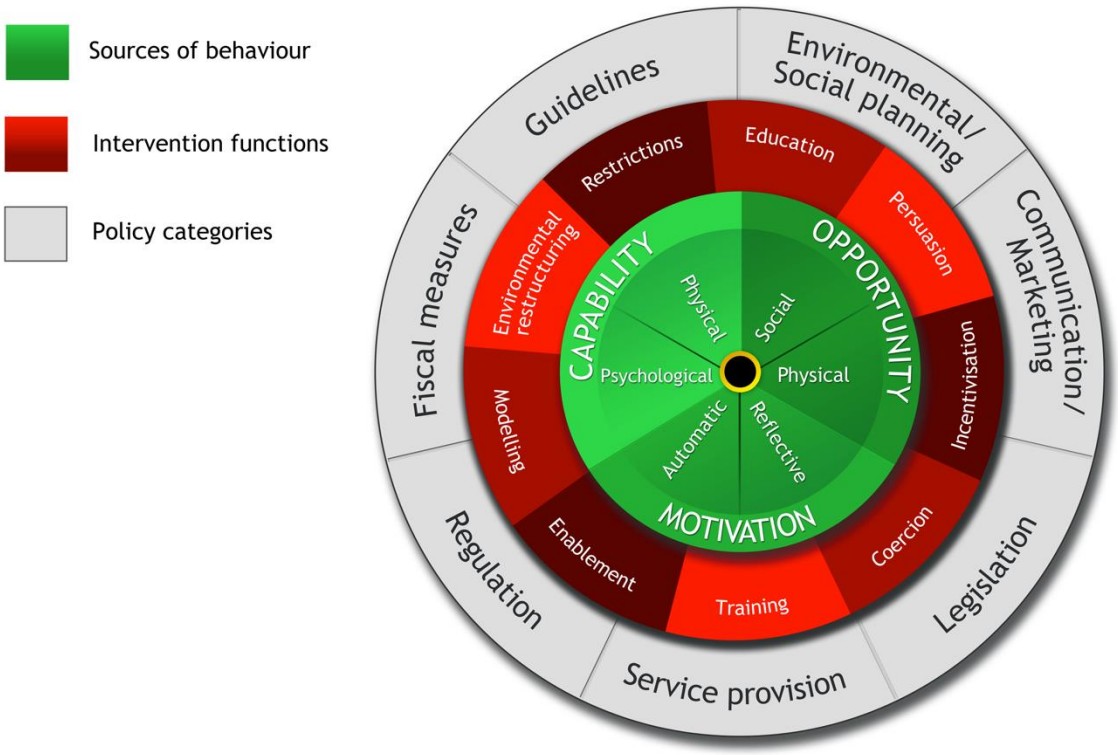
Psychological Health	Definition
discrimination	treatment of a person differently to others / forced to work long hours / feeling bullied / being verbally abused
stress / anxiety / depression	A person that directly expresses feelings of stress / anxiety / depression, or indirectly via their use of language and phrase as judged by consultant
loneliness	A person that directly expresses feelings of loneliness or feeling disconnected / isolated
mental illness	as diagnosed by a healthcare professional

Physical Illness and Injury	
back injury	injury to back whilst working
injury at work	any injury whilst working
illness at work	various e.g. chicken pox nosebleeds shingles gout lumbago chest pain stomach pain heart attack HIV symptoms stroke blood in stool lung problem not specified
gallstones	as diagnosed
pneumonia	as diagnosed
hepatitis b	as diagnosed
haemorrhoids	as diagnosed
kidney stones	as diagnosed
malaria	as diagnosed
cancer	as diagnosed

Humanitarian	Definition
imprisonment / ship arrested	imprisonment of seafarers and / or ship arrested at a port
seafarer missing	seafarer missing - usually contacted by family member. This does NOT include a seafarer that cannot be contacted by family for a week or so as it is likely they are out of range. A seafarer is classed as missing if there has been no contact for 3 weeks or longer
Abandonment	Ship left drifting / in port / at anchor with no contact with owner for 3 or more weeks with no provisions and / or fuel
Piracy	Threat or actual attack by pirates either onboard vessel or in a port
Death	Death of a seafarer accidental or deliberate

Other	Definition
sexual harassment	Unwanted sexual advances or obscene remarks
human trafficking	Possible trade of humans for labour
bereavement	Seafarer has lost a close family member
ship condition	Concerns about ship condition and ship being seaworthy e.g. hole in ship

Figure 2: Behaviour Change Wheel



PowerPoint Presentation

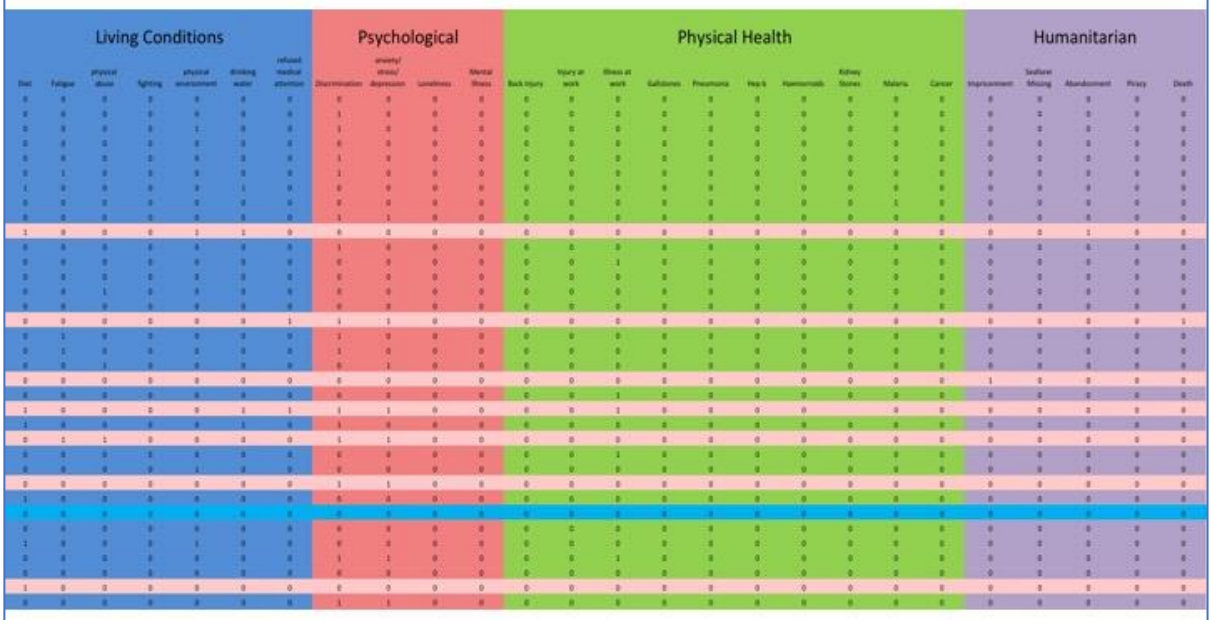
What did I do?

- The original spreadsheet of communications for 2015 consisted of over 1000 entries (similar to 2014)
- Majority of calls were in relation to non-payment / repatriation.
- The focus was on health and well-being so some calls were discarded.
- Discarded calls; non-payment / repatriation / contract issues and general information.
- Included calls; abuse or bullying / death / family problem / health or medical / psychological issues / welfare
- Additional issues for 2015 that didn't occur in 2014 data.

What was I left with?

- I was left with 345 communications and 638 issues.
- For 2014 there were 185 comms and 273 issues.
- I then read the narrative for each of the communications.
- Each issue was binary coded, being allocated a 1 for issue present and a 0 for an issue not being present.
- Many of the calls listed 2 or more issues as being of concern.
- Each issue was listed in its' relevant column.
- Totals are the number of items raised NOT the number of communications made.
- For 2015 all cases are given a priority number 1, 2 or 3, with a notes column enabling cases to be found easily.

Binary Coding

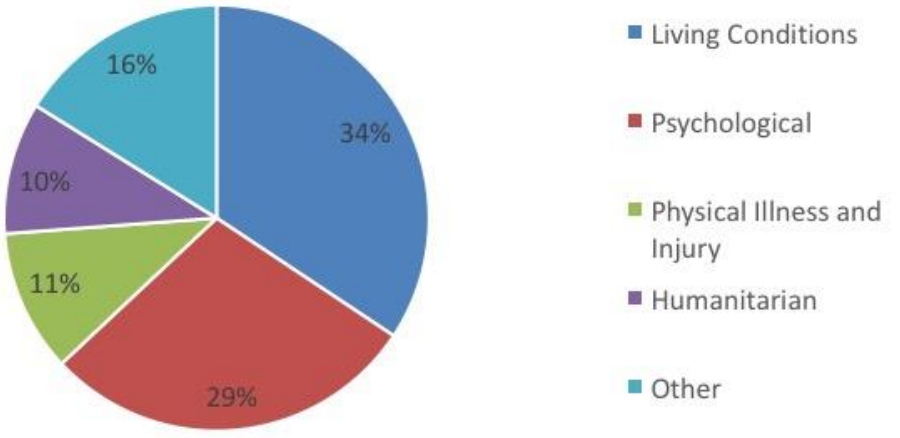


Sexual harrass-ment	Human Trafficking	Bereave-ment	Ship condition	Other	No of Health Issues	**Priority Number**	**Notes**
0	0	0	0	0	1	**2**	seafarer currently in Sydney has stomach pains, but his captain refuses to allow him to see a doctor
0	0	0	0	0	2	**1**	seafarer is missing at sea nobody knows what happened to him, family are looking for answers
0	0	0	0	0	2	**1**	seafarer is experiencing heart palpitations and is worried but is denied medical attention he wants some help
0	0	0	0	0	1	**3**	insufficient food and seafarers have not been paid
0	0	0	0	0	1	**3**	has to pay for water and it is supposed to be free, cannot drink the water from the tank
0	0	0	0	0	2	**3**	paperwork is being forcified and seafarers are being forced to work long hours
0	0	0	0	0	1	**2**	has health issues (doesn't specify) cannot finish contract wants to go home

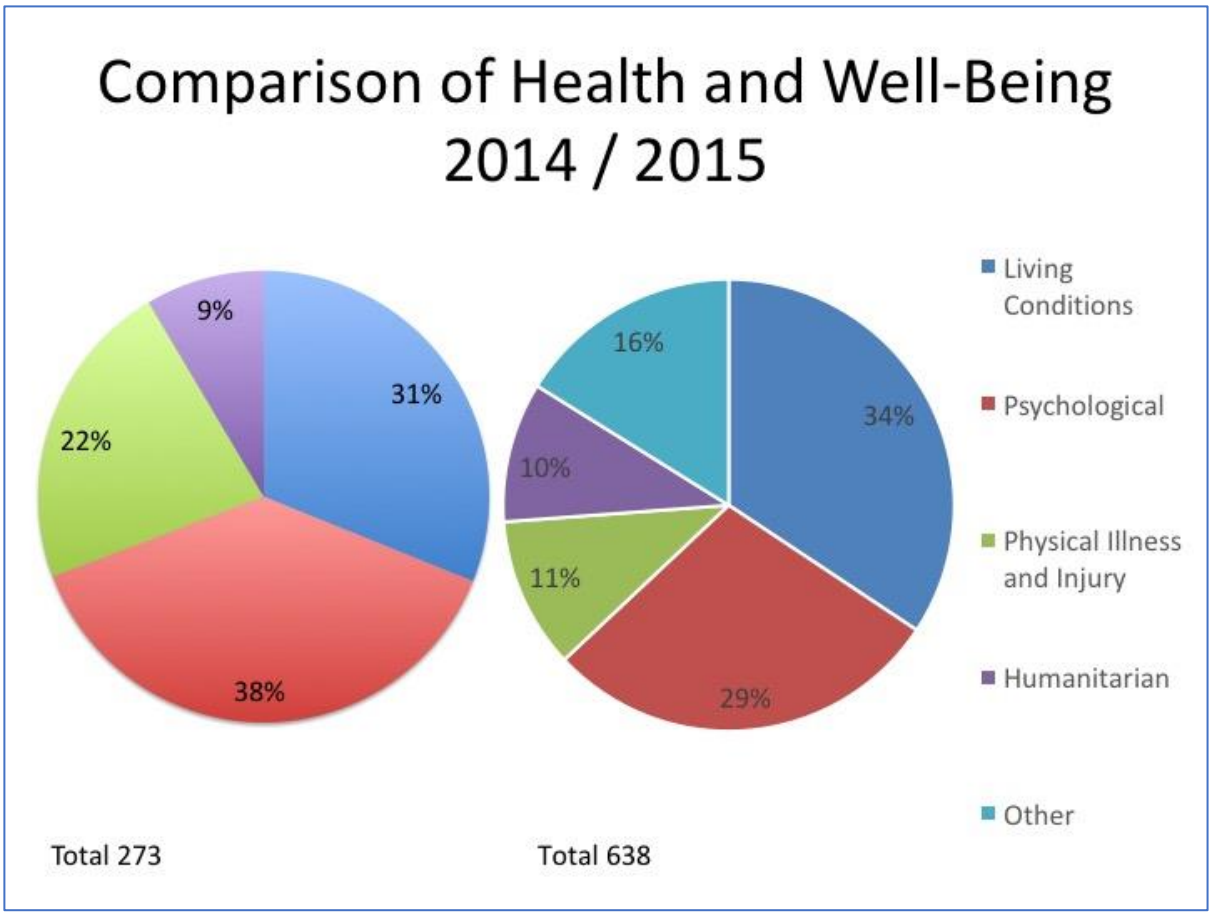
Remember……

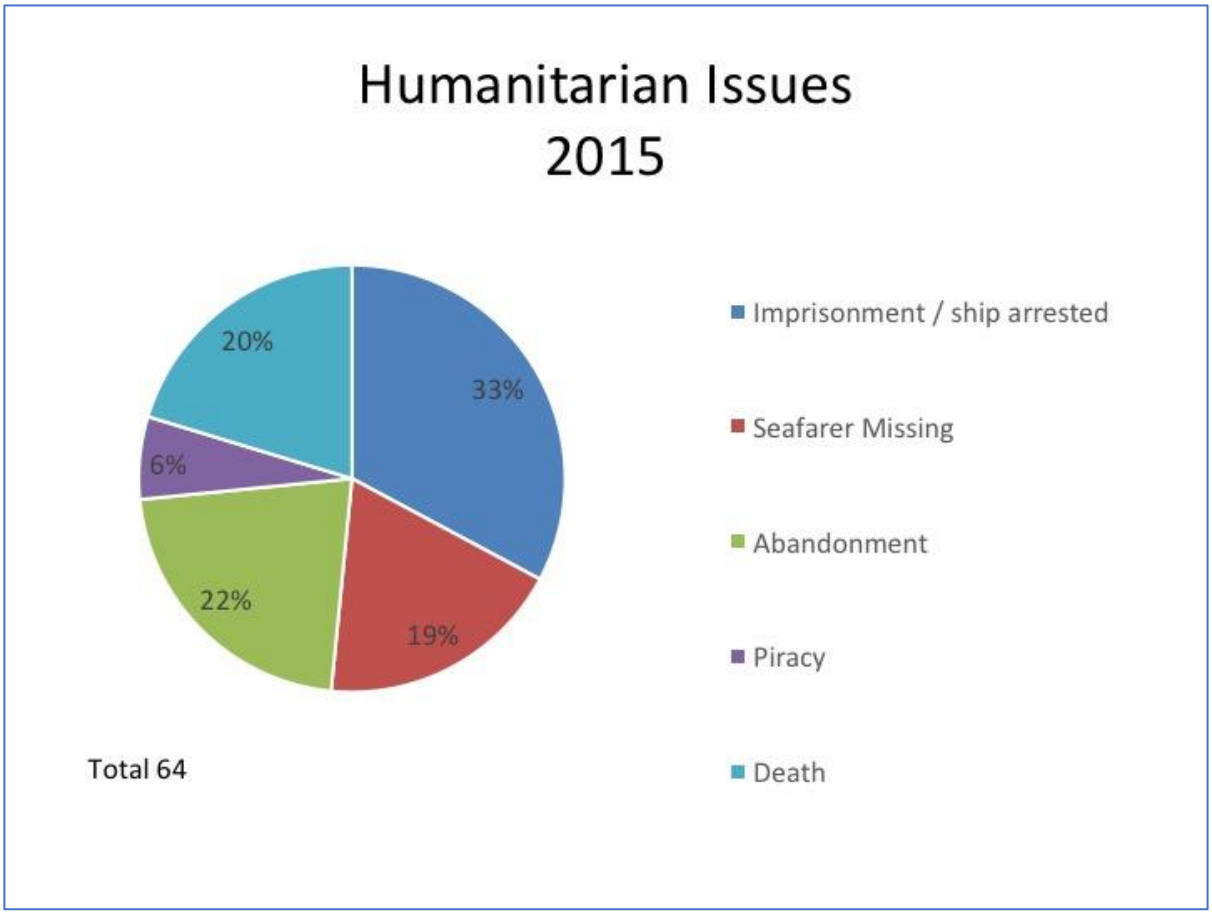
- …..as with all data and analysis there are points to consider
- These narratives are third hand, these are my interpretation of the call receivers' interpretation of a seafarers' issue.
- The discarded items concerning repatriation, contract issues and non-payment are all stressful and distressing but these have been discarded here due to time restraints and the focus on health.
- Some issues may be embarrassing to talk about, e.g. STD's loneliness.
- **Many seafarers may have only talked of the issue MOST concerning them and not others that are less priority… (social isolation and loneliness).**

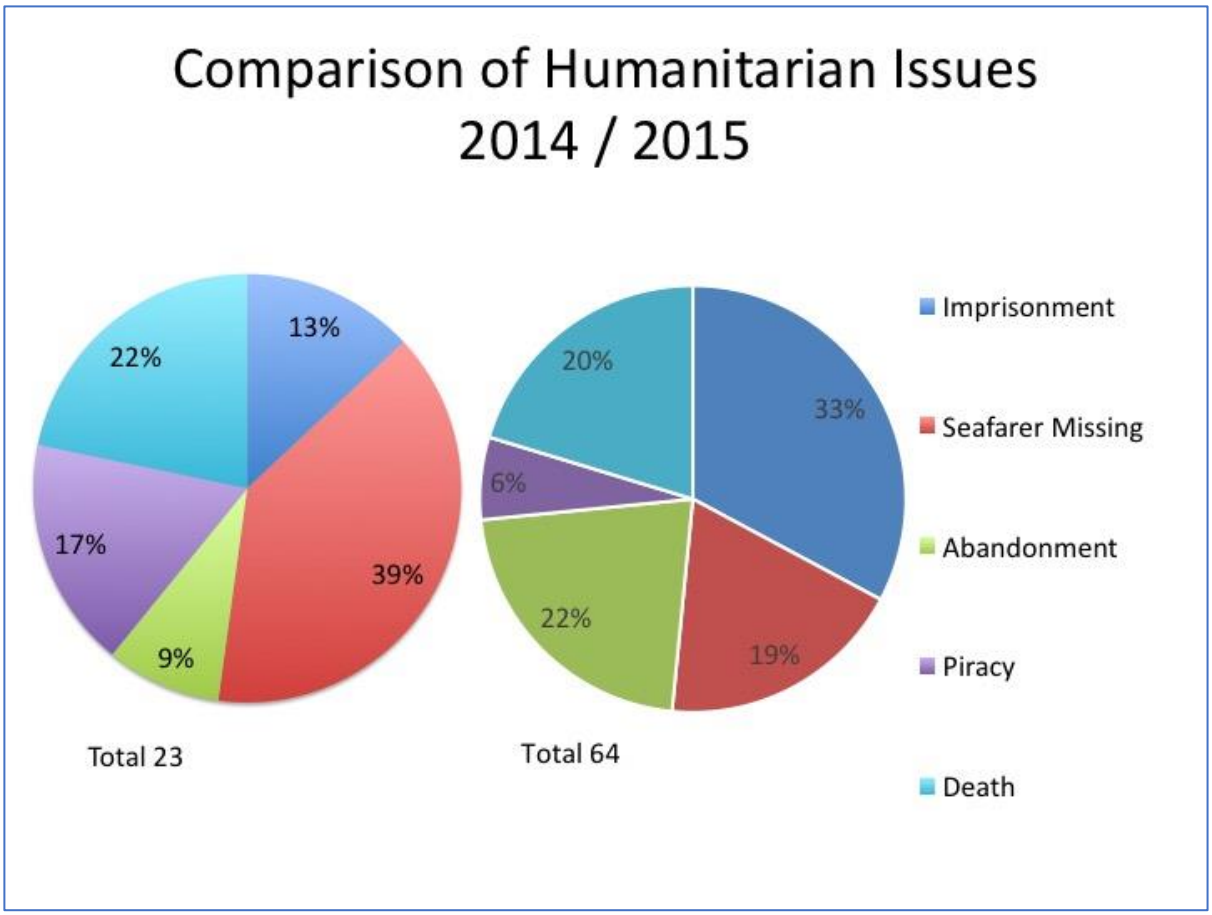
Categories of Health and Well-Being 2015

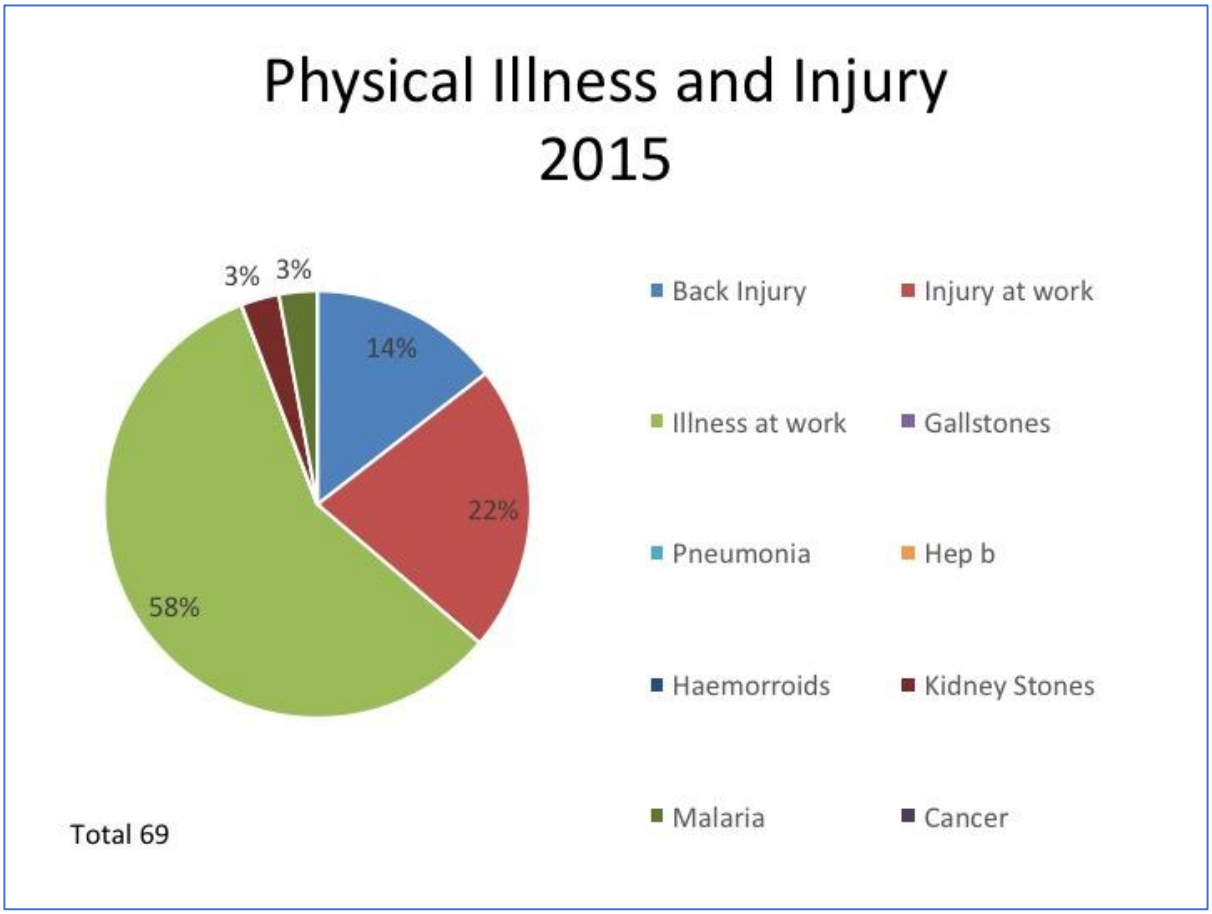


Total 638

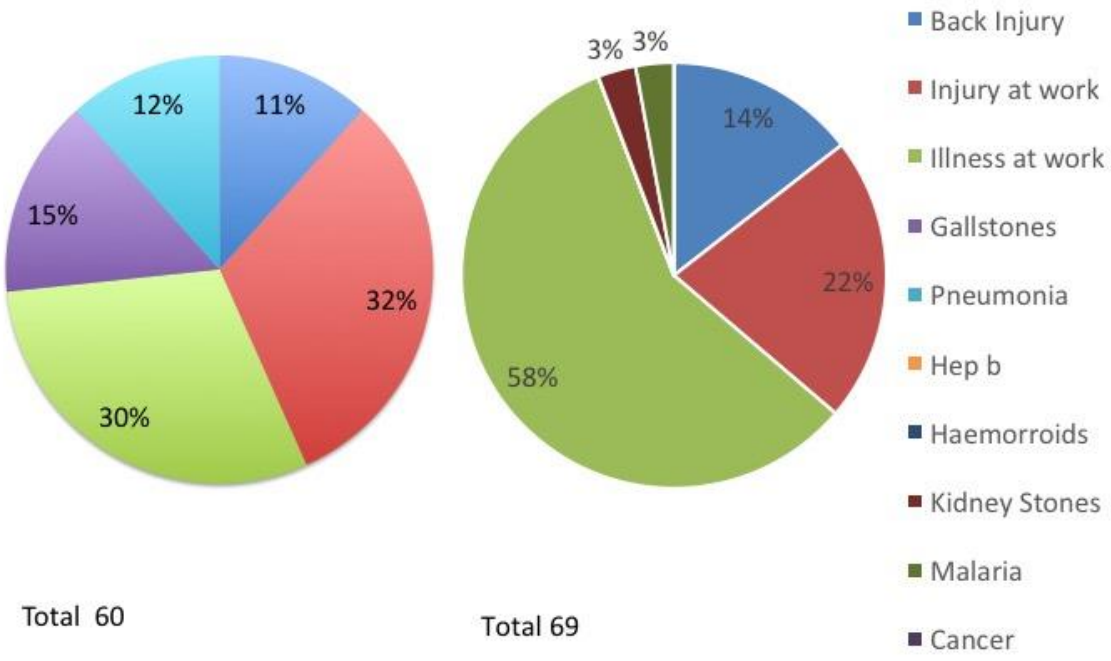

Comparison of Health and Well-Being
2014 / 2015
9%
31%
22%
38%
16%
34%
10%
11%
29%
Living Conditions
Psychological
Physical Illness and Injury
Humanitarian
Other
Total 273
Total 638


Humanitarian Issues
2015
20%
33%
6%
22%
19%
Imprisonment / ship arrested
Seafarer Missing
Abandonment
Piracy
Death
Total 64


Comparison of Humanitarian Issues
2014 / 2015
13%
22%
17%
39%
9%
Total 23
20%
33%
6%
22%
19%
Total 64
Imprisonment
Seafarer Missing
Abandonment
Piracy
Death


Physical Illness and Injury
2015
3%
3%
14%
22%
58%
Total 69
Back Injury
Injury at work
Illness at work
Gallstones
Pneumonia
Hep b
Haemorroids
Kidney Stones
Malaria
Cancer

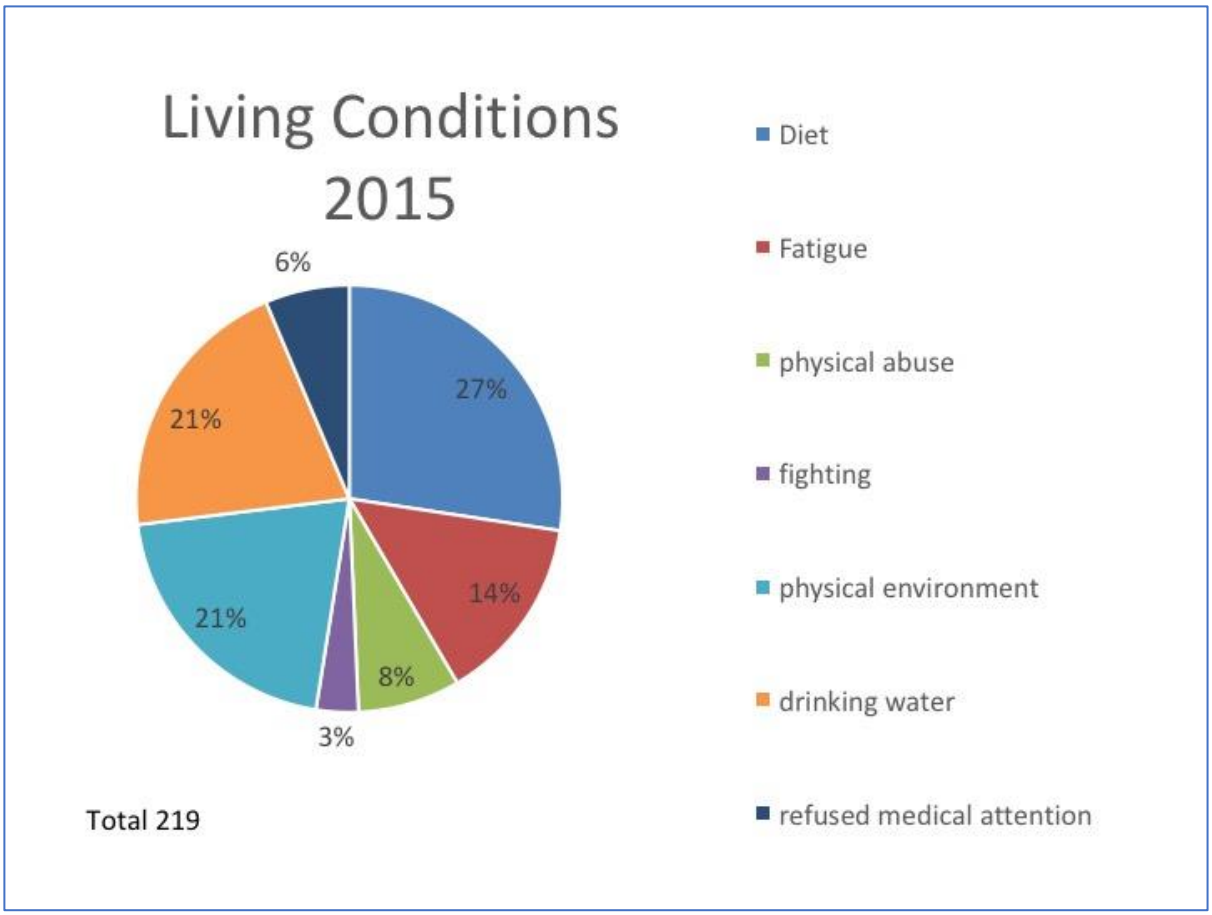
Comparison of Physical Illness / Injury 2014 / 2015

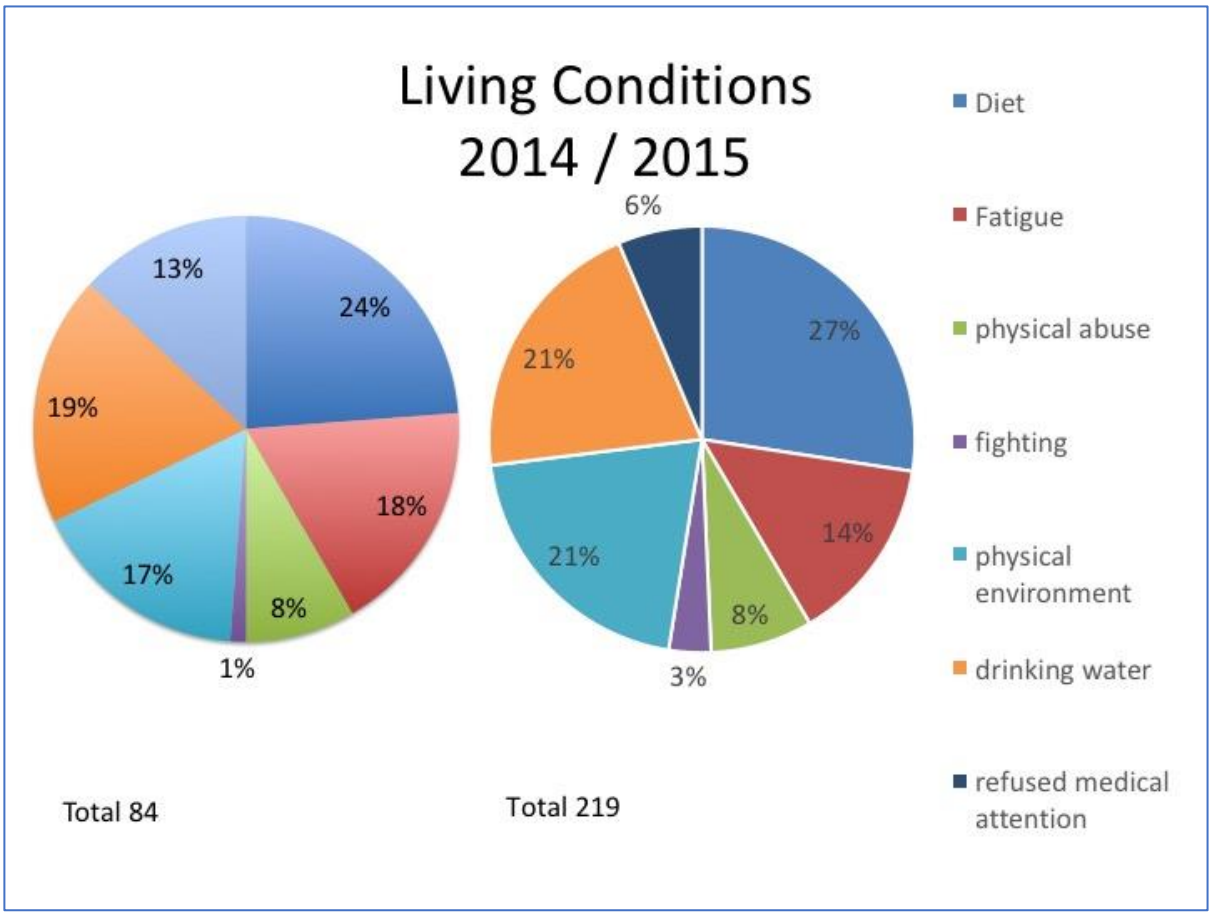


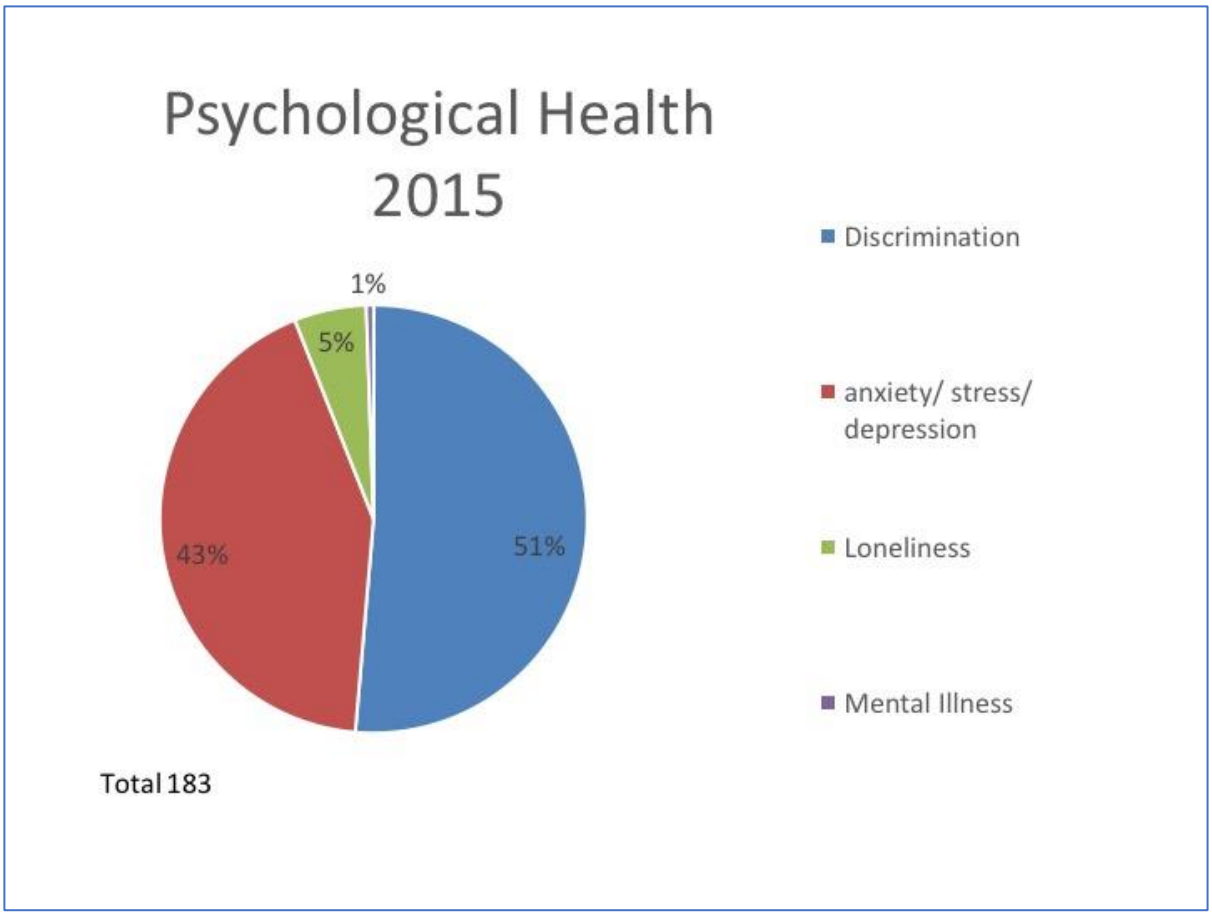
Illness at work

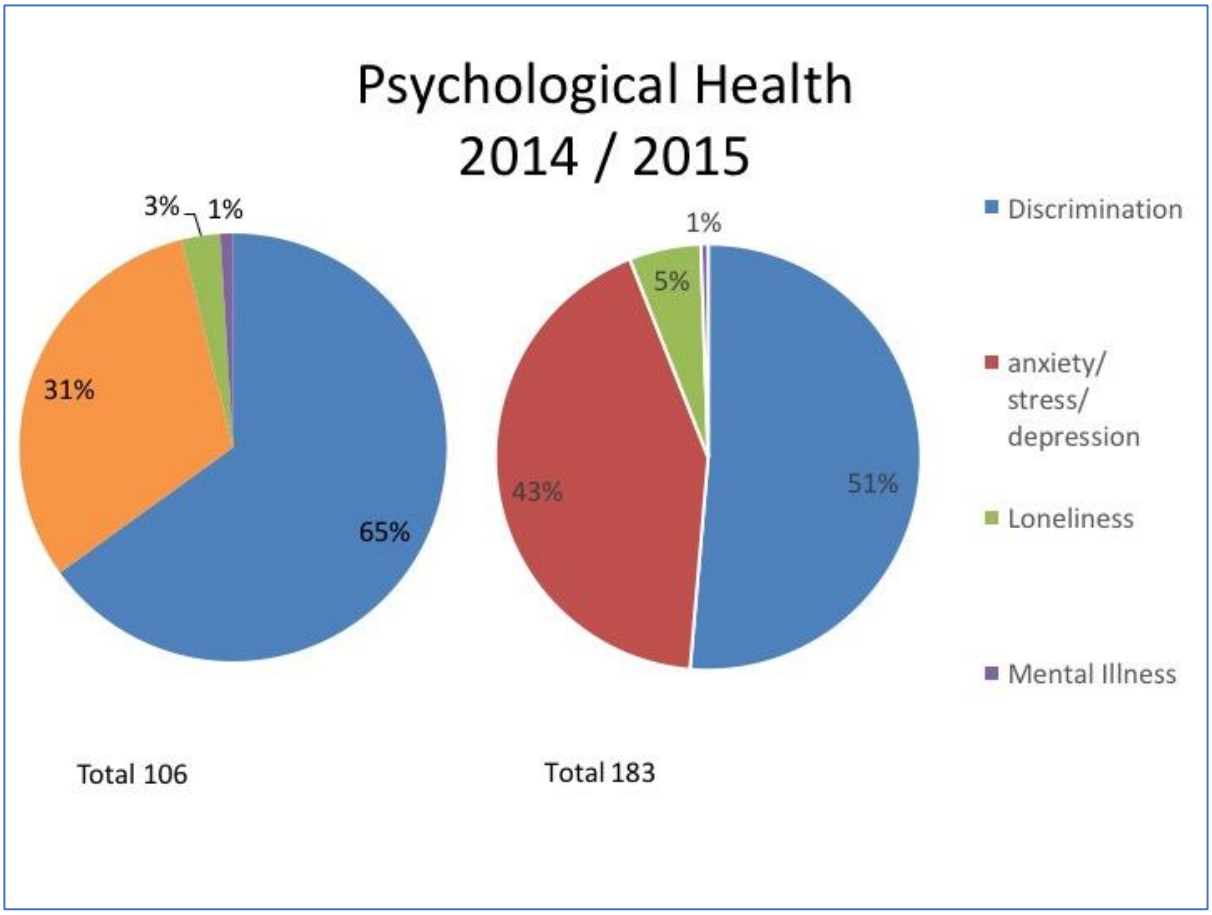
Chicken pox
Nosebleeds
Shingles
Gout
Lumbago
Chest pain
Back pain
Stomach pain

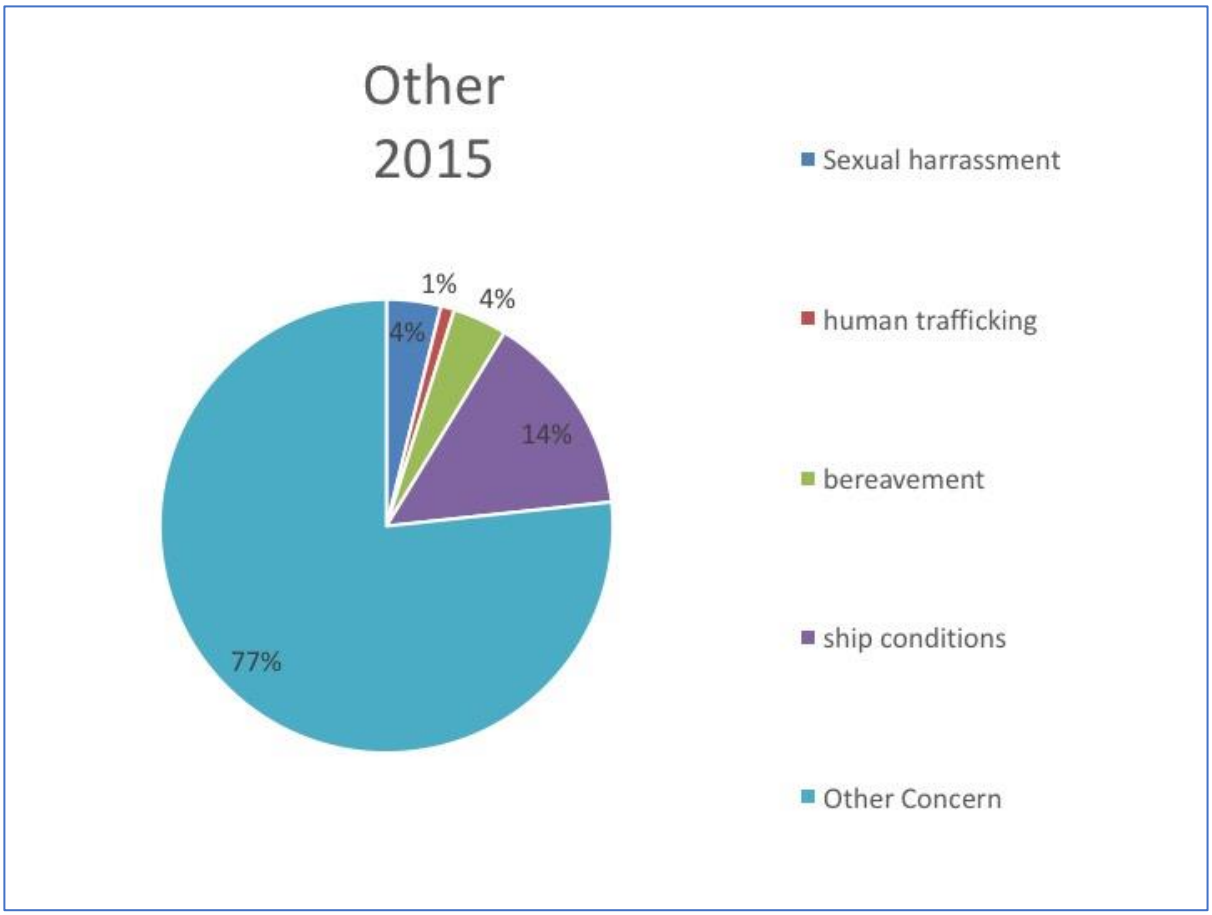
Heart attack
HIV symptoms
Stroke
Blood in stool
Lung problem
not specified

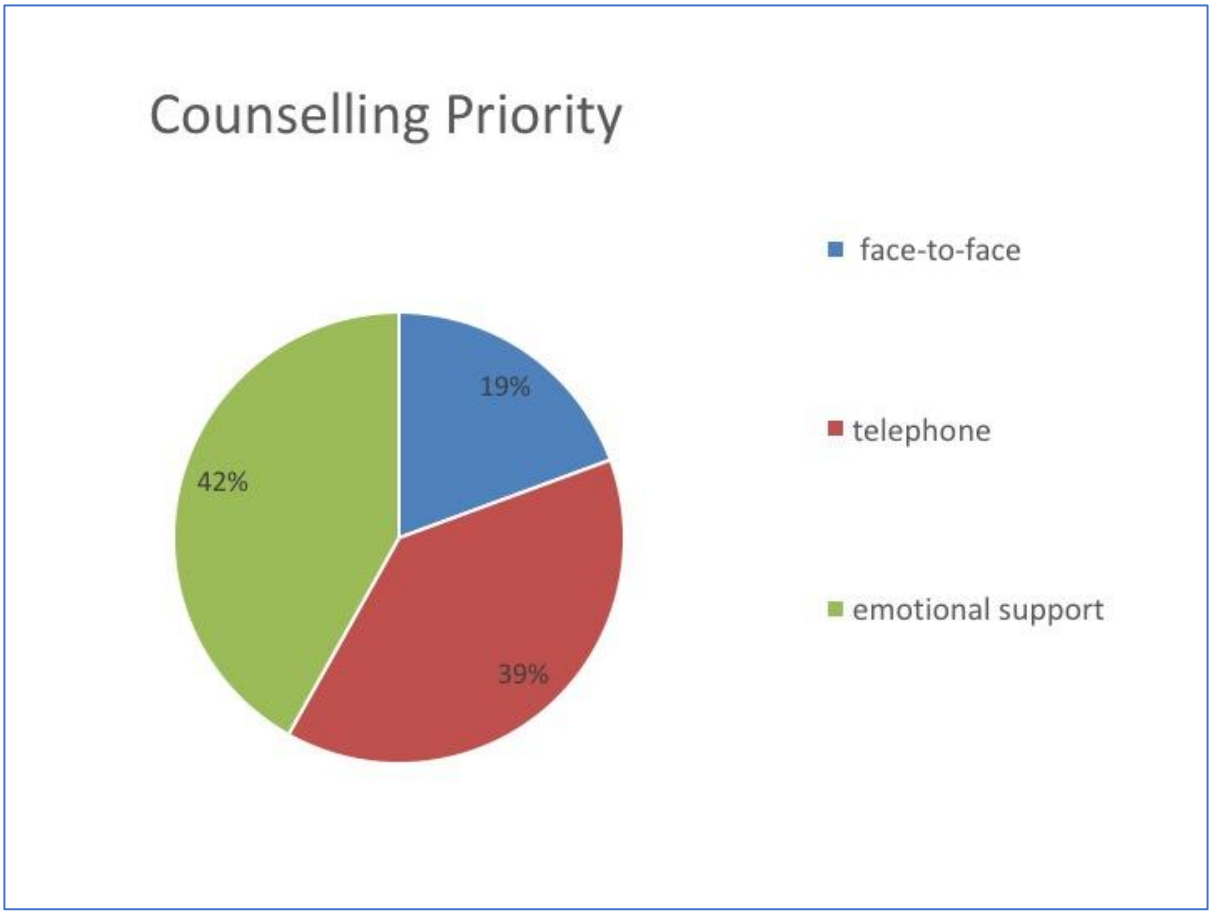

Living Conditions 2015
6%
27%
21%
14%
21%
8%
3%
Diet
Fatigue
physical abuse
fighting
physical environment
drinking water
refused medical attention
Total 219


Living Conditions 2014 / 2015
13%
24%
19%
18%
17%
8%
1%
Total 84
6%
27%
21%
14%
21%
8%
3%
Total 219
Diet
Fatigue
physical abuse
fighting
physical environment
drinking water
refused medical attention


Psychological Health
2015
1%
5%
43%
51%
Discrimination
anxiety/ stress/ depression
Loneliness
Mental Illness
Total 183


Psychological Health
2014 / 2015
3%
1%
31%
65%
1%
5%
43%
51%
Discrimination
anxiety/ stress/ depression
Loneliness
Mental Illness
Total 106
Total 183


Other
2015
1%
4%
4%
14%
77%
Sexual harrassment
human trafficking
bereavement
ship conditions
Other Concern


Counselling Priority
19%
42%
39%
face-to-face
telephone
emotional support

Seafarer Call

I am a slave… he is a master. I have to clean bridge toilets in free time and forced to sign worksheets for 8 hours but have worked for 12. I am a experienced 4th engineer... I felt in to depression and weak day by day... mind somewhere, and body somewhere... I started having health problems..dysentery, vomiting..weakness….. there is no internet or mail facilities onboard ship. I have having depression and weakness…. I was frustrated, out of mind, weak, no one to help…some people want to get the favour of the Captain, they warned me not to call the ITF because the OWNER is very Powerful, you will have problem going home, may be they will keep your documents.

I am forcibly working every day…. captain does not force the company to get me to the doctor else he tells me that it is too much expense…. Company has a tendency of sacking officers and crew without warning letter, without wages. too many sacking in the last 6 to 7 months, no salary paid to them….

Now I just want to go home, I don't want to stay single moment...

Email from a Filipino lady on behalf of her brother

My complaint Sir is about the abuse and maltreatment of those Iranian officials to those Filipino seafarers. They are also deprived of food which is a basic need for every human being alive.We already coordinated with the agency in the Philippines and the Philippine Embassy in Tehran, Iran. The feedback they gave us was they already did spoke to the principal owner and this principal assured the Embassy that he will process the documents of my brother and his three crewmates as soon as possible for immediate repatriation. He even said that the Captain and the Chief Mate were being replaced but it was'nt true because until now they are still there and keeps on abusing and maltreating them. We are not satisfied with the results of the investigations conducted by the agency in the Philippines because it seems that they favored more to their client than those poor seafarers out there which are deprived of everything. I hope I am wrong with my speculations. I just wish that they will do their part. The principal even made a memorandum to the four of them. They expect they could get help from the agency and the principal after they made a complaint against the Captain and the Chief Mate but the complaints they made was to no avail. Hence, it ended up that it was there fault. In short it's the opposite. They are in the hot seat. It was biased because the Captain and the Chief Mate told the principal that my brother and his crewmates are lazy and are not fit for their work. I hope they'll be choked with their lies .

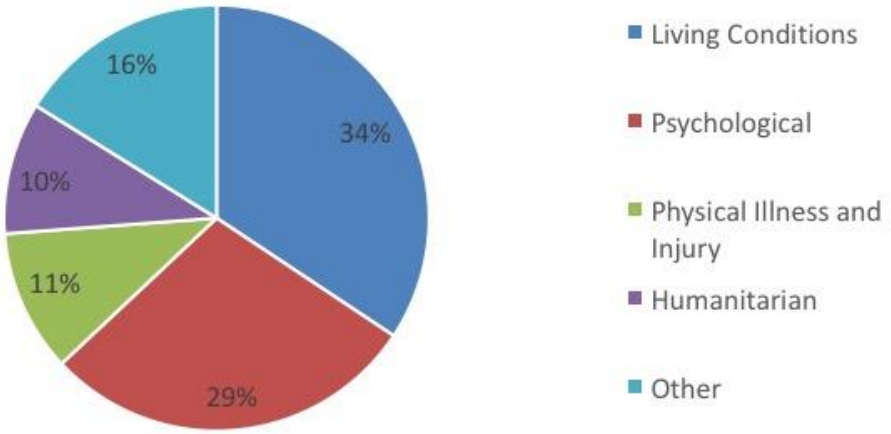
Continued....

God sees everything they did. I hope also that this principal will going to conduct a thorough investigation not only to his officials but to the crews as well. May he exercise his listening ability and wisdom as his officials are putting a bad image on his company.Everytime my mother receives a text messages from my brother she's in total despair because he told her that they are being beaten, dragged, pushed and sometimes hit by wood or anything that is hard and solid in the head and in the back. He was also strangulated by the chief mate and it caused a cut on his neck area. Right now, he said that he is not in good condition as he is experiencing difficulty of breathing and severe back pain as he was hit by a piece of wood or something by the chief mate and even said that the order is coming from the captain. He also said that he's already spitting blood whenever he coughs. He said he wants to have a check-up with a physician as soon as possible so he will know what's wrong with his system and a right treatment will be rendered to him. These abusive officials are doing the acts especially if they are on their way to the shore.Sir, we really do not know what to do now. We are completely helpless.Sometimes our activities of daily living is affected with this problem. I am begging you to help us.

Seafarer Communication

- yhe captain here is korean and since he come onboard last july,2015, he change everything,he never give us a shore leaves,he agrees to go the crews on shore leaves but the boat should be paid by the crews.so nobody are happy to him,hes attitude to the crew is very unpleasant or his unfreindly to us,wer feeling here is comfortless,he even doesnt care the crew,he talk to us in the form of shouting,he delivered the word like blaming to the crews,he never feel us the captain to take care the crews,he never trust the crews,and the respect from him even we are the the lower rank than him we never feel.now wer going to sail again,he treat us upon arriving in china he will collect all the cellpones of the crew,the only communication we have here,so that no body can call or use it.we dont have internet onboard,we only buy a sin card in any port available to talk our family,so,he want to move out tha happiness of all crew.me myself i experience the paifull word,blaiming that stock up to my mind and in my hearts.he told me that im only here to the zhip to take salAry and doing nothing,unsatisfaction even i work hard everyday,doing some maintenance,thats why i feel verry offset,disscomfort and its look like i have a trauma,in my heart and in my mind.

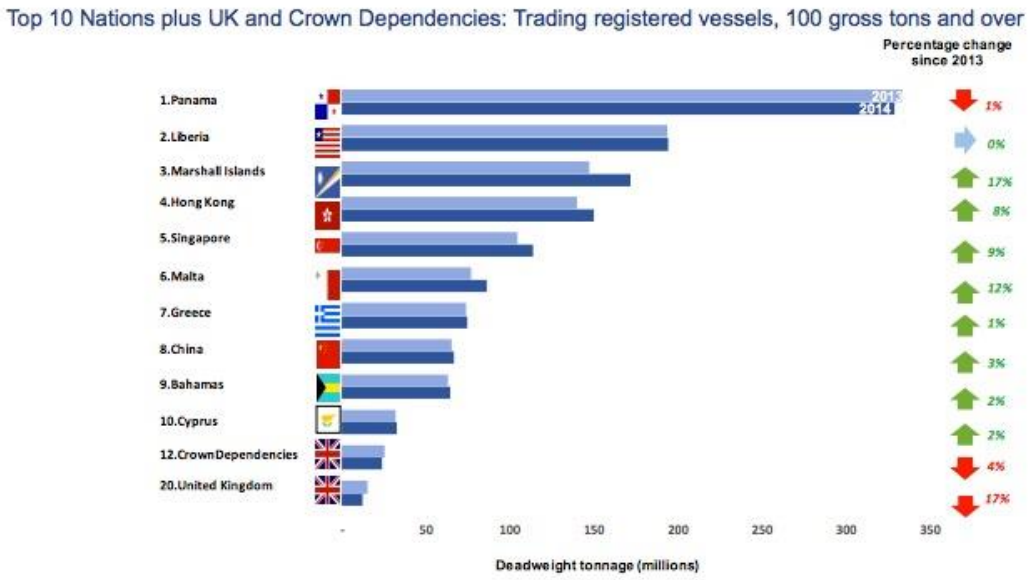
Categories of Health and Well-Being 2015



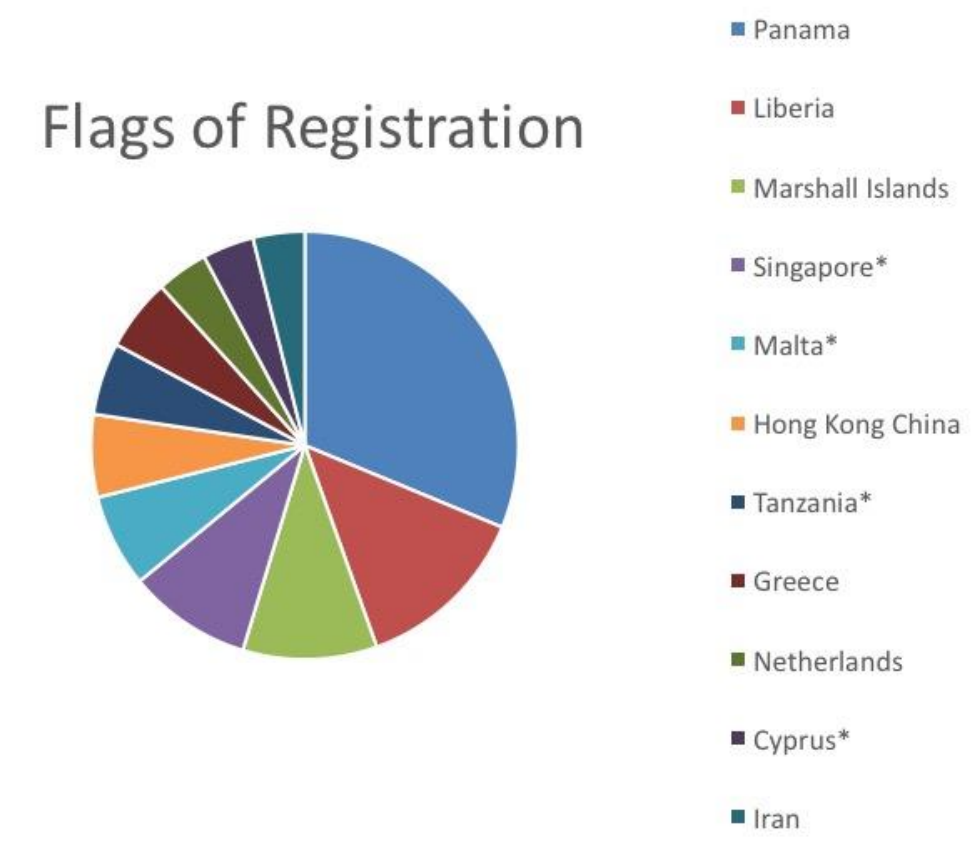
Total 638

Successive Calls – Case Studies

- Caller 2002 – seafarer feels mistreated by Captain and Indian ITF. Gives more details in subsequent calls but did not alter data.
- Caller 2004 - seafarer is missing, has fallen overboard in a port in Argentina, there was some communication breakdown and coastguard was not contacted for 24 hours, therefore searching did not begin until this point. Successive calls gave more detail but did not change the statistics though seafarer does sound more distressed in subsequent calls.
- Caller 8007 – ship has no food and no water and is being helped by other seafarers…it is not clear if it has been abandoned (January)….following communication was a survey sent (May)
- Caller 9964 – seafarer is very lonely….successive calls he reports feeling better, and is grateful for someone calling his wife.
- Caller 10041 – in hospital receiving care after a heart attack. Follow up contact asking about his rights.



Department of Transport Feb 2015
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/404808/shipping-fleet-statistics-2014.pdf



Remember..

- Statistics are not always 100% accurate.
- These statistics were third hand.
- Seafarers are only telling one side of the story.
- Many seafarers may have only talked of the issue MOST concerning them and not others that are less priority…
- The discarded items concerning repatriation, contract issues and non-payment are all stressful and distressing but these have been discarded here due to time restraints and the focus on health.
- There may be instances of seafarers feeling stressed but it's not explicit.
- Some issues may be embarrassing to talk about, e.g. STD's loneliness.

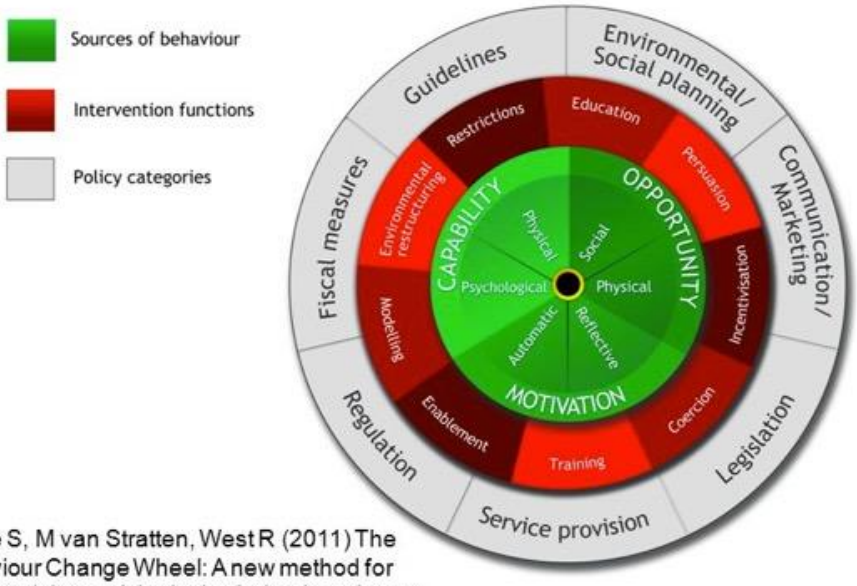
So……..

- What can we do to help? How can we intervene?
- Combining the knowledge we have from our descriptive statistics with evidence from scientific research is the key when applying health psychology to design health promotion, interventions and inform policy.
- We have our descriptive statistics, what about evidence from scientific research?

Biopsychosocial Model of Health

- **biopsychosocial framework:** an approach to describing and explaining how *biological*, *psychological* and *social* factors combine and interact to influence physical and mental health

Behaviour Change Wheel



Michie S, M van Stratten, West R (2011) The Behaviour Change Wheel: A new method for characterising and designing behaviour change interventions. Implementation Science, 6, 42.

14

ISWAN Mission Statement

An international charity dedicated to the relief of need, hardship or distress amongst seafarers of all nationalities, races, colour and creeds irrespective of gender.

Recommendations / Interventions

- Health promotion.
- Give priority numbers to cases as they come in.
- Case loads for staff.
- Counselling intervention.
- Have a policy of escalation of any contact that is a priority number 1.
- Designing a knowledge base.
- A means to support whistleblowers.
- Collaboration with other organisations / agencies.

Health and Well-Being Promotion

We talked about this last year. You may remember, we know from research that promotion that is;

- Tailored – focused on one persons ' needs

And

- Targeted – focusing on a group of people in a homogenous group

Is far more effective than a generic approach

Look at website and health promotion materials, particularly in relation to the big 4!

Assign Priority Numbers / Case Loads

- Is there the capability to add a priority number at the time of contact?
- Assign staff a caseload – giving full-time staff priority 1 cases and staff that are not full-time allocated priority 2 or 3 depending on hours / capabilities etc.
- Follow up on referrals to ITF – what is being done? Who is doing it? Has the seafarers issue been resolved?
- To follow up on research for seafarer rather than passing it to them.

Counselling Intervention

- Many of the cases would benefit from a counselling service, either on the telephone or online.
- Calls given a priority number 2 are those most likely to benefit from counselling.
- If cases are assigned priority numbers as soon as communications come in, seafarers can be signposted to a service or contacted direct.

Escalation

- What happens to cases that are a priority number 1?
- What is the criteria for escalation?
- Are staff consistent in escalating cases?

Knowledge Base

- Does ISWAN have a knowledge base?
- As a query comes in regarding a procedure or policy and call receivers are researching for a seafarer, create and knowledge base where this information in stored and easily accessed next time a seafarer enquires.
- Provide links - this saves time for seafarers with limited internet connection and free time.

Whistleblowers

- Giving seafarers a voice to report an incident and / or person without fear of reprisal or being black listed.
- Utilising Technology – ISWAN website?
- Long-term goal – mobile app?
- In collaboration with others e.g. ITF Seafarers Trust.

Collaboration with other organisations / agencies

High percentage of calls referred to ITF – what other organisation's can be involved in collaboration? Who does ISWAN currently collaborate with?

- Amnesty International – emergency cases / humanitarian
- Interpol – for criminal activity
- Greenpeace – dumping of oil / environmental issues
- MI6 – security concerns
- Port Health
- Chaplains
- ITF - follow up on cases and someone take ownership of cases. Regular meetings with ITF to ensure good practise.

Recommendations for Intervention

- Health promotion.
- Give priority numbers to cases as they come in.
- Case loads for staff.
- Have a policy of escalation of any contact that is a priority number 1.
- Designing a knowledge base.
- A means to support whistleblowers.
- Collaboration with other organisations / agencies.

Bibliography

- Davies, M., & Macdowall, W. (2006). *Health promotion theory*. Maidenhead; New York: Open University Press.
- Kreuter, M. (2003). Achieving cultural appropriateness in health promotion programs: targeted and tailored approaches. *Educational Administration Abstracts*, *38*(3).
- Noar, S.M., Benac, C.N., & Harris, M.S. (2007). Does tailoring matter? Meta-analytic review of tailored print health behavior change interventions. *Psychological Bulletin*, *133*(4), 673–93.
- Michie, S., Atkins, L., & West, R. (2014) The behaviour change wheel: A guide to designing interventions. London: Silverback publishing.

Tiffany Palmer

Consultancy Report - Establishing health and well-being needs of seafarers. ISWAN

Aims

The aims of this consultancy were.

To analyse data for the ISWAN helpline for the year 2015. Examining patterns and themes in the data to establish health and well-being needs of seafarers. Providing descriptive statistics to summarise data and making recommendations for health and well-being interventions based on findings.

Method

Using excel, a spreadsheet was designed with five main categories of health and well-being. The categories were Living Conditions, Psychological Health, Physical Illness and Injury, Humanitarian and Other. Each of these main categories were sub-divided into smaller categories for the most common issues that arose for each. See below.

Living Conditions	Definition
food	food out-of-date / repetitive / lack of fruit and veg / not enough
fatigue	working long hours / being denied rest hours
physical abuse	hit by another crew member and / or officer
fighting	involves two or more people
physical environment	cabins / toilet facilities / a/c not working
drinking water	not supplied / tank is rusty / water is brown
refused medical attention	not permitted by Captain for 1st or 2nd time

Psychological Health	Definition
discrimination	treatment of a person differently to others / forced to work long hours / feeling bullied / being verbally abused
stress / anxiety / depression	A person that directly expresses feelings of stress / anxiety / depression, or indirectly via their use of language and phrase as judged by consultant
loneliness	A person that directly expresses feelings of loneliness or feeling disconnected / isolated
mental illness	as diagnosed by a healthcare professional

Physical Illness and Injury	
back injury	injury to back whilst working
injury at work	any injury whilst working
illness at work	various e.g. chicken pox nosebleeds shingles gout lumbago chest pain stomach pain heart attack HIV symptoms stroke blood in stool lung problem not specified
gallstones	as diagnosed
pneumonia	as diagnosed
hepatitis b	as diagnosed

haemorrhoids	as diagnosed
kidney stones	as diagnosed
malaria	as diagnosed
cancer	as diagnosed

Humanitarian	Definition
imprisonment / ship arrested	imprisonment of seafarers and / or ship arrested at a port
seafarer missing	seafarer missing - usually contacted by family member. This does NOT include a seafarer that cannot be contacted by family for a week or so as it is likely they are out of range. A seafarer is classed as missing if there has been no contact for 3 weeks or longer
Abandonment	Ship left drifting / in port / at anchor with no contact with owner for 3 or more weeks with no provisions and / or fuel
Piracy	Threat or actual attack by pirates either onboard vessel or in a port
Death	Death of a seafarer accidental or deliberate

Other	Definition
sexual harassment	Unwanted sexual advances or obscene remarks
human trafficking	Possible trade of humans for labour
bereavement	Seafarer has lost a close family member
ship condition	Concerns about ship condition and ship being seaworthy e.g. hole in ship

The narrative was read for each communication and binary coding was enter into the excel spreadsheet in the relevant column. For many cases more than one health issue was raised.

Priority Cases

After the binary coding for each of the categories, a column was added labelled "priority number". Each case was assigned a priority number 1, 2 or 3.

Number 1 - Priority number 1 was assigned to cases of an urgent nature. For example, a seafarer's life is in danger / seafarer has been imprisoned / ship has been abandoned with very little provisions / seafarers fear for their lives in dangerous areas. For the majority of cases given a priority 1 their needs are of a humanitarian nature and in need of immediate help - food, water, aid.

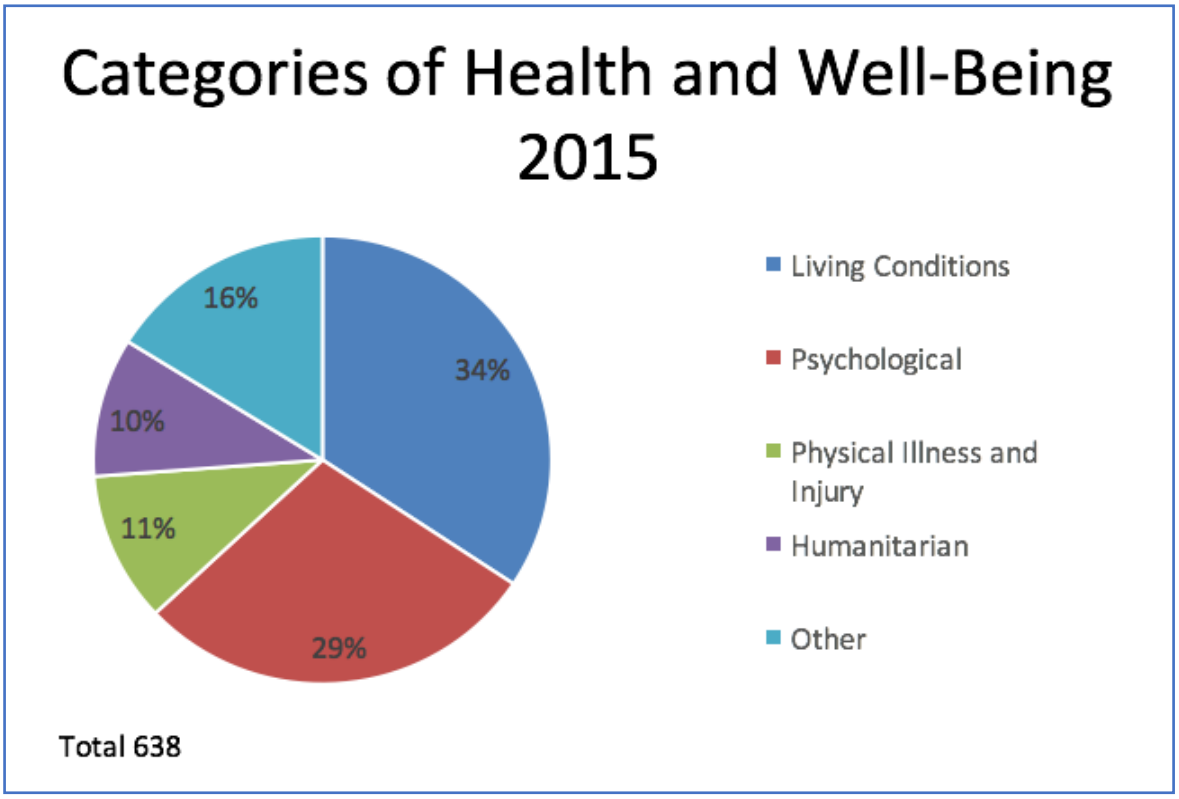
A priority number 1 is also given to people who feel their lives are at risk or are experiencing extreme emotional trauma and need assistance as soon as possible. Some of these cases may be assisting family when a seafarer is missing, and they are suffering extreme stress.

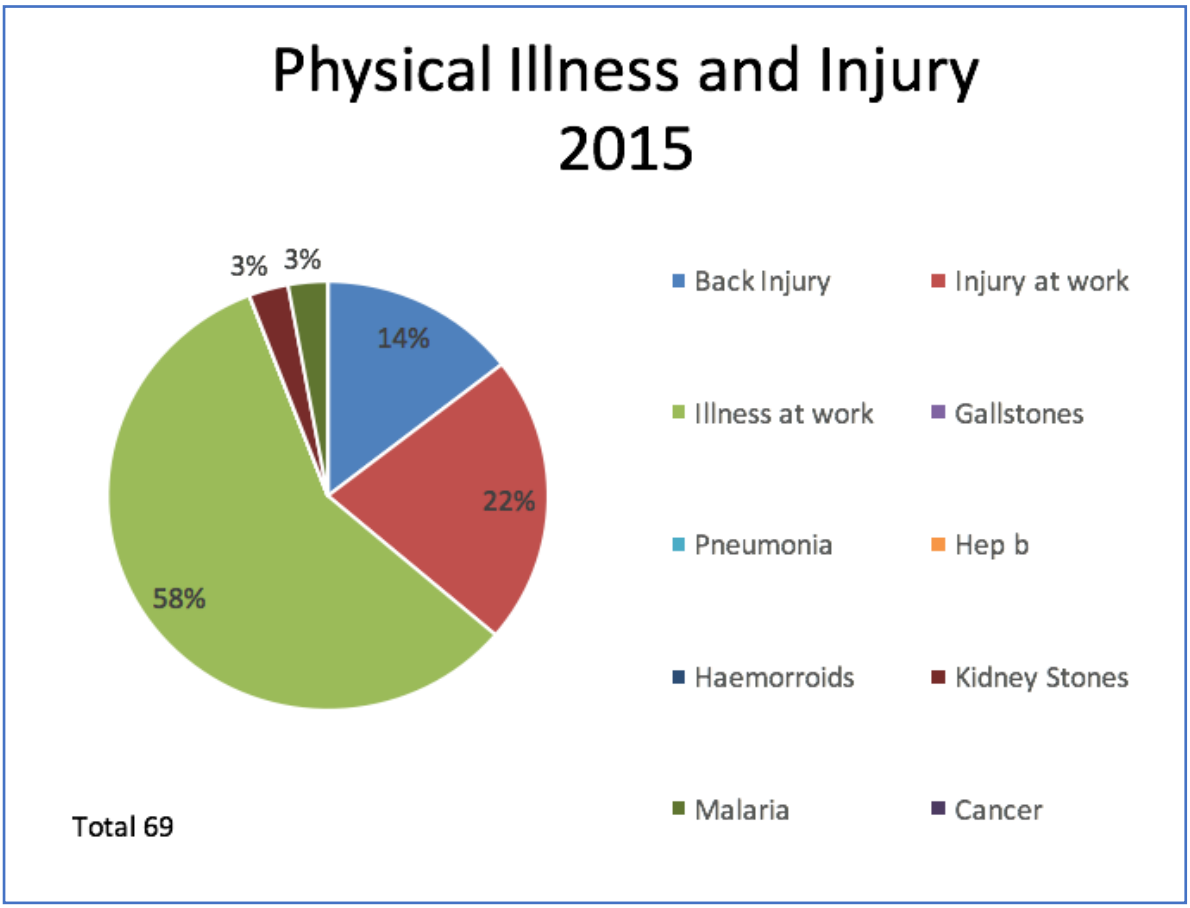
Number 2 - Priority number 2 was given to cases that, though lives are not in danger, seafarers are suffering mentally and /or physically and require help. This may be ongoing abuse / refusal of medical attention / family bereavement / family problems. People with a priority number 2 require assistance or intervention of some nature.

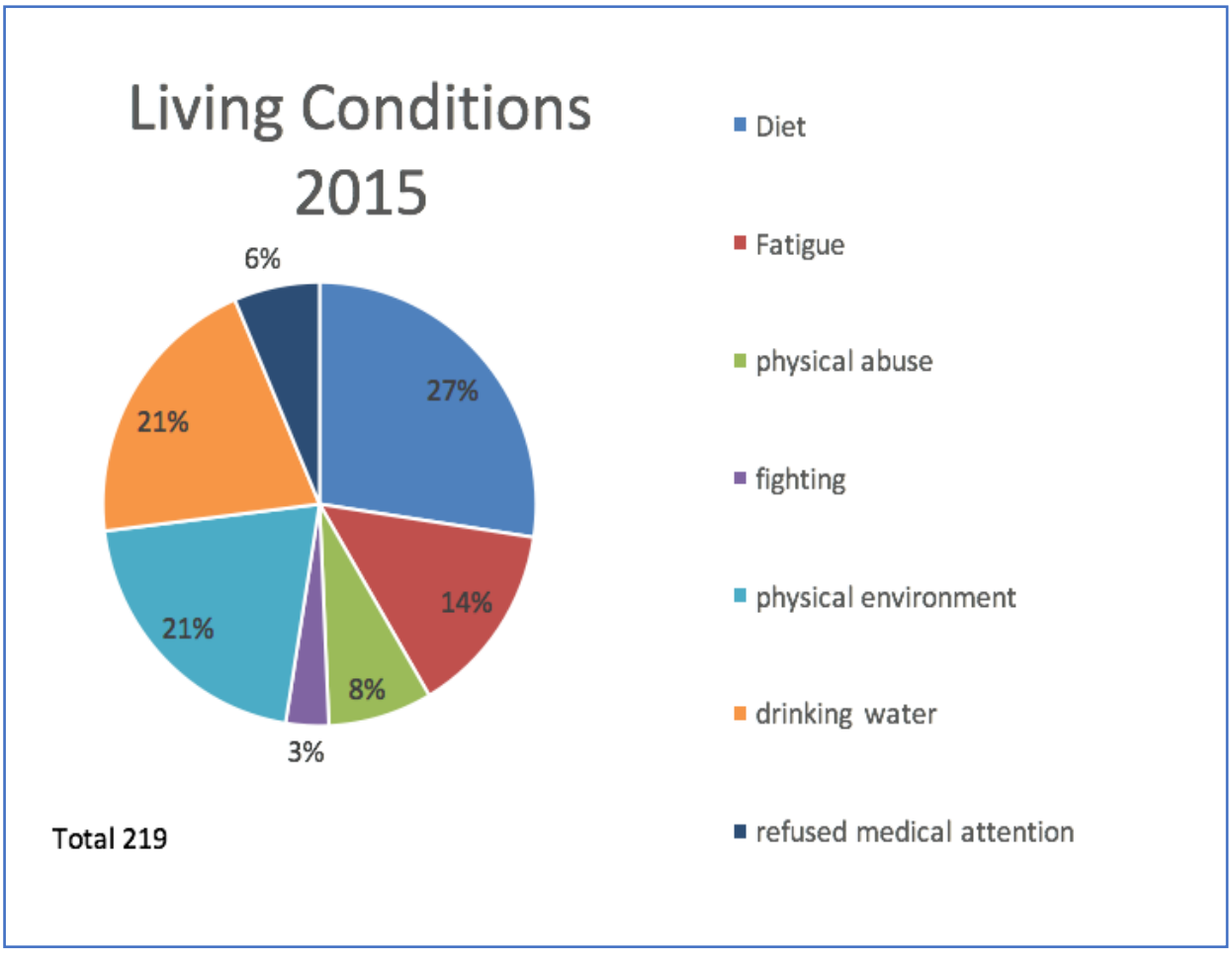
Number 3 - Priority number 3 was assigned to cases that require no help, or it is not of an urgent nature. This includes seafarers that are no longer on a ship (maybe returned home or in hospital). This maybe someone that has had a medical issue and needs assistance from their shipping company. This may involve issues surrounding living conditions but does not necessarily require intervention.

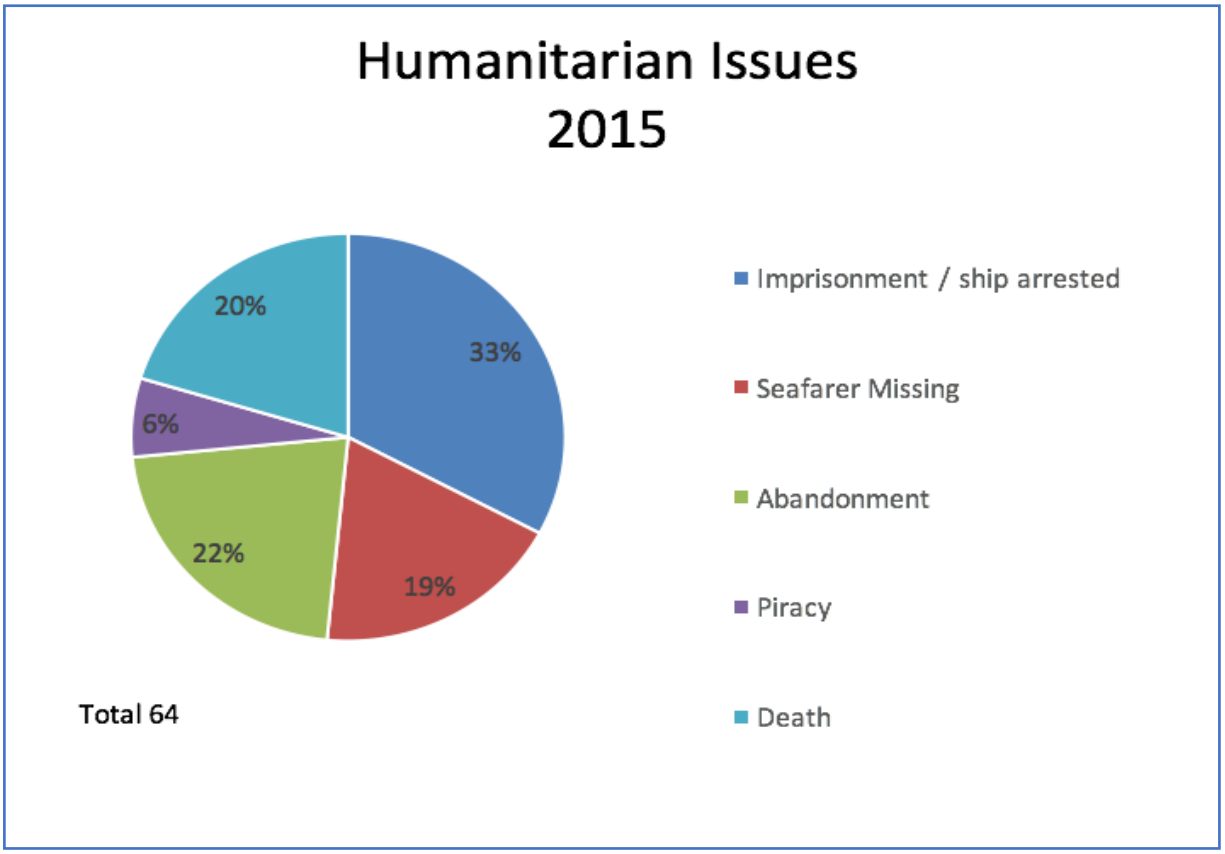
Findings

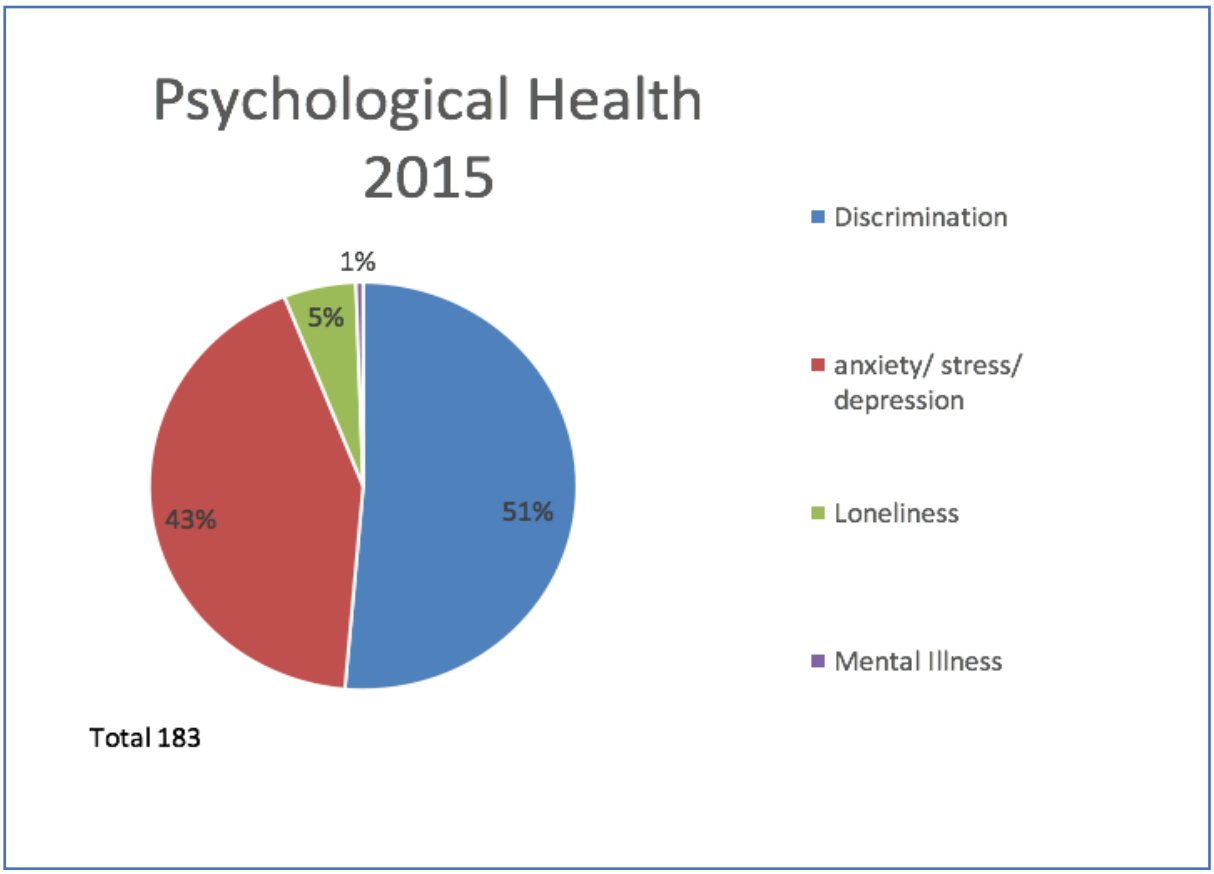
The five main categories can be seen in Pie Chart 1. Pie charts 2-6 show the percentages for the breakdown of each main category, Living Conditions, Psychological, Physical Illness and Injury, Humanitarian and Other.

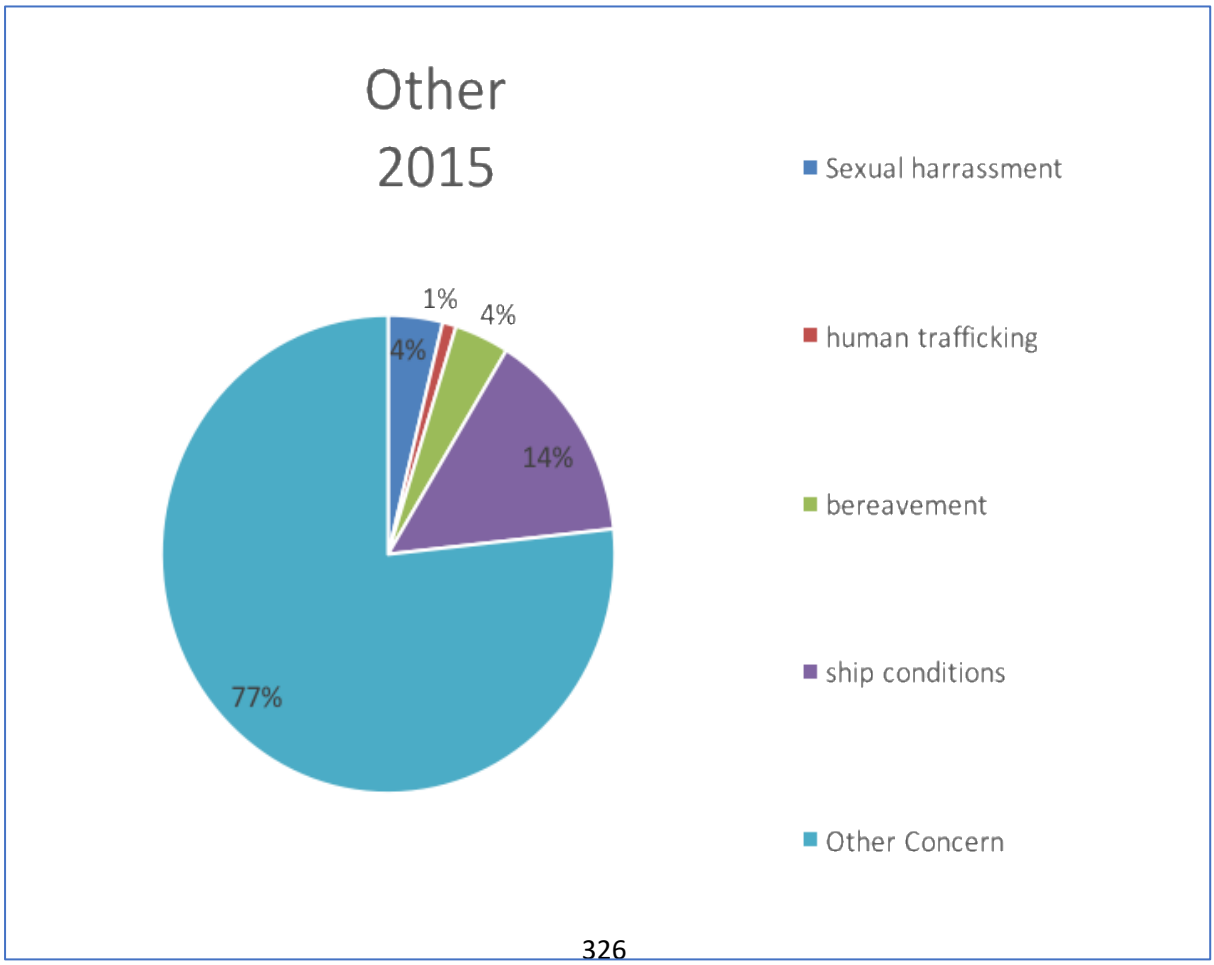

Categories of Health and Well-Being 2015
16%
34%
10%
11%
29%
Living Conditions
Psychological
Physical Illness and Injury
Humanitarian
Other
Total 638


Physical Illness and Injury 2015
3%
3%
14%
22%
58%
Back Injury
Injury at work
Illness at work
Gallstones
Pneumonia
Hep b
Haemorroids
Kidney Stones
Malaria
Cancer
Total 69

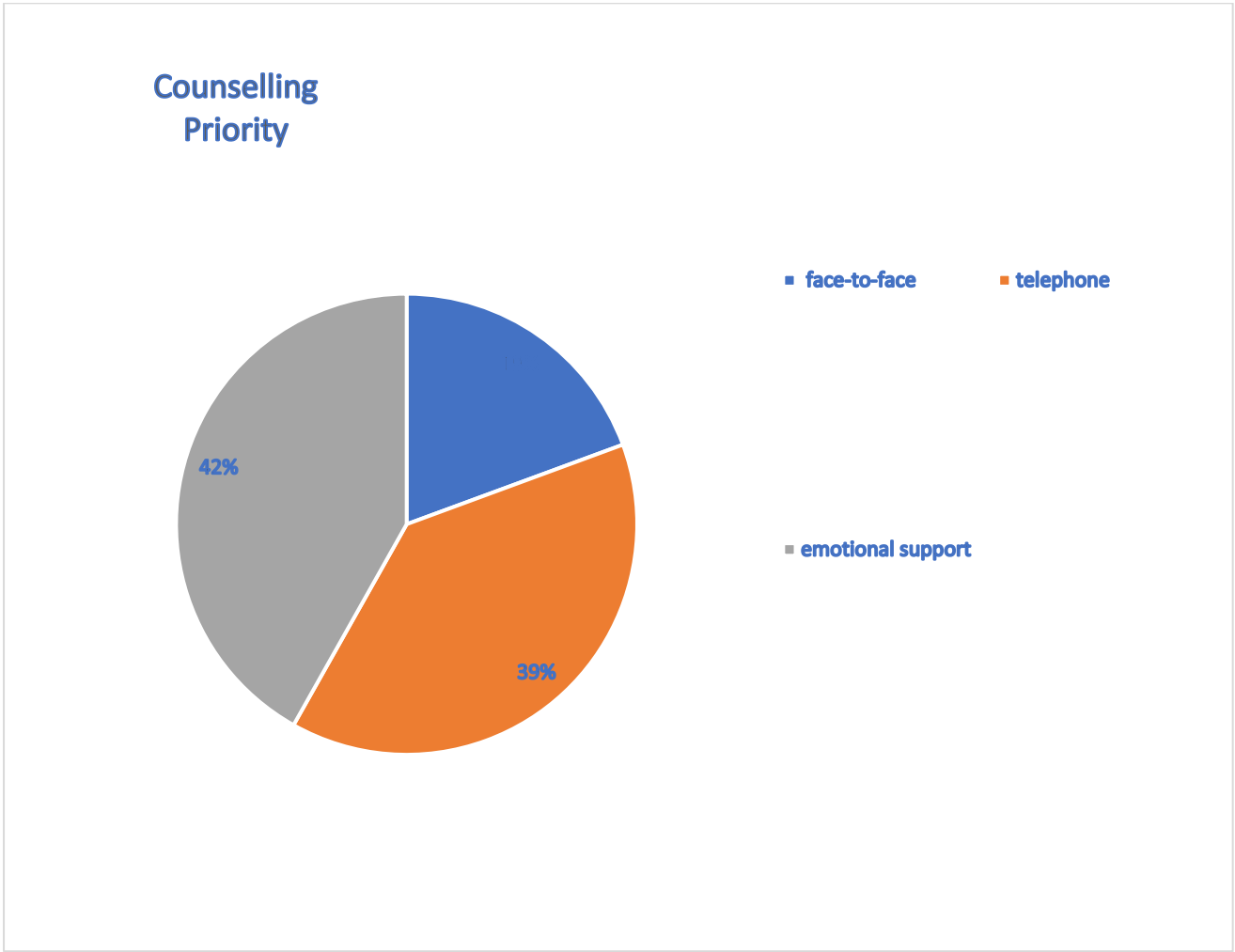

Living Conditions 2015
6%
27%
21%
14%
21%
8%
3%
Diet
Fatigue
physical abuse
fighting
physical environment
drinking water
refused medical attention
Total 219


Humanitarian Issues 2015
20%
33%
6%
22%
19%
Imprisonment / ship arrested
Seafarer Missing
Abandonment
Piracy
Death
Total 64


Psychological Health
2015
1%
5%
43%
51%
Discrimination
anxiety/ stress/ depression
Loneliness
Mental Illness
Total 183


Other
2015
1%
4%
4%
14%
77%
Sexual harrassment
human trafficking
bereavement
ship conditions
Other Concern

In the excel spreadsheet, all cases are given a priority number 1, 2 or 3 as described above. From these priority numbers, it was felt that those that received a priority 2 were those most likely to benefit from some form of counselling intervention. For this reason, the priority number 2's were further broken down into three sub-sections. Emotional support, describes that which is currently given by the ISWAN staff themselves and for many cases this is sufficient. The 'telephone' subcategory are for those cases where it was felt a telephone counseliing service could be utilised and lastly, the 'face-to-face' subcategory for more serious cases that in the long-term would require face-to-face intervention once they are on shore (with support and guidance remotely until such a service is possible). See Counselling Chart below.



Recommendations / Interventions

- Health Promotion
- Give Priority Numbers to cases as they come in
- Caseloads for staff
- Policy of escalation for any contact with a priority number 1
- Design a knowledge base
- A means to support whistleblowers
- Collaboration with other organisations / agencies

Health Promotion

We know from research that promotion that is:

- Tailored – focused on one persons' needs

And

- Targeted – focusing on a group of people in a homogenous group

Is far more effective than a generic approach

The health needs that emerged from data analysis could be targeted using health promotion, particularly in relation to the big 4! The "big 4" behaviour's targeted in health behaviour change are; diet, exercise, smoking and alcohol consumption. Given that ships are "dry", and diet is out of their control, it is recommended that health promotion material concentrate on either smoking and / or exercise. Given that stress and anxiety are well-documented as having a negative impact on health and well-being, exercise, to reduce stress as well as promote physical health is therefore recommended as the priority for health promotion materials. There are various apps that are free to download with an evidence base – e.g. 7- minute workout. These could be signposted on the ISWAN website as well as stress relieving apps and websites such as mindfulness, meditation.

Assign priority numbers / staff caseload

- Is there the capability to add a priority number at the time of contact?

- Assign staff a caseload – giving full-time staff priority 1 cases and staff that are not full-time allocated priority 2 or 3 depending on hours / capabilities etc. Assign a member of staff to certain cases of concern - so they are responsible for following the case for seafarers at high risk (no 1) - technology allows ships to be tracked and ISWAN have the directory of chaplains in each port to provide some assistance.

- Follow up on referrals to ITF – what is being done? Who is doing it? Has the seafarer's issue been resolved?

- To provide information and research and send link to seafarer – given their limited time and access to wifi.

Escalation

- What happens to cases that are a priority number 1?
- What are the criteria for escalation?
- Are staff consistent in escalating cases?

Design a Knowledge Base

- As a query comes in regarding a procedure or policy and call receivers are researching for a seafarer, create and knowledge base where this information in stored and easily accessed next time a seafarer enquires.
- Provide links - this saves time for seafarers with limited internet connection and free time.
- Advice on high risk areas – all calls referred to ITF
- Policy on cleaning a slug tank and ventilation

Whistleblowers

- Giving seafarers a voice to report an incident and / or person without fear of reprisal or being blacklisted.
- Issues around, bullying, discrimination, security, environmental issues, mistreatment etc.
- Utilising Technology – ISWAN website?
- Long-term goal – mobile app?
- In collaboration with others e.g. ITF Seafarers Trust.

Collaboration

High percentage of calls referred to ITF – what other organisations can be involved in collaboration? Who does ISWAN currently collaborate with?

- Amnesty International – emergency cases / humanitarian
- Interpol – for criminal activity and security issues at sea
- Greenpeace – dumping of oil / environmental issues
- MI6 – security concerns – illegal firearms
- Port Health – bring ships to the attention of Port Health
- Chaplains
- ITF – follow up on cases and someone take ownership of cases. Regular meetings with ITF to ensure good practice.

Recommendations and interventions will hopefully give some food for thought. There are question marks against some of the recommendations as this may be something that ISWAN already do that I am not aware of.

End of Report.

Invoice

[redacted]

Tiffany Palmer

1st August 2016

Invoice

Consultancy Report - Establishing health and well-being needs of seafarers. ISWAN

Objective	To analyse data for the ISWAN helpline for the year 2015. Examining patterns and themes in the data to establish health and well-being needs of seafarers. (To re-run work carried out last year examining data for the period of 2014).
Completed	1st August 2016
Fee	[redacted]
Bank:	Santander
Sort Code:	[redacted]
Account No:	[redacted]

Email Feedback

From: [redacted] **Subject:** RE: Consultancy Complete

Date: 11 August 2016 08:27 **To:** Tiffany Palmer tiffpalmer@me.com, Roger Harris [redacted]

Cc: Roger [redacted]

Hi Tiffany

Many thanks for this, it is a good, thought provoking piece of work and I can see that you have put a lot of effort into it.

I have read it once but need to read it again and have a good think and talk about the issues it raises. I think there are some very helpful points you have picked up on and suggestions you have made.

We would like you to give a presentation of this to the team, but we have quite a few on leave at the moment so I will get back to you to arrange a date.

Once again, many thanks for this, it is a good piece of work. Regarding your invoice, I have asked Angie to arrange payment. Very best regards.

[redacted] Head of Operations ISWAN (International Seafarers' Welfare and Assistance Network) Tel: +44 (0) 20 8253 0160 Web: www.seafarerswelfare.org 3rd Floor, Suffolk Hse, George Street, Croydon, Surrey, CR0 1PE, United Kingdom.

SECTION C5

TEACHING & TRAINING COMPETENCY

Contents

TEACHING EVALUATION

5.1 Plan and design training programmes that enable students to learn about knowledge, skills and practices in health psychology

- 5.1a Assess training needs
- 5.1b Develop the structure and content of health psychology training programmes
- 5.1c Select appropriate training methods, approaches and materials

5.2 Deliver training programmes encompassing knowledge, skills and practices in health psychology

- 5.2a Facilitate learning in health psychology

5.3 Plan and implement assessment procedures for training programmes in health psychology

- 5.3a Select and implement appropriate assessment methods
- 5.3b Produce records or progress and outcomes

5.4 Evaluate training programmes encompassing knowledge, skills and practices in health psychology

- 5.4a Evaluate the outcomes of training programmes in health psychology
- 5.4b Identify factors contributing to the outcomes of training programmes
- 5.4c Identify improvements for the future design and delivery of training in health psychology

Reflective Commentary

References

Appendix

- Module Aims and Objectives
- Case Studies
- Lecture Plan
- Additional Comments from Student Feedback Forms
- Original Student Feedback Forms

CASE STUDY PPT LECTURE & TEACHING VIDEO USB

Case Study and Teaching Plan

The aim of this case study and teaching plan is to illustrate how I have gained sufficient experience to fulfil the learning outcomes for the Teaching and Training Competency of the Professional Doctorate in Health Psychology. I chose this particular case study, as it was the third in a series of four lectures to the same cohort of students. Having had previous experience with this particular group, I was able to reflect on this and plan my lecture, with a more accurate assessment of their training needs and ensure I met their learning objectives. The students were third year undergraduates from London Metropolitan University. They were a mixed cohort from two courses; BSc Psychology and BSc Psychology and Criminology on a shared module of "Clinical and Health Psychology" (Module Code PC6006) and the lecture was entitled “Health Across the Lifespan”. This lecture focussed on two significant health behaviours: obesity in children and alcohol in adolescents and into adulthood. This case study describes how I evaluated training needs, designed and developed the structure and content of a health psychology lecture and selected appropriate training methods, approaches and materials in relation to this lecture.

5.1a **Assess Training Needs**

Assessing training needs was conducted by referring to the course booklet, in the first instance, for the module of "Clinical and Health Psychology" (Module Code PC6006). This lecture met the training needs and was related directly to the aims and learning outcomes of the module. See Appendix.

Since this was the third in a series of four lectures, I already had a good rapport with students and had some insight into their levels of knowledge, interaction and engagement. There were

students in the class that had a good grasp of health psychology and the main models of behaviour change, however there was a large proportion of the group for whom this information needed consolidating. I was mindful that I needed to incorporate previous learning into this lecture to remind students of health psychology models and applications to consolidate their knowledge.

A proportion of students in this cohort were less interactive and largely overshadowed by more outgoing members of the group. I was aware in the previous two lectures that these students worked better in small group tasks. In the first and second lectures of the series, I had included 1 group task throughout the 2-hour lecture, however, given the size of the overall group (between 50-70 students), I tailored my third lecture with a group activity in both the first and the second half of the lecture, giving the quieter students the opportunity to engage and interact with their peers. During this time, I moved around the room ensuring that all students were actively taking part and spending more time with those groups that I felt needed encouragement. One of my key strengths is being mindful when students are not engaging or appear to be feeling uncomfortable. I address this by encouraging participants without being forceful or intimidating. This lecture enabled me to demonstrate how I have developed as a practitioner, reflecting on previous experience, tailoring information to the needs of the group, and designing a lecture that encouraged the less extrovert students to interact and engage.

5.1b **Develop Structure and Content**

Research suggests that preparation is essential to delivering a successful lecture, and that students are more positive in their learning when they believe teaching material directly meets

their learning needs and objectives (Domizio, 2008). I volunteered to teach various lectures to third year undergraduates. I had a minimum of 3 weeks to prepare for the four lectures I had agreed to deliver. The focus of this case study is the third lecture I delivered “Health Across the Lifespan”.

In previous lectures, it became apparent that students were quite anxious about the assignment for this module, which required them to complete a case study designing a health intervention. See Appendix. For this reason, I tailored my lecture to address their learning needs. Since the assignment gave students the option of two case studies to choose from, the lecture lent itself to being tailored to these case studies. I split the lecture into two halves, being mindful that the title of the lecture was "Health Across the Lifespan" and therefore tailored each half of the lecture with the aim of addressing two health issues at different stages in the lifespan.

The first session looked at the complex issue of obesity in childhood, with a strong focus on the biopsychosocial model of health. The second half of the lecture focused on alcohol in adolescents and in adulthood, with reference to different social cognition models, whilst being mindful of social and culture factors that influence health behaviours. This allowed me to cover the criteria for the lecture requirements, whilst tailoring the two halves of the lecture to each of the case studies for their assignment.

A previous lecture with this cohort of students had focussed on social cognition models and self-efficacy in particular. When discussing obesity in childhood, I referred back to the lecture on self-efficacy. Students were reminded to consider self-efficacy when thinking

about designing an intervention with the patient group in the case study they had chosen. This helped me to assess how much students had retained from previous lectures and how well they could apply previously learnt knowledge in a different setting. When developing content and structure, I felt it was important to illustrate how concepts link together, and demonstrate cohesion between health psychology theory and application, hence reflection on previous learning was an integral part of the lecture.

5.1c **Select Appropriate Training Methods, Approaches and Materials**

Careful consideration was given to the teaching approach I chose, being mindful of adhering to the 6 features commonly subscribed to in andragogy; need to know, foundation, self-concept, readiness, orientation and motivation. On examination of adult learning theories an experiential approach was adopted as the most appropriate theory fit for purpose, that is "learning through doing" (Kolb, 1984). Consideration was given to Jarvis's Learning Process and Adult Learning Theory, (Jarvis, 1995), however, this learning theory relies heavily on learning from experience. Since the students I was teaching were undergraduates with very little, if any, work experience in the real world, this learning theory was not best suited to this cohort of learners. I selected Kolb's experiential learning theory (ELT) as the basis for my lecture design. See Figure 1.

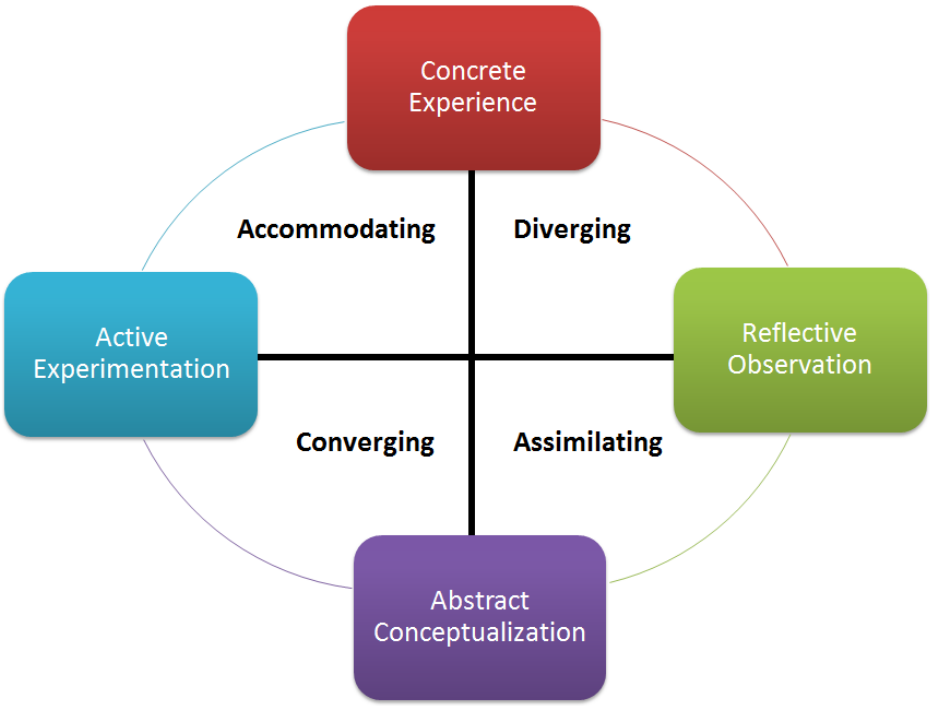


Figure 1. Kolb's Model of Learning.

As Kolb incorporates learning styles with a four-stage learning cycle, it covers the fundamentals of helping others learn and is widely used and respected. Given the large group of students I was teaching (70) it was anticipated that there would be a substantial number from each of the categories of learning style.

Adopting Kolb's model of "learning by doing" served more than one purpose:

1. Introducing two group tasks during the lecture, enabled me to address issues in each of the case studies for the assignment and therefore tailor the lecture content to students' needs.
2. Considering that the time of the lecture was post-prandial (after lunch), it was important to ensure that active participation was present throughout the lecture, to keep students engaged and interested.

3. Reflecting on previous lectures with this cohort of students a proportion appeared shy and engaged more in smaller groups. Therefore, I introduced two group tasks into the lecture, enabling those quieter members of the group to be involved and consolidating students' learning "by doing".

I designed a comprehensive slide presentation using PowerPoint, covering the aims and objectives of the lesson plan. See Appendix pg. 38. I requested previous lectures from the London Metropolitan psychology department, to ensure I had covered the content of previous lectures and that the appropriate theory and research was evident in my lecture. The lecture design included material to cater for the different learning styles; theorists, reflectors, activist and pragmatists (Honey and Mumford, 1982), and incorporated a variety of teaching materials to meet the needs of each group of learning styles including; group exercises, group discussion, PowerPoint presentation, YouTube clips and individual exercises which provided opportunity for quiet reflection. After some tweaking of my content and order of my slides, I was pleased with the content of my lecture, but was aware that I needed to work on the delivery. I therefore spent time practising on my delivery at home, ensuring I spoke loudly and clearly and kept eye contact with my audience (using a mirror). Students were able to download the lecture slides from the University's intranet, Weblearn, two days prior to the lecture. The slide presentation provided the main structure of the lecture, (See PowerPoint presentation submitted on USB device), and was used in group discussions and individual exercises, with questions and points for consideration. This gave students a reference point and reminded them of their own self-efficacy. I selected appropriate training methods, approaches and materials for accommodating the different learning styles in order to meet students' learning objectives. See the teaching evaluation below for more details (Pg. 355).

5.2a **Facilitate Learning in Health Psychology**

On the day I delivered each of the lectures in the series, I arrived early to ensure I was well prepared. I set up the guidelines for engagement, such as the use of mobile phones etc. The lecture was delivered using the teaching plan in order to ensure I met with the learning aims and objectives. See Appendix, pg.363. I encouraged students to initiate discussion in order to generate conversation and consolidate their learning.

I began the lecture using an icebreaker "Which one is the lie?" and in groups of 2 or 3, asked students to tell their peers two truths about themselves and one lie, I facilitated learning by joining in myself. Students were required to speculate about what statement was untrue, based on what they knew about their partner and what they expected to be true. This exercise linked well to the topic "Health Across the Lifespan" and students agreed that people did not meet with their expectations. This was a good illustration of how people change throughout their lifespan and as an introduction to the topic.

In the first half of the lecture, the group task required use of the internet and any resources available. Working together, the aim was to establish search criteria, and carry out a literature search, to find articles examining the impact that obesity has on children, in the short-term or the long-term. I anticipated that the students would find this exercise challenging, and throughout the duration of the task, I asked them to reflect on their own general self-efficacy. The previous lecture I had given them, "Personality and Health" had focussed quite heavily on self-efficacy and we had examined the evidence on how high or low self-efficacy can impact performance on a task. I asked students to now reflect on that lecture, whilst undertaking the group task, and to think of the various ways we had researched (in the previous lecture) to

increase self-efficacy. Students reported verbally that just by being mindful of their own self-efficacy, they felt it increase, and how the reflection from their previous learning, helped to put the concept into reality, and enabled them to adapt their approach to the group task.

The previous lectures I had given, had a strong emphasis on the biopsychosocial model of health. Students indicated that they had a good understanding of the biopsychosocial model, however, in a previous lecture, students had been asked to design an intervention using a case study. From this task, I became aware that although students claimed to have a good grasp of the model, in practise they designed interventions with no consideration, or mention, of the many aspects that impact behaviour change, e.g.; SES, social support, living conditions. For this reason, whilst planning my lecture, I found a resource to demonstrate the significance of the biopsychosocial model. The YouTube clip by MoreLife, (the weight management and health improvement programme in the UK), showed a glimpse into the lives of families living with the challenges of a child with obesity, and the obstacles and real-life barriers to changing behaviour (MoreLife, 2018) .

Following the clip, many students expressed shock, at the level of self-awareness in the children, the emotion of all family members and the practicalities of adopting changes in family life. Students self-reported the frustration they felt for the parents in the YouTube clip. They felt this short clip, brought the concept of behaviour change to life, and made them think differently when designing interventions, and the significance of adhering to a biopsychosocial model of health. Since this lecture was “Health across the Lifespan”, we discussed the challenges of tackling obesity at different stage of life and how the biopsychosocial model of health provides a foundation for designing comprehensive interventions.

Students agreed that the biopsychosocial model would help in identifying needs of patients and designing interventions for people at different stages in their life. During the group task, students were required to work together on a task, then 1 or 2 members of the group would present their findings back.

Evidence supports the use of rewards as motivation (Michie et al, 2011), and I therefore offered a prize for the group that I felt had the most productive session. I offered the winning group a "healthy" (dried fruit) or "unhealthy" (rhubarb and custards) prize, and as a health psychologist I reiterated that health behaviours were a choice. This was met with humour and despite the simplicity of a simple prize, students were keen to win!

Students enjoyed the group task where they could interact with their peers, particularly when this reflected on the didactic part of the lecture. I repeatedly reflected on previous lectures, health psychology theories and models, and provided illustrations of the application of health psychology to real-life examples from my work experience. Students were engaged and interactive throughout the lecture, and as a developing practitioner, I felt I had illustrated the application of theory to practise effectively as well as facilitating students' learning in health psychology.

5.3a **Select and Implement Appropriate Assessment Methods**

The assessment for the "Clinical and Health Psychology" module, was already established and listed in the student handbook. The module is assessed via 100% coursework in the form of two equally weighted case study reports. The first case study relates to the clinical psychology

aspect of this module and is therefore not relevant here. The second case study report (50%) allows students to demonstrate independent and original thought by selecting and organising relevant material in the design of a tailored health intervention. Students were given a choice of two case studies. See Appendix. In an ideal scenario, I would have liked to set assessment methods myself, and I reflect on this in section 5.3a of the Teaching Evaluation.

5.3b **Produce Records of Progress and Outcomes**

Records of progress and outcomes were not assessed for the lecture that forms the basis of this case study. However, student satisfaction was gathered, by means of a student feedback form to collect information on the lecture overall, the lecture content, and my presentation and delivery. The student feedback form addressed these 3-question using a 5-point Likert scale. See section 5.4a in the Teaching Evaluation for a more detailed account.

5.4a **Evaluate the outcomes of the Training Programme**

Outcomes for this case study were evaluated by the submission of students' assignments and student satisfaction of teaching standards. Using the method of triangulation, I evaluated my teaching effectiveness using multiple sources; I was observed by my academic supervisor who was required to complete an observer form, I reflected on the comments from the student feedback forms, and finally, I watched myself on the video-recording and self-observed my teaching, enabling me to reflect on my strengths and weaknesses.

5.4b **Identify Factors Contributing to the Outcomes of the Training Programme**

On reflection I was very pleased with my lecture and the feedback I received. Being the third in a series of four lectures - this greatly contributed to the outcomes. Knowing the students and having a rapport with them, enabled me to plan and prepare effectively to ensure their learning needs were met. The lecture met the needs of the various learning styles as identified in Kolb's model, using a mix of learning approaches. The feedback from many of the students was that I was approachable, I had a good delivery style and students commented that they particularly enjoyed the two group tasks. Contributing outcomes will be discussed further in the Teaching Evaluation, section 5.4b.

5.4c **Identify Improvements for the Future Design and Delivery**

Improvement for the future design and delivery would be to introduce an informal assessment at the end of the lecture, rather than just the assessment for the module as a whole. This would need to be student-led and interactive and could be achieved, for example, by designing a game with two teams. By creating an environment whereby students could reinforce each other's learning and be given an opportunity for them to reflect on their own, could be extremely effective, while being mindful of those in the group that are shy and reserved.

Teaching Evaluation

The aim of this teaching evaluation is to illustrate how I have gained sufficient experience to fulfil the competency learning outcomes for the Teaching and Training Competency of the Professional Doctorate in Health Psychology. For the purpose of this assignment I have chosen to evaluate a series of four lectures to the same cohort of students. The students were a large group (70 students) of third year undergraduates at London Metropolitan University. They were a mixed cohort from two courses: BSc Psychology and BSc Psychology and Criminology on a shared module of "Clinical and Health Psychology" (Module Code PC6006). The lectures were from the Health Psychology section of the module and included Health Promotion, Personality and Health, Health Across the Lifespan, and the final lecture was coursework support. Having the opportunity to teach a series of lectures, allowed me to reflect and develop as a health psychologist, and hence my rationale for choosing this series of lectures for this assignment. This teaching evaluation examines how I; selected and implemented appropriate assessment methods, produced records of progress and outcomes, evaluated the outcomes of the training programme, identified factors contributing to the outcomes of the training programme and identified improvements for the future design and delivery.

5.1a **Assess Training Needs**

The series of lectures that I agreed to teach ran over March and April 2017 and I had sufficient time to plan lectures in line with the learning objectives. In the first instance, I examined the learning needs in the module handbook, so I was confident that I was lecturing in line with the course requirements. Throughout the series of lectures, as I built a rapport with students, they were inclined to engage more and ask questions and as a result, this enabled me to establish

their learning needs. The second, third and fourth lectures, were therefore developed from assessing students' training needs in the first lecture and this was built upon throughout the series.

5.1b **Develop Structure and Content**

Teaching a series of lectures to the same cohort of students, provided me with an opportunity to develop structure and content with cohesion. Cross-referencing from previous lectures, and building on knowledge, I was able to develop students thinking, encouraging them to reflect, and continuously assess their learning needs throughout the process.

Using my experiences from my working life, I was able to bring in experiences and anecdotes from other areas of psychology and professions, emphasising the significance of collaboration and personal limitations. Structure and content throughout a series of lectures needs to link together, tying in theory with practise, to give students a rounded view of health psychology as a profession, and not just an assignment.

5.1c **Select Appropriate Training Methods, Approaches and Materials**

Kolb's experiential learning theory (ELT) was adhered to for all of the lectures in this series. Please refer to the case study above, for rationale and justification. The inclusion of the group task in the first two lectures represented the "concrete experience" part of the model. Reflection on the first two lectures, made me mindful that during this time, the level of engagement increased, particularly with the quieter members of the group. For this reason, two group tasks were included in the third lecture, which was examined in detail in the above case study.

Teaching a series of lectures, therefore enabled me to, to select and *adapt* appropriate training methods and materials, and the positive feedback both written and verbally reaffirmed that it was effective. In all lectures, it was after the group task, that students were more relaxed, and I felt they were more engaged and interested. In particular, students enjoyed hearing the application of health psychology to real-world examples. I demonstrated well the scientist-practitioner approach, by giving illustrative examples of the application of theory in practice. I felt I selected appropriate training methods, approaches and materials for accommodating the different learning styles and meeting students' learning objectives.

5.2a **Facilitate Learning in Health Psychology**

Facilitating learning in health psychology was largely achieved by adhering to the following techniques I have developed as an educator.

- Planning lectures by staying close to the aims and objectives in the module handbook.
- Adopting appropriate teaching theory and models to accommodate all types of learners, and adapting them, if necessary.
- Reflecting and cross-referencing on previous lectures.
- Reminding students throughout, of significant concepts, such as biopsychosocial model of health / self-efficacy.
- Being mindful of students not engaging / feeling shy and adapting sessions to encourage them to take part.
- Demonstrating examples from real-life experiences of applying theory to practise.
- Illustrating the essence of collaboration with other professions, and the significance of accepting your own limitations

- Making lectures fun and interesting, with key take home messages that are not too theory heavy.

5.3a **Select and Implement Appropriate Assessment Methods**

Assessment for this module, as for the case study above, was already set out in the student handbook. Students were required to use their learning from the lectures to design a health intervention for their chosen case study. The outcome of the assessment would contribute to their meeting the learning objectives for the module, and successful completion of the course. I was therefore, not required to formally assess students, however throughout the 4 lectures I was continually assessing their knowledge and understanding by group and individual discussion.

After the first two lectures, it became apparent that students were anxious about their assignment. They had lots of questions and required consolidation of what was expected from them. As a result, I tailored the third lecture to incorporate the two case studies from their assignment into the group tasks, to enable students to consult with peers, use the time to refine internet literature searches, whilst having me there for support. By tailoring this lecture to the needs of the students, whilst also adhering to the learning objectives of the module, I was able to assess and adapt the follow-up workshop, to be held after the session, to suit their needs and meet their objectives.

After the lecture, I invited students to stay for a workshop directly linked to the case studies for their assignment. This section of the lecture was optional, and students were not obliged to stay. Approximately 20 students stayed for the workshop which had a loose structure and

was very much student led. Students split into two groups, depending on the case study they had chosen to use. This gave me the opportunity to spend time with each group and talk to students 1:1 with any concerns or challenges they had concerning the assignment. I was able to assess their strengths and their weaknesses and challenge their thinking, ensuring they reflected on previous lectures and learning, this is a strength that continues to develop with experience and practice and facilitates my development as an educator.

It was apparent that the majority of students understood the necessity for health psychology theory and models, but when it came to using these to plan and design an intervention, many of them were unable to use a model to inform their design. By assessing their understanding, I was able to use the workshop to give concrete examples from experience, answer questions, and give them short cases to practice with each other in the workshop - increasing their self-efficacy around using health psychology theory in practice. I produced 1 overhead slide, using PowerPoint, with points for discussion. See Figure 2 below.

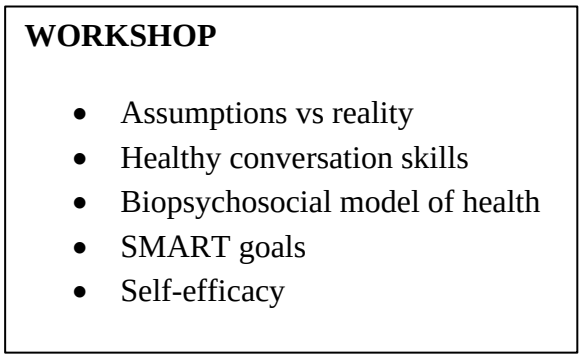


Figure 2. PowerPoint Slide for Workshop

The points on the PowerPoint slide were there to promote discussion.

- Assumptions vs reality – I ensured that students reflected on their own thinking and were aware of assumptions they may make about people and situations. We referred back to the YouTube link and the illustration of real-life challenges. We talked about "bracketing" our own opinions and trying to be objective when assessing patients and designing interventions.
- I introduced healthy conversation skills to the students (Black et al, 2014) as there is growing evidence that communication is vital in motivational interviewing (Miller & Rollnick, 2012) when establishing patients' needs and that healthy conversation skills are becoming good practice across the NHS. I was mindful that students were BSc and not MSc students, therefore I introduced this concept briefly and since this was a smaller group than the original lecture, was able to assess from self-reporting, whether students understood the concept and how they could use this information and apply it to their assignment.
- We reflected and reviewed the biopsychosocial model of health, throughout all lectures and the workshop, and I was able to assess students understanding by asking them how they would apply this knowledge to their assignment.
- Many of the students knew about SMART goals, but for those that didn't, I encouraged them to research them during the workshop and take the opportunity to discuss with peers and ask me any questions. Students enjoyed this part of the workshop and had constructive conversations about how they would apply SMART goals within an intervention design.
- Self-efficacy as previously discussed, was referred to in the lecture and reflected on, throughout the workshop. We talked about self-efficacy in relation to the patients in the case studies, as well as our own general self-efficacy as health professionals (Bandura,

1982). Students had animated discussions and challenged each other on their opinions. I was able to ascertain that all students had a good grasp of self-efficacy and were developing in their learning by reflecting on their own, throughout the task.

5.3b Produce Records of Progress and Outcomes

Records of progress and outcomes were set by the module leader in the shape of the assignment. I was, therefore, not required to produce records of progress myself. However, though formal assessment for each lecture is not a necessity, informal assessment of students' knowledge would have provided me with a gauge of students' comprehension of health psychology, and its application to designing interventions and wider public health issues.

That is not to say that students' progress was not monitored at all. Discussions, group work, and question and answer sessions, enabled me to assess students understanding, however this was established by verbal means, and therefore some members of the group contributed more than others. Research suggests there are many ways to informally assess adult learners such as observation, grading, quiz, written feedback and multiple-choice tests and that these methods can increase motivation (Wlodkowski, 2008). Reflecting on this, I could have informally recorded progress and outcomes in a fun and engaging way, such as with a quiz or game. This would have enabled me to ascertain whether students had met their learning objectives, and illustrated the gaps in their knowledge, prior to them completing the assignment for the module.

5.4a Evaluate the outcomes of the Training Programme

Evaluating the outcomes of the training programme was measured by evaluating the effectiveness of my teaching and student satisfaction. The student feedback forms relate to lecture 3 only, and on reflection I could have provided feedback forms for every lecture, or at least the first and last lecture I gave. Throughout the series of lectures, I received very positive verbal feedback from students, thanking me, and telling me how much they had enjoyed, and gained from them.

Adhering to the approach of triangulation, I evaluated my teaching effectiveness using multiple sources:

- I was observed by my academic supervisor who was required to complete an observer form.
- I reflected on the comments from the student feedback forms.
- I watched myself on the video-recording and self-observed my teaching, enabling me to reflect on my strengths and weaknesses.

I designed feedback forms as part of the method of triangulation on my teaching performance. Students were asked to rate the lecture on three criteria:

1. The lecture content met the learning objectives and was relevant.
2. The lecturer presented well and was engaging.
3. Overall rating for this lecture.

The student feedback form addressed these 3 questions using a 5-point Likert scale. Results can be seen in table 1.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The lecture content met the learning objectives and was relevant	15	6	1		
The lecturer presented well and was engaging	16	5	1		
	Very good	Good	Neutral	Poor	Very poor
Overall rating for this lecture	15	5	2		

Table 1. Student Feedback Summary

The form had a section for “Additional Comments” in which students could chose to comment if they wished, and most students did. See Appendix.

Lastly, I watched myself on the video-recording and self-observed my teaching, enabling me to reflect on my strengths and weaknesses. There are times when I appear nervous, but not to the extent that I was feeling nervous and I do not feel that my nerves are evident from the video.

I am clearly spoken, succinct, engaging and am able to reflect on previous lectures and health psychology theory in conjunction with real-life experiences.

5.4b Identify Factors Contributing to the Outcomes of the Training Programme

There were a number of factors contributing to the positive outcomes of the series of lectures.

- Simple housekeeping rules, such as expectations regarding mobile phones / laptops.
- Ice breakers helped to relax myself and the students.
- Using real-life examples from my work throughout all lectures, putting theory into context.
- Adhering to the teaching plan to ensure I met with the learning objectives.
- Using group work to enable more shy members of the group the opportunity to take part (particularly in such a large group of 70).
- Encouraging questions and comments throughout the lecture to keep the sessions interactive and consolidate learning.
- Giving students quiet moments for reflection.
- Demonstrating the overlap between disciplines and the significance of collaboration.

Above is a list of the key factors contributing to the success of the series of lectures taught to third year undergraduates. The key tenet of my approach was engagement. I encouraged students to speak out during the lecture if they wanted to contribute or had a question, used techniques to facilitate their learning such as group tasks, icebreakers, and quiet moments for reflection. This enabled students to be active and take ownership in their learning (Chan et al, 2014).

5.4c Identify Improvements for the Future Design and Delivery

In order to improve future design and delivery, I would implement informal assessment at the end of a lecture as described above in the case study. Secondly, I would try and control my nerves by holding index cards with notes on, rather than relying on the notes on the computer screen, and therefore allowing me to move around the room more freely.

Overall, I was extremely pleased with my fulfilment of the teaching and training competency for the Qualification in Health Psychology (Stage 2). I have developed and grown as an educator and I am aware of my strengths and weaknesses. I feel effective and competent in evaluating training needs, designing and developing the structure and content of a health psychology lecture and selecting appropriate training methods, approaches and materials. I look forward to continuing my development as an educator and teacher, under the umbrella of a chartered health psychologist.

Reflective Commentary

This reflective commentary is based on 10 minutes of a lecture given to third year undergraduates from London Metropolitan University. The video material has been submitted to the external examiner on a USB device along with this write-up. This was the third in a series of 4 lectures with the same student group and supports the case study and teaching evaluation also submitted.

The lecture was entitled "Health Across the Lifespan" and the section of the lecture was from 9 - 19 minutes of the second half of the lecture. The topic for this lecture lent itself well to

incorporating the material relevant to the two case studies students had been given for their assignment. This lecture was divided into two halves, the second half focused on alcohol, adolescents and adults.

The video was an opportunity to observe myself and reflect on both the positive and negative aspects of my teaching. Overall, I was pleased with the lecture and felt it went well, which was also reflected in the feedback from students. See Appendix 3. However, there were elements that on reflection could be improved. From the video, myself and the PowerPoint slides can be seen, though there is no recording of the audience to observe their engagement and body language. I made the decision not to record the students as I didn't feel that this would be appropriate, however on reflection I could have asked them if they minded, and this would have given me a more comprehensive recording to reflect on.

From the video, I appear well-dressed and professional in my manner. I speak clearly and with enthusiasm and I am engaged in what I am talking about. I do, however stumble on the odd word, which due to nerves appears to be because I am talking too fast. In future, I will encourage myself to take short pauses (maybe by having a drink of water) to slow down my pace, give emphasis, and stop me tripping over my own words.

Throughout the video, I stand by the computer to the side of the screen so that the slides are clearly visible to the audience. In previous lectures I had used index cards with handwritten notes to enable me to walk around. However, since this was my third lecture with these students and I felt I had a good rapport with them, I wanted to lecture without holding notes but to have my hands free. I therefore had a few notes as prompts, which were on the

computer screen on the desk. I, however, did not feel comfortable moving away from the screen and therefore stood behind the desk the whole way through the lecture. In future, I will go back to handwritten notes on index cards as I felt more relaxed when I could move around the room and felt more engaged with my students.

I set students up with a group task, they were required to practise their research skills, and each find, read and summarise an article, on an intervention for alcohol dependency. I had a PowerPoint slide with instructions for the task which I put on the screen, however, on reflection I think my verbal instructions could have been more comprehensive and used the slide for reinforcement only.

I was aware from previous lectures with this student group that many of them were pursuing a career in neuroscience or neuropsychology, I therefore introduced a few slides on neuropsychology from my previous MSc that overlapped well with this lecture material, and was a good illustration of the overlap between different disciplines in psychology. Written feedback from students was very positive, and verbal feedback from students after this lecture was overwhelmingly positive.

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Module Aims and Objectives for third year undergraduate students on Module "Clinical and Health Psychology" (Module code PC6006).

Module Aims
This module introduces students to Clinical and Health Psychology as applied area within the discipline to allow informed and realistic decisions about further education and training in clinical and health psychology. The module aims to critically appraise key perspectives and approaches to clinical and health psychology as well as to evaluate diagnoses, explanations and treatments that are applied to a range of physical and mental disorders. Students will have the opportunity to investigate the role played by physiological, psychological and social mechanisms in the causation and treatment of physical illness and psychological disorders. Students will gain experience in constructing case reports thus providing an additional transferable skill for future employment.

Module Learning Outcomes
On successful completion of this module students will be able to: Critically appreciate the basic principles of diagnosis, assessment, formulation and treatment planning for a range of mental disorders. Discuss the conceptual and evidential basis for explanations of physical and mental disorders. Demonstrate understanding of major theories in clinical and health psychology and apply these to real-world issues. Evaluate the role psychology plays in health promotion and illness prevention.

Case Studies for third year undergraduate students on Module "Clinical and Health Psychology" (Module code PC6006).

1. *Jeremy is a 62 year- old divorced father of three children who have grown up and moved away. He was made redundant from a major Law company several years ago, he now lives alone in a council paid flat in receipt of incapacity benefit. He is currently drinking heavily in his home every day (currently around 160 units per week). Jeremy begins drinking when he wakes at around 11am and continues until he passes out in the chair at around 2am. Jeremy smokes 30 cigarettes a day, he does no exercise and has become progressively more reclusive, depressed and isolated from friends and family.*

2. *Zak is 10 years old and lives with his mother and 2 older brothers. Zak was diagnosed as obese. He refuses to go swimming and tries to avoid PE. His mother works full time and she is a single parent and often needs one of the older boys to baby-sit especially on Saturdays when she is at work. He plays a lot of computer games at home. Zak seems to be getting more unhappy and withdrawn.*

Lecture Plan: Health Across the Lifespan (2 hours) plus Workshop (1 Hour)

Audience	**Size of Group**
3rd Year BSc Psychology & BSc Psychology and Criminology	50-70

Learning Objective

By the end of the session students will be able to:

Understand how health issues impact at different stages of the lifespan.

Understanding the biopsychosocial model of health when working with a patient and planning an intervention.

An understanding of health inequalities and diversity.

Understanding the significance of tailoring a health intervention to a patients' needs.

Learning Outcome	**Time**	**Activity**
Introduction, housekeeping, aims and objectives	5 minutes	Slides 1 - 2
Understanding and defining childhood obesity worldwide, across Europe and within the UK.	15 minutes	Slides 3 - 11
Inequalities in health	15 minutes	Slides 12 - 15
The biopsychosocial model of health	5 minutes	Slides 16 - 18
Group Task	20 minutes	Slides 19 - 21
Break	10 minutes	Slide 23
Impact of alcohol	10 minutes	Slides 24- 31

Binge drinking and the risks	5 minutes	Slides 32 - 35
Adolescents and risk taking with introduction of neuropsychology	15 minutes	Slides 36 – 40
Problem drinking in later life	5 minutes	Slides 41 – 44
Alcohol expectancies	5 minutes	Slides 45 – 47
Group Task	20 minutes	Slides 48 – 50
Workshop	1 hour	Slide 51

Additional Comments from Students' Feedback Forms

- Very approachable person.
- Good and challenging group activities.
- More information on theories and effectiveness of interventions currently used to prevent obesity / alcohol use.
- Great lecture.
- Lecturer is very encouraging and talented in drawing the correct and objective impression on any subject.
- You're a very good lecturer. I like the way you explain things. Also, thank you for recording the lecture, very helpful. I also liked the group task.
- More specific for details on health interventions.
- Enjoyed the use of YouTube videos. Specific details surrounding behavioural change interventions would have been useful.
- Lectures explained well.
- Very engaging and interesting.
- Reads from the slides too much.

- Very knowledgeable.
- Made lecture more interesting by adding videos.
- Great lectures.
- Lecture delivered really well.
- I liked the interactive part very much.
- Me likes sweets.
- She is an amazing lecturer. I thought after Jo and Sam, we won't meet another good lecturer. Tiffany also makes sure we engaged with each other and understand what we are studying.