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Editorial

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Since the publication of the first and second issues of the DBS Business Review, both Alan Morgan (former Editor-in-Chief) and Marie O'Neill (former Managing Editor) have moved on from these roles. Both Marie and Alan were hugely instrumental in getting the journal off the ground and then helping it achieve several significant milestones. These milestones included the journal being indexed on the Directory of Open Access Journals, the journal's inclusion on international EBSCO and ProQuest databases, expansion of the Editorial and Advisory Boards with members from universities across the globe, and growth in contributor engagement with the journal from academics, academic managers, leaders, the business sector, librarians and students. One of the last acts that Marie did for the journal was to suggest the current theme for this journal special issue edition (Psychology and Business), and the journal team and I take up that gauntlet now with this issue. I have a great debt to pay to Marie and Alan for leaving this journal in such great shape, and I hope I do not let them down in terms of reaching the high standards they set in the first two editions. Marie and Alan leave a great legacy and I wholeheartedly thank them for all their sterling work for the journal.

In the forefront of my mind when making the contributor call for this special issue is the fact that, as a psychologist myself who works in a business third-level college, who has taught business students in relation to research methods and management techniques, published articles in the marketing field (e.g. Prentice, Brady and McLaughlin, 2018) and co-authored a book on virtual leadership (Brady and Prentice, 2019), I have my own perspective on the partnership between psychology and business and the possibilities that can develop from that combination. However, to remain neutral, the call was as broad as possible with many possible psychology and business related areas suggested from which academic papers, original research, reflections, review papers, case studies, book reviews, original creative work, and interviews with key thinkers and practitioner updates could come. These suggested areas included: ethics in business; well-being in the workplace, transferable skills; occupational psychology; creativity, innovation and entrepreneurship; psychology and marketing; human resource management; leadership; psychology, technology and computing for business; workplace relations; policies/workplace laws; behavioural economics; cognition in the workplace and health promotion and psychological interventions in the workplace. The contributor submissions we received for this issue

did not disappoint, as they embraced this diverse view on the partnership between psychology and business.

After a rigorous peer review process, the accepted article submissions for this special issue focus on diverse psychology and business-related areas: former military personnel's ability to cope with work-life transition; management and administrative practices relating to nurses leaving the Irish healthcare system; the work experiences of employees with Asperger Syndrome; work-life balance and workplace well-being; psychometrics at work; the influence of promotions on consumers' purchasing decisions; and the psychological effects of workplace violence on social care staff.

What struck me most about Whelan and Feeney's investigation into the transferable skills of the Non-Commissioned Officers (NCOs) in the Defence forces was how well the participants in this study had adjusted to civilian work through application of the positive transferable skills they learnt from their military experiences. The psychological attribute-related positive transferable skills included leadership, self-discipline, self-pride, trustworthiness, and self-motivation. In order to best utilise these core skills, Whelan and Feeney make a number of recommendations to the defence forces and potential employers.

The Irish healthcare system is a major concern to the general public in Ireland and the recent Irish election underlines this with health topping the Irish Times poll on the important major issues for the Irish electorate (Leahy, 2020). Thus, Jilani's review article on nurses leaving the Irish healthcare system is timely. Amongst the various reasons for nurses leaving Ireland, including unfair compensation, occupational health-related factors come to the fore especially when implications from overwork and work-related conditions, for example burnout and stress, are discussed. This review article is a must-read for anyone trying to understand the issues effecting the state of the Irish healthcare system at this time. The conclusions and recommendations from this article offer advice on ways forward for the policymakers and management.

One of my wife's colleagues is diagnosed with Asperger Syndrome, so Julian and Barron's article has special personal interest to me. My wife's colleague has grappled with some of the key themes found in this research, for example: self-improvement and career progression, supportive work environments and workplace politics. The good news, highlighted by this article, for all those diagnosed with Asperger Syndrome, is that the diagnosis did not stop the participants in this study from having fulfilling careers.

We all need to pay heed to our work-life balance (WLB), and the issues related to it, but the Sharkey and Caska article also highlights, within this Information Age, the need for us to recognise the possibility of work-life merge (WLM) in our lives and the possible advantages and disadvantages of this phenomenon. Intriguingly, those employees working partially from their company offices and at home (WLM group) reported significantly greater levels of life and job satisfaction compared to those working solely in their company offices (WLB), which could relate to issues like frustratingly long commute times and disconnection from the family cited by some workers in the WLB

group. The ability to psychologically switch on and off from work, an issue especially if you bring your work home with you (WLM), is also explored.

A point made right at the start of Caska's reflective review paper is that psychology and business intersect when psychometric tests are used to aid decision making within organisations. This underlines the importance of psychometric tools to help organisations hire the best person for the job and pinpoint who are the best candidates for promotion. Psychologists like Dr. Barbara Caska (Selection by Design), who have formal training and qualifications in, and experience of, psychometric testing, are in a unique position to provide psychometric consultancy offerings to organisations. This reflective review paper opens the curtains to let you see the world of psychometrics and what it can offer.

You cannot talk about psychology and business without mentioning an obvious business-related area that embraces both realms, marketing. More specifically in the case of this special issue, the McPoland, Furey and McLaughlin article examines the influence of promotions on consumer snack purchasing decisions. An important emphasis coming from the findings of this article is the food retailers' obligation to recognise their corporate social responsibility where promotions are concerned, putting consumers' health before profit. To me this article has its heart in the right place.

The last thing we want is a shortage of social care workers looking after the most vulnerable individuals in our society but without the necessary staff supports this will be an ongoing problem. Within this special journal issue, Dowling and Banka shed light on major factors that lead to social care workers leaving the profession: workplace violence leading to staff stress and burnout. Even more importantly, the article's findings, implications and applications point to, amongst other things, the key protective role for effective staff self-care activities in ameliorating stress and burnout, and the need for self-care technique training.

In addition, Managing Editor, Jane Buggle, interviewed a practitioner in the business psychology field, namely, Nicola James, a chartered occupational psychologist and founder and CEO of Lexxic. Lexxic work with the public and private sector to facilitate organisations to gain greater understanding of dyslexia and neurodiversity within their workforce, allowing them to get the best from their employees. Laoise Darragh, a Library Assistant and a postgraduate psychology student at DBS, also provides a review of a book entitled "Unsafe thinking: how to be creative and bold when you need it most" by Jonah Sachs. The book review and interview are welcome additions, facilitating an expanded discourse within this special issue.

I hope you enjoy this special edition of the journal, and I would like to thank you, the reader, for your continued support. The next edition of DBS Business Review goes back to its open call for submissions from any business-related discipline.

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An Investigation into the Transferable Skills of Non-Commissioned Officers (NCOs) in the Defence Forces of Ireland (Army Only) on Retirement

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Abstract

The Irish Defence Forces currently employs approximately 8,750 personnel, with some 7,300 employed in the army. Approximately 3,139 Non-Commissioned Officers (NCOs) have changed career paths into civilian roles between the years 2000-2015. Many of these individuals found the transition from a military career to a civilian career challenging, despite having obtained some useful transferable skills. One of the most pertinent challenges has been the lack of any appreciation by employers of the range of transferrable skills that were gained by NCOs during their military careers. This paper aims to identify what transferable skills contribute to the transition from a military career to a civilian career from the perspective of a small sample of former army NCOs. The methodology consists of a qualitative study involving semi-structured interviews with key personnel who previously served in the Irish Defence Forces. The findings indicate that the range of transferable skills gained in a military career have important and timely relevance to careers in a civilian context. Recommendations are proposed in relation to how the Defence Forces might assist retiring personnel to target civilian employers and jobs.
Keywords: Defence Forces; Career Transition; Transferable Skills.

Introduction

Very little research has been carried out on career paths of Non-Commissioned Officers (NCOs) in the Defence Forces of Ireland (Army only) on retirement. The Defence Forces is a significant employer in Ireland and its training and structure develops and provides added value across a number of sectors in Irish society, including the business and voluntary sector. This research bridges the gap in this field particularly in the Irish context.

This research is important because it can establish a base line of skills and how individuals acquired them. Individuals should be capable of transferring these skills into other work places and into society at large. This paper will help to understand the experience of some NCOs transitioning from the military to civilian careers. Therefore, this research has significance because it will identify the skills gained by the individual that might be useful in transitioning to a civilian career. Military life differs from civilian life and the Defence Forces Strategy Statement (2017-2020) sums up this uniqueness through its mission statement, which states "to contribute to the security of the State by the military defence of its territorial integrity and to fulfil all roles assigned by Government, through the deployment of well-motivated and effective Defence Forces" (Department of Defence, 2018).

It is important to note at this stage that the word retirement is used as a common factor and includes all those NCOs who have left the Defence Forces. Consequently, the word retirement is used throughout this document to capture all those who are no longer members of the Defence Forces and are now civilians.

Background to the research

Between 2000 and 2015, an average of 210 NCOs retired from the Defence Forces each year. Little is known about the skills they brought with them into their civilian life or how these skills influenced their subsequent career choice. Data received from the Defence Forces clarifies why they retired in military terms, however, it does not state whether they have secured civilian employment. This research is an investigation into the experience of a small sample of NCOs in the Defence Forces of Ireland (Army only) arising from their retirement over the 15 year period 2000-2015.

The Defence Forces is a complex organisation consisting of three main formations: the Army, Navy and Air Corps, with a total establishment of approximate 8,750 personnel (all ranks). The Army is the largest formation with 7,300 personnel in all ranks. These formations consist of smaller units and sub units that hold specialist teams that allow the Defence Forces to function on a daily basis.

The Defence Forces of Ireland is similar to other organisations, in that it has a unique operating culture. However, it is very different in the way it operates and conducts its operations and day-to-day business. Every member of the Defence Forces receives training with the same ethos and every member must reach an acceptable standard to become a permanent member of the Defence Forces. A military career is full of adventure and the training for the Defence Forces is the same as all other military organisations across the world, in that it is designed to train the individual to think as part of a team in the most stressful situations and survive. The Defence Forces' uniqueness is summed up in its mission statement: "to contribute to the security of the State by providing for the military defence of its territorial integrity and to fulfil all roles assigned by Government, through the deployment of well-motivated and effective Defence Forces" (Department of Defence, 2018).

In 2012, the Defence Forces underwent a radical restructuring process with the Army moving from a three Brigade structure to a two Brigade structure. The overall strength of the Defence Forces went from 11,500 to 9,500 across all three services.

Aim of the study

The primary aim of this study is to identify the transferable skills that the individual learns during their service with the Defence Forces. This involved interviewing former members of the Defence Forces and employers to identify the skills and skills gaps, if any. The findings from this research will be used to recommend further research in the area.

Learning in the Defence Forces

Whilst the theory works within the context of the Defence Forces and other organisations, much of the knowledge soldiers learn is through a process of observed behaviour. Vast knowledge is gained by NCOs both on overseas missions and on training courses. Some of this knowledge is captured in military manuals and passed on by other instructors. However, a lot of important information that is gained as tacit knowledge is information that can only be passed on by the individual sharing the experiential knowledge with another individual (Nonaka and Takeuchi, 1995). Some of this tacit knowledge is learned through hard experience, for example, the individual may have come under fire so that shared experience is vital to the young soldier and the younger NCOs.

A military career is full of adventure, and the training for the Irish Defence Forces is the same as other military organisations across the world. The training is designed to ensure that individuals think as part of a team in the most stressful situations. The majority of personnel who enter the Defence Forces do so through the general enlistment process. Every member, regardless of his or her entry process, will have to successfully complete the initial training. The ultimate objective of all military training is to develop individuals, units and formations in order to ensure military success. Training reflects the ethos and doctrine to which the Defence Forces subscribes and is stimulating, rewarding, and inspires subordinates to achieve greater heights. A valuable by-product of good training is the fostering of teamwork and the generation of the force's confidence in commanders, its structures and procedures. It also underpins the core values of the Defence Forces, which are respect, loyalty, selflessness, physical courage, moral courage and integrity.

Career transition from the Defence Forces perspective

The prospect of leaving the Defence Forces and seeking a new career can be daunting and scary even for the professional career soldier. They have proven themselves against other soldiers across the world while on peacekeeping and peace enforcement missions and leading, training and managing our nation's youngest soldiers. They are beset with the notion they may fail as a civilian and need all the help and guidance that is available. Previous research has been carried out by former members of the military into the area of career transition of military personnel but this research was focused on the United Kingdom (UK) and the United States of America (USA) armed forces. These previous studies discuss and analyse the preparation their individual military organisations undertake in order to transit the individual from the military to civilian career (such as that undertaken by Haynie and Shepherd, 2011). There is no

policy within the Irish Defence Forces in relation to preparation or transition of army personnel to a civilian career. The transition from any military organisation can be complex, the more preparation the military do to aid the transition, the greater the chance of the individual success (Haynie and Shepherd, 2011).

There are three vital strands to the circumstances surrounding the challenge of transition from the military to a civilian career. The first is that military personnel, particularly soldiers, train to kill or not kill depending on the operational situation. The second strand is that military life offers what the Defence Forces refer in their Defence Forces Handbook (2011) as "a life less ordinary" (pp.11-13). The Defence Forces offer the individual everything they could possibly need in life: food, accommodation, sports, friendship, travel and the opportunity to bring peace and stability to different parts of the world. However, dependency on the military system that provides everything can lead to its own challenges during the transition. The third strand is the length of time an individual spends in the military organisation. An individual could, in theory, spend his or her entire adult life in the Defence Forces. That notion or comparison would be difficult to find in a civilian career.

Methodology

A qualitative approach was used for this study. Interviews were conducted with five former NCOs and two employers who are currently employing former members of the Defence Forces. All interviews were conducted in private on a one-to-one basis and all participants were forwarded the interview template in advance to allow them to focus on the research question and prepare some of the answers. The pre-interview briefing also included a consent form, giving them the option of withdrawing at any stage and confirming the data protection requirements. The interviews were digitally recorded and subsequently transcribed. All findings arising from the interviews were considered using a thematic approach. In addition to the interviews, the Defence Forces were contacted by the researcher to provide data in relation to NCOs leaving the organisation. Information received from the Defence Forces included reports and other data regarding organisational priorities. Exploring the research through the interview method was necessary given the unique nature of the content. This method has not previously been used in this context in Ireland, although it has been used in other countries.

Profile of interviewees

All of those retired Defence Forces personnel interviewed had extensive service within the Defence Forces. The average length of service was 20 years, and their experience of transition was very positive in that they all adjusted well into their new lives. During their military career, all had been overseas and had been involved in conflict situations, with the exception of participant number 5.

The two employers gave valuable information into the skillset of the former Defence Forces members they had employed or are currently employing. They identified some gaps in the required skills and discussed the difference between former members of the Defence Forces and their civilian counterparts.

Findings and Discussion

This study interviewed five retired members to ascertain what transferable skills were particularly useful arising from their military career. In order to appreciate these findings in context, Table 1 below shows each of the participant's current employment status and position:

Table 1: Current Employment Status of Participants

Name	Current employment status
1	Barrister
2	IT lecturer
3	Stunt man in the film industry
4	Head of security in an internationally-focused port
5	Recently retired from the Defence Forces and is starting a business

All participants agreed that the core skills they acquired were leadership, team working, self-discipline and self-motivation, and taking personal responsibility for their actions. Participant 3 added that a sense of pride and trustworthiness are two key skills in his current role that are vital skills learned both informally and formally in the Defence Forces. Participant 5 stated that networking and the ability to plan and organise were proving invaluable in her new start-up business. What they currently do had some bearing on the transferable skills they chose to discuss. All participants stated that the skills such as leadership came naturally and they did not have to think about the action they took. This supports Zarecky's (2014) findings that:

> …all participants certainly came across as having a positive, "can do approach", and a strong work ethic. However, this was not something that they seemed to be aware of, perhaps because it is something everyone possesses in the military world, and as such is taken for granted (p.60)

Table 2 below outlines the specific transferrable skills cited as being relevant by all participants in this study.

Table 2: Transferrable skills gained in a military career

Competencies	Skill
Team Work	Loyalty Friendship Self-confidence Networking Change management
Planning and Organising	Ability to prioritise Responsibility for own actions Time management
Leadership	Ability to analysis the situation
Motivation	Self-motivation Sense of pride

The skills outlined by all participants and summarised above are similar to those reported by Robertson and Brott (2013) who found that:

> Veterans regularly cited the tasks and skills learned on the job and the manner in which they currently use those skills either in their transition or on the job. Skills such as communication, training and leading others and characteristics such as hard work, loyalty and one's ability to manage change (p.73)

The profile of each interviewee shows that all of those interviewed were career soldiers. None of those interviewed reported that the skills they learned prior to enlisting had a direct effect on their ability to endure military life. In fact, most of them reported that they considered having a previous career as being a disadvantage.

Participant five worked as a personnel manager for a major retailer prior to her enlistment. She reported that she found adjusting to the military context harder than her fellow recruits and consequently had to repeat her recruit training. She considered this being a consequence of her previous experience and her age, which enabled her to question what she called "the nonsense stuff that went on during her recruit training".

Transferable skills that are learned informally

This study identifies a number of skills that participants identified as having been learned during their military career, but on an informal basis. Table 3, below, identifies these.

Table 3: Skills Learned Informally in the Military

Competencies	Skill
Team Work	Loyalty Friendship Self-confidence Networking Change management
Planning and Organising	Ability to prioritise Responsibility for own actions Time management
Leadership	Ability to analyse the situation
Motivation	Self-motivation Sense of pride

The Defence Forces instruction staff spend an enormous amount of time outside of normal duty hours with their students and this time is spent teaching and coaching the student in areas they may be weak in or areas they may need positive reinforcement. Most of this time is spent by telling stories and relaying events to show the student that the formal training actually works in a real-life situation. In a military environment, it is vital that the soldiers have a sense of pride in themselves and their unit.

The skills listed in Table 3 above are transferrable to any civilian organisation. The difficulty for the individual transiting to civilian life is identifying the informal and formal skills. Military training is based on core beliefs or values that the organisation is built on. Most organisations pride themselves on their core values and mission. This finding supports the work of Zarecky (2014) who observed that:

> you can take a lot of the core values with you, they are so embedded as part of your psyche, and it's very difficult to change them. So these military values are good values, really good strengths to help you transition, transferable strengths that you can take to civilian life (p.59)

The informal knowledge and training binds the individual's belief in the organisation and their fellow soldiers. The core values of the Defence Forces (cited as being: respect, loyalty, selflessness, physical courage, moral courage and integrity) are underpinned by the formal and informal teaching and training.

The employers' perspective

The two employers interviewed had similar backgrounds but held different views in relation to what skills they required from all their potential employees. Both participants were asked questions in relation to the skillset they sought in candidates and if the skills of the former Defence Force personnel were suitable for roles within their organisations. Table 4 (below) details the answers to the questions.

Table 4: Skillset Identified by Employers during Interview

Question	Participant One	Participant Two
Are there skills that you have identified in former Defence Force personnel that you were not necessarily looking for?	No! Can't say that I have, however, this job needs a high degree of communication both written and verbal. I found the ex-military people excellent in communication and command and control	No! I know what I need from all my new employees. I do find that ex-military have a great capacity to learn very quickly and once you tell them something it's done. This is time and money saving.
Are there skills that former members of the Defence Forces were lacking or needed work on?	The one thing I will say about them is they can be very black and white in some cases. This is a product of their training. The benefit here to me is that the port is governed by international security protocols and this requires those rules and laws to be applied in a black and white nature. So what some people may call a "restriction" I see it as a positive.	I won't say they lack certain skills, more they apply certain communication techniques that take time to get used too. An example would be how they give instructions or direct the public. They can be very direct and lack the personal touch that would in most cases be normal for a civilian. To be fair I would have to say that once you say it to them they change and learn very quickly and most important they don't take it to heart and see it as a learning opportunity.
How did the former Defence Forces personnel interact with their civilian counterparts?	I don't or have never had an issue with the Defence Forces people mixing with their civilian counterparts. Irish troops have a great and long history on peace-keeping missions all over the world. This allows them to mix and get on with everybody	None at all, in fact they have very good social skills and seem to blend in and can be great to keep the team focused and have a laugh too.
What skills have you identified in the Ex Defence Forces employees?	Communication, organising and planning, their tact and their ability to deal with tricky situations. Teamwork and their adaptability skills	Communication, their ability to predict problems and then solve them quickly, very clear when taking and giving instructions, their leadership and command skills, their ability to change focus and they know how to impress with their presence including how to wear a uniform

Employers' perception of the Defence Forces is critical to their understanding of the calibre of the individual leaving. According to McDermott (2007):

> knowledge of service life is limited to those serving and their immediate families, thus the world of the military is largely seen through media streams. This limitation extends

> to potential employers who may not understand or have knowledge of the skills military have (p.4).

This is an important point as it's critical that the individual contemplating leaving the Defence Forces should understand their own individual skillset. It is equally important that the potential employer sees the potential in that individual. Both employers interviewed had a good knowledge of the Defence Forces and had some knowledge of the type of skills and training the military recruits receive and consequently they can see the value former Defence Forces NCOs can bring to their organisation. The research into this topic supports McDermott's statement to some degree. Ireland is a smaller country than the UK and so, whilst there is a lot of work to do in educating the potential employer about the skill, attitude and knowledge of the Defence Forces personnel, it is not a big a challenge as it would be in the UK.

Preparation the Defence Forces Undertake Prior to Departure of Staff

Prior planning to retire from any military organisation is a vital step in providing the knowledge for a successful transition to civilian life. All five participants were asked questions as to what the Defence Forces did to prepare them for the transition. Participants 1-4 all said nothing was available, while participant 5 could have availed of a transition course but chose not to.

The context of why the NCOs retired was also considered. The findings as to why they retired are outlined in Table 5 (below). All five participants had a variety of reasons for leaving; for example, participants 3 and 4 felt that the military system had let them down and participant 4 had challenges in relation to a promotion.

Table 5: Reasons for leaving the Defence Forces

Participant number	Reason for leaving
1	Had just been promoted and the overseas missions had stopped due to the downturn in the economy. Left and took the CS pension
2	The pay in the Defence Forces was poor at the time. I was 40 and felt I had the confidence and skill to make it in civilian life
3	I wanted to spend more time with my young children
4	Confusion in relation to a promotion and felt the system had let him down
5	Felt she had done all that was available and wanted a new challenge and had a young child to look after

The participants were asked what did they miss about the Defence Forces and there were a range of findings. All participants stated they missed some elements of their military life and the focus was on their friends and the good times they had.

In terms of the level of preparation provided by the Defence Forces to personnel planning on retirement, participants have some interesting views. These are summarised in Table 6, below.

Table 6: Defence Forces Preparation for Retirement

Question 1	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
What did the Defence Forces do to prepare you for a civilian career?	Absolutely nothing - I prepared myself	Nothing, I had 3 months paid leave that I used to get a job	I think the skills I learned while serving were a great benefit to me	They didn't do anything in a formal way, however, they made me the person I am today	Nothing in a formal way, I was lucky that I had a lot of positions that gave me very good transferrable skills

The findings show that there was no formal structure to the retirement of each individual interviewed. The only official course is labelled a pre-retirement course, which lasts for 3 days and takes in a variety of topics including taxation, medical issues and pensions. It is not compulsory, nor is it targeted at the soft skills such as CV writing and interview preparation skills.

Conclusion

This study explored the transferable skills that are acquired both formally and informally, in a military career. The application and recognition of these skills remain important factors for success in transitioning to civilian life and career management. A number of recommendations emerge as a result of this study. These are detailed below. The research also concluded that the challenges facing the Irish Defence Forces members retiring are similar to those in the USA and UK military. The skills, knowledge and behaviour are similar in all soldiers, the society they transition to plays an important part in that transition process.

Recommendation 1: Structured Transition Course

The Defence Forces currently run two transition courses, each of which lasts for 3 days. Each course covers different modules. These courses should be combined to

deliver a cohesive and coherent course that can provide better focus for participants over a single five-day period.

Recommendation 2: Create a careers office to be located in each of the three services: Army, Navy and Air Corps.

This office, if structured correctly, could operate in the same way as any recruitment office. It need not be a separate, stand-alone office. It could be an added service provided within the Defence Forces. It would facilitate employers who seek former military personnel with transferable skills to liaise with a wider pool of potential recruits.

Recommendation 3: Open days and information events for potential employers

These could be run and companies invited in to meet potential individuals who are contemplating retiring from the Defence Forces. It could be run as a jobs and careers fair and would provide a showcase for the Irish Defence Forces training processes.

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The Management and Administrative Practices Resulting in the Exit of Nurses from the Irish Healthcare System – a Review

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Abstract

The exit of nurses from the Irish healthcare system is a growing concern especially coupled with the ageing population of Ireland. The article explores the many reasons nurses are leaving the country: mainly the disrespect by management, unfair compensation and the shortage of staff leading to professionals being overworked and eventually experiencing burnout. For many professionals, it has become an issue of their own physical and mental well-being. There are a few recommendations discussed to solve the issue of nurses, which includes a strong push to change perspectives of management and a change of policy by the government. These include retraining healthcare management, an emphasis on hiring and retaining nurses by increasing incentives and making the workload easier to carry.
Keywords: Nurses; Irish Healthcare; Healthcare Management.

Introduction

There is a critical demand for nurses and allied healthcare staff in most of the western world including the Republic of Ireland and the reason behind this current crisis is the scarcity and turnover of skilled and trained nurses, not only in the region but also at a global level (Hayes *et al*., 2006; Haddad and Toney-Butler, 2019). There is an imbalance between the skilled staff supply and rising healthcare demands all around the globe (World Health Organization (WHO), 2018). According to WHO (2018), nurses and midwives represent more than 50% of the current shortage in the health sector. In the current scenario recruitment and retention of nurses is a critical issue across the world including the Irish healthcare system, both in the public and private healthcare organisations.

The Irish healthcare system is currently facing a multitude of problems from low capacity in hospitals, extremely long wait times, how expensive it can be for someone to receive healthcare, etc. However, one that might shake the core of the Irish healthcare system is the rapid and steady exit of nurses and medical professionals. Approximately 14,000 Irish qualified nurses and midwives have chosen to leave the Irish healthcare system since 2010 (MacNamee, 2017). This figure comes from the

number of verification certificates handed to these professionals, certificates that are used to prove appropriate qualification to foreign recruiters. The figure amounts to nearly 2,000 professionals every year. In this article, the issue of health professionals' retention, especially of nurses and midwives, in Ireland is highlighted. A thorough literature review and analysis of both the quantitative and qualitative research publications have been done to get a panoramic view of the diverse perspectives and issues that exist between the intricate layers of this multifaceted dilemma of nurses burnout, turnover, and hence leading to a shortage of mainly "womanpower" in this sector.

The Irish Healthcare System

The Irish healthcare system is a blend of public health services provided and funded by the government and private healthcare services provided on the basis of self-financing or insurance (Goldrick-Kelly and Healy, 2018). Both the public and private healthcare services work differently and so the services offered to the patients differ in quality (Connolly and Wren, 2017). The private patient gets faster treatment as compared to the public patient, plus it is unaffordable for the large section of the population (Schneider and Devitt, 2018). About €16.2 billion is allocated for health in the 2018 budget which is 19% greater than the €13.6 billion of 2013 (Connors, 2018).

The Irish health system is a mix of both public and private institutions and funders. It is primarily tax-financed and around 43% of the population has private health insurance (Connolly and Wren, 2019). The Irish health service has recently come through a radical reform program called 'Sláintecare' and is going through bedding down the process (Burke *et al*., 2018). 'Sláintecare' is a ten-year plan, proposed in May 2017, for healthcare delivery in Ireland with various reforms agreed upon by all political sectors. There are various components of this plan including 'Acute Care', 'Patient Safety', 'Health and Brexit' and 'Nursing and Midwifery' among others (Department of Health, 2016). The significant interest shown by the government in the health services sector in recent years may lead to major changes and aims to provide universal healthcare in Ireland (Keegan *et al.*, 2019). The focus has now moved to consolidation and improved quality and efficiency. Every resident of Ireland is eligible for health and social services and, through Sláintecare, strategy services are accessible on a need basis rather than affordability.

Ageing Population

Results from the Census 2016 (Central Statistics Office, 2017), show that the population of Ireland is continuing to increase, although at a slower rate than in previous years. There is about a 1.9 million increase in the last 60 years. Over the past 15 years, the birth rate in Ireland has increased by 10.4% from 57,854 in 2001 to 63,841 in 2016. Significantly, though, results show that the number, as well as the proportion of the population in the older age groups, is increasing rapidly. The number of people aged over 65 years has increased by approximately 19.1% since 2011 (Central Statistics Office, 2017). The total number of people over the age of 65 is increasing every year and it will be doubled by 2050. Population predictions state that

the population over 65 will more than double over the next 30 years (Central Statistics Office, 2017), with evident implications for health service planning and delivery. With an ageing population at hand and a severe shortage of nurses, the consequences could be detrimental to the healthcare delivery system in Ireland.

The Problem of Recruitment and Retention in the Irish Healthcare System

In 2008, Ireland was hit hard by the economic recession that led to great levels of emigration, higher than countries like Spain or Greece. This led to a major brain drain and a problem that was just starting (Glynn, Kelly and MacÉinrí, 2013).

The WHO Global Code of Practice on the International Recruitment of Health Personnel recommends that each country must educate, retain and sustain an appropriate health workforce to develop sustainability in the healthcare system (WHO, 2010). While Ireland seems to excel in the education part of the equation by providing appropriate medical training and educating sufficient numbers (Humphries *et al*., 2011) it seems to be lacking in the retention of these nurses. This is leading to mass emigration and a continued shortage of nurses to staff the healthcare system.

A drastic impact of nursing staff shortage is inadequate care offered to patients leading to patient management at risk. Senior nurses are more involved in administrative and managerial tasks. As a result, they have little time for supervision of newly-qualified or contingent workforce. Modifications and restructuring of the healthcare service delivery such as the preference for day-care procedures, minimising the hospital stay for acute and emergency cases, the use of highly sophisticated technology, the rapid turnover of patients have further affected the workplace situation negatively. The cumulative effect of all of these determinants cause burnout in healthcare staff, and frustration and dissatisfaction in patients (Carayon and Gurses, 2008).

The major issue in Irish healthcare system delivery instability is increased emigration of Irish trained and qualified nurses and their replacement by foreign qualified staff. The main reason behind this brain drain of local qualified staff is unmanageable workplace situations leading to burnout and stressful life (Brugha, McAleese and Humphries, 2015). According to the Irish Nurses and Midwives Organisation (INMO), the working environment for nurses in Ireland is unsustainable and unsafe due to excessive workload, inadequate remuneration and lowering of morale. The INMO survey reveals that 71% of nursing graduates consider leaving Ireland (Thomas, 2019). A qualitative study was performed in 2015 through an online survey and found out the views of emigrated nurses, midwives, and doctors (Humphries *et al*., 2015). In most of these cases, the emigration destination was either Australia, UK, USA or Canada and it is reported that approximately 20,000 registered Irish nurses have relocated to foreign countries between 2007 and 2017 (Christensen, 2019). They found comparable differences in the working conditions and relocation packages offered to them between the source country and destination country. According to Peter Hughes of the Psychiatric Nurses Association (PNA), the Health Service Executive (HSE) started a campaign with the notion ‘Bring Them Home” in 2015 by offering them a token of €1,500 after completing a year of service in Ireland. This is

highly comparable with the relocation package of €8,000 to €9,000 offered by the UK to foreign-trained nurses (Scott, 2019).

According to MacNamee (2017), the Irish Medical Organisation (IMO) and Irish Nurses and Midwives Organisation (INMO) has reported that this was long coming. Liam Doran, who held the position of General Secretary of the INMO, believes that the members of his organisation are disrespected by management and morale is low, being described as one of dejection. He says that many members are expected to work more with fewer resources which is leading to burnout and lost hope and this is the reason for the mass exit. Doran also mentions that hospital management and even the Department of Health has failed to protect and value their staff. Dr Peadar Gilligan, in an interview for an article for the Irish Times, said that the medical profession was under attack and medical professionals were sick of the so-called reform (Wall, 2018).

Irish nurses are highly sought after as they complete a four-year program with a widely recognised degree whereas most countries have three-year courses. The UK is offering Irish nurses' same levels of pay, better bonuses and working hours, according to Doran in his interview for MacNamee (MacNamee, 2017).

Brexit is a very important factor to consider in this whole scenario as it will have major effects on both countries' healthcare systems. In an article for the Brexit Institute, the effects of Brexit on the Irish Healthcare System were evaluated and it was found that recruitment and retention of staff by Ireland will likely be harder, as Irish trained nurses will have free access to work in the UK and there will be a need in the UK to replace EU and non-EU nurses (Staines, 2018).

An Analysis of Management and Administrative Practices

There are various factors that lead to this shortage crisis and some of them are: ageing of the workforce, inclination towards part-time opportunities, inadequate replacement of retiring nurses by fresh graduates, increased mobility of nurses within the country or overseas offering profound incentives. Since 2012, approximately 60,000 registered nurses who reached the age of 50 and above left the workforce and it is estimated that by 2020 nearly the same number will be retiring annually, resulting in immense loss of knowledge and prowess (Buerhausus, Auerbach and Staiger, 2017). The replacement of these senior and highly-experienced nurses with newly-graduated nurses is not uniform and steady. This imposes a challenge for healthcare organisations to create a balance between the exit of experienced staff and replacement by novice staff. A smooth and steady recruitment strategy will help in the transfer of knowledge and expertise from seniors to juniors.

Job stress and dissatisfaction, premature retirement, organisational injustice, and use of agency staff are some other determinants of enhanced healthcare staff turnover and interstate or overseas mobilisation, and hence creating vacant spaces to fill (McHugh *et al*., 2011; Aiken *et al*., 2013). Locum and temporary staffing by employing agency nurses are causing a negative impact on the quality of care services and adding more pressure and stress on the permanent staff as the contingent workers are not fully acquainted with the environment, policies, communication technology,

personnel and other working elements of a particular healthcare organisation and need close supervision by the senior staff, orientation, and training to adapt well to a new working environment (Bray, 2019). In addition, it is an extra burden on the health budget as the agency staff, as compared to permanent staff, is far more costly (Dall'Ora C and Griffiths P, 2018). It has been reported by the HSE that an average of €900,000 a day on agency staff in hospitals and community healthcare organisations has been spent in the first five months of the year 2019 (Bray, 2019). Float pools or internal nursing which refer to available resources at the hospital level is more preferred than external arrangements with agencies as this is more cost-effective and safer in terms of patient safety and care (Hurst and Smith, 2011; Kortbeek *et al*., 2015). The float pool concept is used since 1981 and is widely applied and appreciated in a healthcare setting to overcome staffing deficiencies (Straw, 2018). A 'float pool' of nurses is a group of talented and highly-skilled supplemental nurses created or designed to be able to work in multiple units. This is a more applicable solution for healthcare managers to consider while tackling with staff shortages. This strategy has many benefits such as providing safe and quality care to critical patients, reduced job stress, and cost-effectivity (Rainess *et al.,* 2015).

There is an increasing trend found in young nurses to prefer to work through an agency rather than a permanent or contractual commitment. The flexibility of shifts with lifestyle adjustments, more attractive remuneration and less stress of the job commitment and security, profound opportunities for personal development through continuous training and courses, are some of the reasons behind this 'shift' of employment pattern (Epstein, 2002).

There is evidence that Ireland is lacking in routine monitoring of the healthcare professional emigration crisis (Buchan *et al*., 2014). While there is some talk of the issue, whether it is national media highlighting the issue or policy-makers vowing to take action, there still seems to be a huge gap in research about the topic and there is a lack of evidence about the root cause of emigration.

The first step to solving this issue is identifying and studying the root causes of the problem. Is the crisis a direct result of the recession or cuts in cost by the Department of Health? Or is this a gradual build-up of frustration and loss of hope in the Irish healthcare system? (Thomas *et al*., 2013). The recession in Ireland led to many reductions in salary and a rise in tax (Thomas *et al*., 2013). It is important to realise how important a factor the economic recession was in this crisis. Oulton finds that healthcare management has often failed to recognise and solve problems that have bothered nurses for a long time such as longer working hours, insufficient training, inadequate staffing levels and salaries (1998). In MacNamee (2017), John Duddy, who was then president of the IMO and a neurosurgeon at Cork University Hospital, also agreed that poor management is one of the major reasons for this mass exit. He gave examples of nurses having to queue upwards of 45 minutes to try to find a parking spot. He went on further by saying that nurses would go up frequently to management with ideas on improvement in service, but these suggestions were completely ignored by management. A research study conducted to identify the causes of nurses' turnover intention and emigration found five main reasons reported by respondents which included working conditions, training opportunities, financial reasons, career progression and personal reasons (Humphries *et al*., 2015).

The research found that nurses and midwives, particularly, felt that the low compensation and working conditions in Ireland forced them to leave (Murray, 2019). Professionals who worked in the emergency department felt there was no pattern for their days off and it was impossible to have a work-life balance as it was very difficult to plan events as they never knew when their days off might be. The research also found that respondents were so exhausted from their working days that their days off were spent recovering from the exhaustion. Respondents even noticed that there were detrimental effects of these working conditions on their own health and well-being, one reporting that they ended up in hospital twice because of the long hours and understaffing.

Respondents reported that they felt that management and employers had no respect for their employees or poor working conditions. Nurses noted that the emigration decision was not about money but the disrespect in the field. An article published in the Irish Examiner on 16 June 2018 reveals worrying statistics. It brings to light the increase of physical, verbal and sexual attacks on hospital nurses over the years. There were 559 recorded assaults in 2016 and 587 in 2017. These assaults are recorded in the HSE's National Incident Management System which is set up to record all assaults on health workers. However, the INMO said that these figures are even bigger in reality as assaults on nurses who work in voluntary hospitals in the country are not logged at all. These assaults are often career-ending and, in most cases, have traumatising and long-lasting effects on the nurses. Not much has been done to alleviate this problem. This shows our nurses that they, and the service they provide, are not valued or respected (Irish Examiner, 2018)

Caoimhe O'Brien, 27, a nurse from Dublin who, in an interview for the Irish Mirror, said that she became a nurse after four years of studying hard and going through 80 hours a week on work placements, for which she was paid less than minimum wage. Caoimhe was attacked by a patient while working over Christmas and has suffered from insomnia and anxiety since. She went on strike for the nurses stressing that nurses really had no choice but to strike as staffing levels are extremely dangerous, the workload is constantly increasing, and it is causing a lot of stress and burnout in nurses. This means that patient care is also affected (Hughes, 2019).

Nurses and midwives also echoed their medical colleagues and reported poor working conditions, understaffing and disrespect. They also noted their dissatisfaction against the introduction of the graduate nursing scheme which aims to recruit entry-level nurses at reduced rates of pay. All respondents called for an end to the scheme. They also expressed concerns for patient safety and believe that, because of the immense pressure on nurses due to shortages and long hours, it often became very difficult to exhibit safe practice (MacNamee, 2017).

Recommendations

Workforce planning is critical in terms of attracting and retaining qualified nursing staff in the field as over a period of time the pool is declining in number because of inadequate replacement by fresh graduates and ageing of the already working force (Haddad and Toney-Butler, 2019). A long-term solution to fill the shortage gap is to motivate and attract a new generation towards this profession, not only females but

males as well, by offering them good job opportunities and incentives once graduated. Nursing is thought to be a female profession and only a few men opt for this profession (Sullivan, 2001). It has been found that across the western world the nursing profession is dominated and overpowered by women. The female to male nurse ratio among these countries is 10:1, specifically in Ireland only 7.8% of the total nurses are male (O'Connor, 2015).

According to Wall (2017), the Minister of Health has launched a new framework "to support the recruitment and retention of the right mix of staff across the health and social care system and build a sustainable, resilient workforce for the future". He said that through this new framework Ireland would be taking steps to build a more resilient and sustainable health workforce for the future. The objectives of the framework include the identification, agreement, and implementation of appropriate solutions for all challenges the nurses are facing (Wall, 2017). Dr Arne Björnberg, the Chairman of the Health Consumer Powerhouse, mentioned that healthcare systems reform revolves around demanding better management results and taking the politics out of healthcare (Ní Aodha, 2017). He suggests motivating staff, maximising production, minimising costs and continually monitoring outputs of reforms in healthcare.

Brugha, McAleese and Humphries (2015) found what it would take for these emigrant nurses to come back to Ireland. Their respondents felt that a significant improvement in the working conditions was crucial prior to their return. The most common reforms cited by respondents included better working hours, task shifting or transfer of tasks, support by senior colleagues, structured teaching and training, better pay, respect, more consultants, computerised health records, etc. Staffing levels were cited as a very important reform that highlighted the need for an increase of front-line staff, improving nurse to patient ratios, adequate holiday covers, etc.

Research done previously has shown that retention is proven to be a better solution to recruitment when dealing with staffing shortages (Halter *et al*., 2017). Doran suggests that it is time for the concerned authorities to work on keeping Irish nurses in Ireland and in the public sector. He highlights the issue of the substantial pay gap between nurses working in the public and private sector, the latter being paid substantially more. He suggests that every final year nursing student is offered a permanent job, along with a shift in attitude towards nurses already in the field, providing them with more respect and job security (MacNamee, 2017). Steps should be taken to ensure that their demands are heard and worked on rather than ignored.

One of the recruitment strategies which can improve the situation of this shortage and retention challenge is to attract foreign qualified nurses from abroad and introduce training programs for them especially for critical shortage areas like intensive care units, midwifery, and aged care (Allen, 2019). Bridging courses for overseas qualified nurses and midwives should be arranged by public and private Irish healthcare organisations so that they can reach the Irish healthcare services standard. These locally trained overseas qualified staff should then be retained by offering long-term temporary resident status while already in the state (Parliament of Australia, 2002). There is a significant contribution of foreign qualified registered nurses, mostly from India and the Philippines in the Irish healthcare sector since 2000 and further planning and policy implementation is desired to retain this valuable talent (Humphries, Brugha and McGee, 2008).

Another problem area is inappropriate or disproportionate skill mix. It should be taken care of that those new graduates or overseas staff should be a desired skill mix to fulfil the demands in specialist sectors like aged care, intensive care, community and mental health, midwifery, etc. (INMO, 2018). The WHO recommends that to overcome this challenge, devising an outstanding policy is obligatory and strong leadership with competent governance and effective execution at a higher organisational level is the need of the day (2019).

Conclusion

A shortage of nurses provides a massive strategic risk to the effective functioning of a healthcare system and it seems like the Irish healthcare system is facing a crisis with the mass exit of nurses.

To achieve medical workforce sustainability and to revert the emigration of highly qualified and trained staff strong strategic planning is mandatory. The areas to be more focused upon are improved and supportive working environment, revised job specifications and terms of service, organisational justice at all levels, equitable remunerations, opportunities and access to training and personal development and last of all, the most important factor of burnout which is to address is shorter and more convenient working shifts (Humphries *et al*., 2015).

It seems there is a lot wrong with the Irish healthcare system but not all hope is lost. The damage that has been done can still be undone and rectified. First, the emigrant health professionals are still interested in returning to Ireland if certain reforms are made (Humphries *et al*., 2015). There is still a window of opportunity for the Irish healthcare system. Secondly, it may not be as hard to introduce the reforms emigrant health professionals ask for, all the factors these professionals complain of are within the control of policymakers and management. If these were outside the control of the health system such as mass unemployment, recession, etc., this could be a difficult feat. However, with a few policy changes and a change in attitude, management can bring about changes to real concerns of nurses such as poor working conditions, understaffing, better pay, increase of respect and value.

Many articles reference the Minister of Health's speech at the annual conference of the IMO in Killarney in 2018. He suggested that even though the Irish Government plans to spend €11 billion additionally in hospitals and the system to boost capacity, it might not be the solution to the whole problem. Mr Simon Harris said in his speech: "We must make real changes to healthcare delivery in order to have a sustainable healthcare system in the future. Put simply, we have no option but to reform."

To attract back emigrant health professionals, the Irish healthcare system needs reforms and to implement working conditions and career progression opportunities that can compete with benefits and compensation packages offered by destination countries. This will not only help attract emigrant health professionals back but also be a major help in the recruitment and retention of potential health professionals.

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Employees with Asperger's Syndrome and their Experiences within the Work Environment

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Abstract

This qualitative study gathered experiences of employees with Asperger's Syndrome (AS) within their workplaces. Data were collected by conducting six semi-structured interviews: three face-to-face, one by phone and two by Skype with audio only. A thematic analysis with an inductive approach was applied. Four main themes with multiple sub-themes emerged: Competence and Work Performance; Self-improvement and Career Progression; Supportive Work Environment; and AS in the Workplace. Findings revealed that these employees were team-oriented, productive and highly skilled professionals with a strong work ethic. Furthermore, their diagnoses did not hinder fulfilling careers. They emphasised knowledge sharing and factual communication while cooperating with their work colleagues. However, decoding workplace politics presented a major hurdle to their job satisfaction. Also, the traditional hiring process, as well as bright fluorescent overhead lights and noisy surroundings (for example canteens, office spaces) were sources of distraction and distress. Therefore, the essential role of HR would be to re-visit and adjust the interview process. Whereas managers should, perhaps, reflect on their leadership and communication styles, show some recognition for their employees' quality-consciousness and become advocates of a more inclusive culture. Finally, enabling career-progression and providing sufficient learning opportunities for these employees should also be prioritised by managers.
Keywords: Asperger's Syndrome; Workplace; Experience; Employment; Career; Inclusive Culture; Job Interview; Teamwork; Productivity; Leadership Styles.

Introduction

The dynamic nature of the current job market forces businesses to embrace diversity in the workforce. Thus, an evident increased interest in the topic of employees with a diagnosis of Asperger's Syndrome (AS) should come as no surprise. As per the Department of Health (DOH) (2018), the prevalence of Autistic Spectrum Disorder (ASD) in Ireland is estimated at 1.5%; however, this estimation does not include the

adult population. Moreover, the employability rate within this population in Ireland is still unknown but according to international estimates, among the approximate 1% of the diagnosed individuals, only as little as 6% are in employment (Wareham and Sonne, 2008). Despite declarations on promoting an inclusive culture, unfortunately in some organisations employees with AS are often deeply misunderstood whereas prejudice and ignorance of AS, are still alive and well (Hendrickx, 2008).

Hans Asperger's paper on autism was published back in 1944 but only fifty years later, AS was distinguished from autism (Lyons and Fitzgerald, 2007). However, since 2013, the two were amalgamated and, as per the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), classified as ASD (Skuse, 2018). It is important to note that symptoms vary in their severity, thus the word spectrum was applied in this classification. As outlined by the American Psychiatric Association (2013), ASD manifested itself by symptoms like difficulty in reading social cues, hypersensitivity to visual or auditory stimuli (bright lights, noisy surroundings etc.) or strong dislike of changes. To this day, however, these diagnoses' amalgamation is debatable and, to some health specialists, even highly controversial. The held belief being that autism and AS are too distinct to be merged and, more importantly, therapeutic interventions for each differ (Kite, Gullifer and Tyson, 2013). As emphasised by Kite, Gullifer and Tyson (2013), autism often has negative connotations, perceived by some as a more severe diagnosis; in contrast AS is often attributed to savants or high achievers. These misconceptions often lead to concealment of diagnosis by AS employees due to fear of autism stereotyping. Concealment prevents being pigeonholed as disabled but also does not hinder the opportunity to be hired or simply to retain their current employment (Johnson and Joshi, 2016; Hendrickx, 2008).

Lorenz and Heinitz (2014) took notice that AS is, unfortunately, often perceived as a disability and such stigmatisation resulted in low self-esteem within the population of employees who received an official diagnosis. However, Austin and Pisano (2017) had a different perspective on this population; rather than focusing on stigmatisation issues, they believed these employees just had a different cognitive style. Furthermore, many employees, instead of viewing their own AS as a disability, fully embraced it and actually viewed it as an advantage. As reported in the qualitative study with six participants conducted by Krieger *et al*. (2012), they had a sense of achievement and, despite any difficulties related to AS they might have encountered at work, many of them still managed to have successful careers. However, at times, sustaining jobs and having a continuity of employment was truly problematic to some. Despite being highly competent and having qualities which would only make them assets to any organisation, (during or after the probationary period had passed) they were evaluated by some employers as inflexible or not team-oriented (Parr, Hunter and Ligon, 2013; Scott *et al*., 2015).

Traditional interview processes which focus heavily on communication skills may not provide individuals with AS a platform to demonstrate their true expertise. Additional methods of assessment have been identified to provide practical assessment of candidates' skills; one Danish consulting company Specialisterne (The Specialists) replaced the traditional interview with a process called hangouts. This method is an equivalent of an assessment centre and enables practical assessment of candidates' problem-solving skills by means of the LEGO Mindstorms (Austin and Pisano, 2017). Specialisterne posit that embracing diversity by hiring candidates who may be

perceived as outliers (i.e. they do not fit to the traditional workplace), could only benefit an organisation (Austin and Pisano, 2017).

When candidates with AS are hired, as emphasised both at the review article by Austin and Pisano (2017) and the qualitative study conducted by Scott *et al*. (2015), these employees could excel in their jobs, as long as their employer is willing to put some minor adjustments into their physical work environment to reduce sensory overload. This involves adjusting overhead desk lighting, providing noise-cancelling headphones or assigning a workstation facing the wall to minimise distractions (Austin and Pisano, 2017; Hedley *et al.*, 2018). Such enablers, as defined by Hedley *et al*. (2018), are feasible and inexpensive yet contribute to increased productivity, overall job satisfaction and, more importantly, benefit the whole organisation. However, once an individual with AS has entered into employment, a myriad of other difficulties are often reported such as social interactions, inflexibility (dislike of unexpected changes) and sensory overload caused by a noisy over-stimulating environment (Parr and Hunter, 2014). Communication difficulties, in particular "office banter", included difficulties in interpreting facial expressions or understanding the sarcastic sense of humour of their colleagues (Vogeley *et al*., 2013). Conversely, work tasks and the job itself were not reported as problems (Scott *et al*., 2015).

In contrast with most of the previous research on this population, one AS employment support service, Specialisterne, emphasised strengths and aptitudes of employees with AS. They also believed that once these workers' talents are utilised and tailored to the specific role, this, as a result, contributed to the success of any organisation. It was reported that, for example, they could excel in quality control due to their exceptional accuracy as they notice tiny but important details that can often be overlooked by their colleagues (Wareham and Sonne, 2008). Besides, as per findings from the qualitative study with 52 employees with AS conducted by Parr, Hunter and Ligon (2013), while their team members find certain tasks tedious, they are comfortable performing them both thoroughly and efficiently. Their strong work ethic certainly did not go unnoticed. As discussed by Hedley *et al.* (2018), focus groups and interviews revealed that other team members admired productivity, commitment and outstanding quality of work performed by their colleagues with AS. Furthermore, as reported in the case study by Wareham and Sonne (2008), employees with AS outperformed their colleagues as they turned out to be eight times more accurate in data input work. Whereas in the field of software testing, their accuracy was 50% greater in comparison to other team members.

Despite some unfair misconceptions about these employees being supposedly unsuitable for customer service roles, Austin and Pisano (2017) described an example of an employee with AS, employed by SAP, who resolved a commonly encountered issue for the client by simply applying a different cognitive style. As a result, not only the customer was satisfied but also the whole organisation's credibility and reputation were strengthened. In fact, employees with AS provided flawless phone-based customer service as this type of interaction was more comfortable to them. Since they sometimes find eye contact intimidating, it suited them to have structured, pre-written and scripted answers which they could apply while responding to phone queries (Johnson and Joshi, 2016; Trevisan *et al*., 2017).

As suggested by Parr, Hunter and Ligon (2013), the leadership style used by managers while interacting with staff members with a diagnosis of Asperger's mattered. One example of a leadership type is the transformational leadership style; in essence, transformational leaders are supportive and mindful of their employees' needs. Whereas to motivate staff, these leaders tend to use an emotion-laden communication style but according to Parr, Hunger and Ligon (2013), it was ineffective during interactions with staff members who were diagnosed with Asperger's. Parr, Hunter and Ligon (2013) noted that this communication style increased their anxiety, whereas abstract concepts, used by transformational leaders, unfortunately only amplified misunderstandings. It is because individuals diagnosed with Asperger's can sometimes misread metaphors as they take them literally. Moreover, it was reported that they prefer directness and honest feedback from their managers. They thrive in the work environment where, preferably, both clear expectations and instructions on their work tasks are specified (Parr, Hunter and Ligon, 2013). Finally, they prefer reasonable predictability in their work as they enjoy routines and if there is an unexpected change in their structured and precisely planned workday, they can sometimes get easily frustrated or even anxious (Cockayne, 2016; Hedley *et al*., 2018).

Interestingly though, some managers noted that an open communication style used by these employees had a positive impact on communication within the whole organisation. They also admitted that having these staff members on board made them better leaders (Hendrickx, 2008). Whereas other supervisors found their employees' straightforward communication style refreshing as, according to them, there was no "hidden agenda" (Hendrickx, 2008, p. 84). However, as reported by Hedley *et al*. (2018), this directness could cause tensions within a team and be sometimes taken by their colleagues for arrogance. For that reason, unfortunately, employees with AS are often misunderstood or not considered as team players (Pedersen, 2017). Transformational leadership, however, received an extensive critique for failing to promote inclusiveness within the organisation. As noted by Randel *et al*. (2017), reportedly, the leadership type known as inclusive was most suitable for employees with AS. Inclusive leaders embrace diversity and are able to utilise resources appropriately. This individualised consideration means that work tasks they assign match employees' predispositions (Parr, Hunter and Ligon, 2013). As a result, work performance improves whereas turnover rates decrease (Randel *et al.*, 2017).

Scott *et al*. (2015) in their qualitative study contrasted viewpoints of 40 employees with AS with 35 employers which resulted in gathering a broader perspective on the topic of employment within this population. According to Scott *at al*. (2015), within organisations which truly promoted an inclusive culture, employers recognised employees' input and considered their viewpoints in their decision-making process. This meant employees felt appreciated and that their efforts were recognised which resulted in a noticeable increase in their intrinsic motivation. This made them more productive and engaged which in turn, benefited the whole organisation resulting in increased profits etc. Correspondingly, Randel *et al*. (2017) claimed that a leadership style classified as authentic also promoted inclusive culture but emphasised leader's ethical conduct. It was suggested that authentic leadership style is highly beneficial for employees with AS as they value qualities like honesty, integrity, respect, consideration for others, or fairness. Thus, if their leaders shared similar core values,

they would experience greater job satisfaction and less anxiety (Parr, Hunter and Ligon, 2013).

The primary goal of this qualitative research was to explore the personal experiences of employees with AS in the workplace, their perceptions of workplaces and the challenges, if any, that they face at work. Furthermore, the present study aimed to explore hurdles related to the interview process and then the job retention, their work motivations, social interactions with colleagues, and their perceptions about the possible benefits of hiring employees with AS. Workplace improvements such as needs for reasonable adjustments, if required, and suggestions, including modifications in the hiring process to enable AS candidates to secure employment were also explored. As discussed by Krieger *et al.* (2012), there is a gap in research on the adult employees with AS, therefore, the current study provides a valuable contribution to the existing literature on this topic within the Irish context. Whereas, as emphasised by Hendrickx (2008), the stigma associated with AS is alive and well, including prejudice, misunderstandings and insufficient education on the topic within the general public. Thus, the current study has an educational value by addressing the existing stigma.

Methodology

Participants

Six participants living and working in Ireland, four females and two males, ranged in age from 27 to 50 (mean = 39.67 years, SD = 8.16), with a diagnosis of Asperger's Syndrome (AS) participated in this study. The inclusion criterion was any individual aged over 18, who self-identified as having AS, with participants recruited using a snowball and purposive sampling. Ethical approval for this study was granted by Dublin Business School Research Ethics Committee, and participant-informed consents were obtained prior to commencement.

Design

The interview topic guide was developed in order to explore job interview experiences, team interactions, physical environment and motivation at work. Ten open-ended questions were developed in cooperation with the second author and based on discussions and the previous literature. Semi-structured interviews were conducted with these questions to guide further discussion via a multimodal approach (three face-to-face, one by phone and two via Skype with the camera off). This method gives flexibility, allows for a natural conversation flow with a researcher open to anything that might come up in responses. It is also less intimidating to participants, enabling them to answer spontaneously whereas a researcher can gather more in-depth data (Pietkiewicz and Smith, 2014; Trevisan *et al.,* 2017).

Qualitative interviews were digitally recorded and transcribed verbatim. The interviews were then thematically analysed to fully explore and summarise the employment experience of participants with AS (Braun and Clarke, 2006). The thematic analysis process comprised of data familiarisation through transcription and re-reading transcripts; line-by-line coding of each transcript and generation of a coding framework; creation of themes and sub-themes through synthesis of initial codes. A

review of themes and sub-themes for appropriateness was conducted initially by the first author and subsequently in conjunction with the second author. This process allowed for theme interpretations to be validated through discussions and allowed for repeated referral to the coded extracts and original dataset; labelling and defining themes, the final step being the production of a written report of the analysis.

Results

Interviews lasted between 35 to 90 minutes, with an average duration of 62.5 minutes. Four main themes related to work experience of employees with AS emerged. These themes were: (1) Competence and Work Performance; (2) Self-improvement and Career Progression; (3) Supportive Work Environment; and (4) AS in the Workplace. An illustration of the themes and sub-themes is displayed in Figure 1.

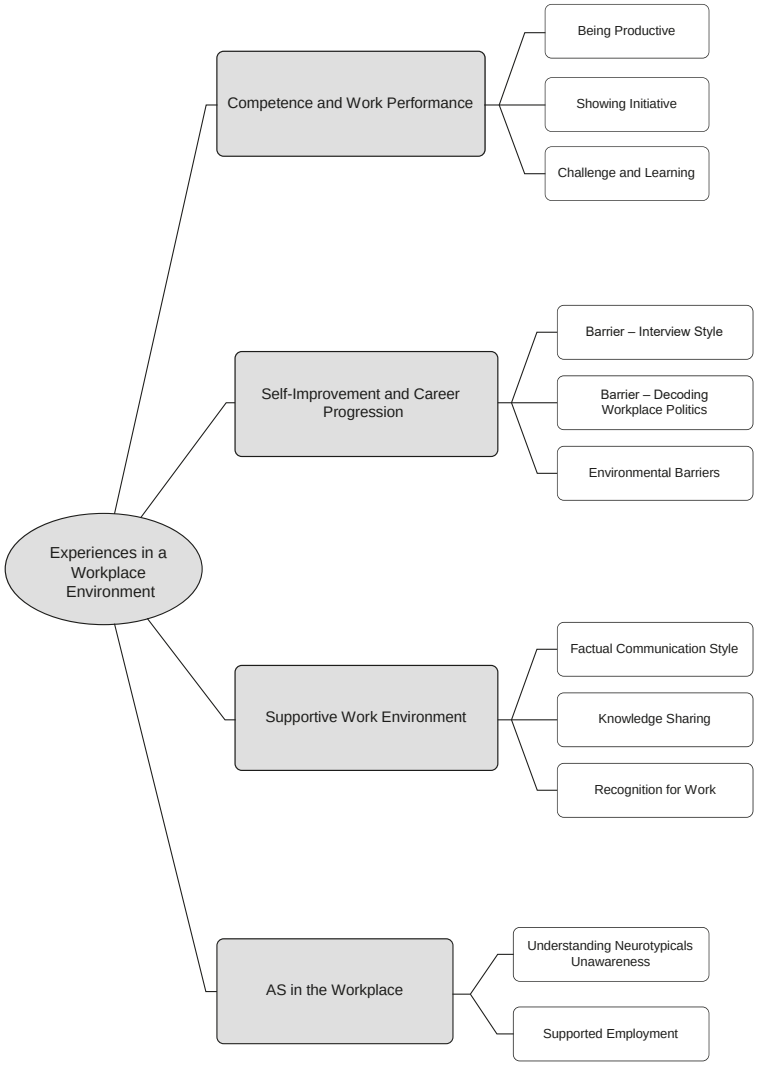

Figure 1. Thematic Map, illustrating four main themes (1) Competence and Work Performance; (2) Self-improvement and Career Progression; (3) Supportive Work Environment; and (4) AS in the Workplace and sub-themes.

Competence and Work Performance

Within this theme, the following three sub-themes emerged: (A) Being Productive; (B) Showing Initiative; (C) Challenge and Learning. Most AS employees discussed how they feel confident about their skills. They identified themselves as highly-competent workers with an impeccable reputation and this confidence clearly showed in their responses.

> Compared to my previous job, (in) this job I know they think I am doing a good job (...) so, when I tell him (the manager) that I have Asperger's, it is kind of like: 'That's great, well, we hear you are doing a great job'. (Participant B)

Also, some admitted they took on a workload which normally would require additional resources. As reported by one participant, they believed they were more efficient than their colleagues. There was also a sense of achievement expressed by several participants, as they met the KPIs and felt proud of having successful careers despite their diagnoses. They are often highly qualified and their strong sense of self-awareness about their advantages combined with a can-do attitude results in greater productivity.

Being productive was mentioned frequently, indicating that it means a lot to the participants. Not only do they prefer to be productive but also to report their actual productivity. As one participant outlined how their problem-solving skills contributed to greater efficiency at work. There was a strong willingness to be given sufficient workload and some reported how satisfying and motivating it was to work within a productive environment. It is also evident that they prefer to be occupied throughout their workday and use the time spent at work effectively as passively waiting for the tasks to be assigned frustrated them.

> (...) my brain is always trying to think of things logically, you know, and always trying to do it the most effective and efficient way, it also means that I get tasks done faster than other people. (Participant C)

Some participants mentioned that they created their own work and responses revealed that apart from being highly productive, employees with AS showed a lot of initiative at work, for example creating files which were useful for the whole team. Interestingly, they were remarkably observant to quickly identify what was needed and then took full responsibility for tasks completion. Furthermore, they often performed tasks they were naturally good at, and, as a bonus, they also enjoyed performing them, saving their colleagues from engaging in tasks they probably found tedious. As a result, the resources were utilised adequately. Also, their ability to recognise what was necessary benefited the whole team. It means tasks were completed and anything overlooked by others was promptly identified and effectively resolved. They often applied problem-solving strategies, in this case, the solution was just to execute what was required.

> I was thinking: 'We don't have team stats', so I started to create an Excel sheet, calculated team stats (...) I even wrote a handbook for beginners, when they are starting, with the training guide for the first five to six weeks because we never got anything like this. (Participant A)

Challenge and a quest for learning were mentioned frequently, particularly in the context of seeking challenge at work or not feeling challenged enough. There was a strong desire to work within an inspiring environment which gives sufficient opportunities to apply the skills they already had. Also, responses clearly indicated that to some, it was extremely motivating to learn at work every day.

> I want the challenge every day, I want the challenge every minute (...) I'll do it, I'm able to work on some complex, whatever, but the thing is, where I'm now (...) there's no challenge because I can do everything. (Participant F)

Moreover, to maximise quiet periods at work, self-training by means of work-related tutorials was applied by one of the participants rather than visiting entertainment sites on the internet and feeling unproductive. Therefore, responses clearly indicated that to some, it was essential to be given sufficient challenges, opportunities to continuously up-skill and trusting in their abilities to complete more complex tasks.

> But just sitting down all the time and I feel worthless when I go home, and I haven't done anything (...) it is really terrible. I started learning, I was going through a lot of online trainings. (Participant A)

Self-improvement and Career Progression

Three sub-themes were identified: (A) Barrier - Interview Style; (B) Barrier - Decoding Workplace Politics; (C) Environmental Barriers. This theme illustrates a strong willingness shared by participants to better themselves both on career and personal levels. Most of them mentioned how challenging it was at times for them to be in the workforce, however, they did not intend to use their diagnoses as excuses. In fact, they admitted how hard they have been working on themselves to combat obstacles caused by some of the symptoms.

> So, what I did was, I started identifying those symptoms one at a time and I tackled them. (...) by necessity, the situation forced me to overcome those symptoms as well, which was a good thing. (Participant E)

Typical areas of difficulties like communication or single-tasking preference were addressed by making an extra effort i.e. learning social skills or doing their best to switch between tasks. One of the participants recognised the importance of communication within a team and they reported assigning a certain amount of time during the workday to socialise with work colleagues. The other wished to apply their learned social skills while participating in regular team meetings.

> That's where I learned then, step by step, to focus on socialising skills. (...) It is just about 10 – 15 % of my day that I only use for socialising then I know, at least 5 minutes per day to talk with everyone, so everyone is happy. And then, 'leave me alone'. (Participant A)

It was found that they were highly self-aware, recognised their weaknesses and stepped outside their comfort zones to tackle these limitations. As if overcoming difficulties was another problem to be solved, they tended to apply their problem-solving approach also in this case. Despite continuous self-improvement, the first obstacle to successful employment occurred at the recruitment stage. One participant replied that they found the note-taking person on the interview panel distracting and anxiety-provoking. Many participants critiqued the way job interviews were designed and some even believed that they were inappropriate for candidates with AS. Whereas others questioned the clarity of the competency-based interviews. The main areas of difficulties included literal interpretation of interview questions or audio distractions (background noise).

> Like if I did a one-on-one interview that was taped and then they took notes afterwards, (it) would be easier than one person taking notes on the side… they are not asking any questions. (Participant B)

This sub-theme addresses issues mentioned quite frequently by participants in relation to their inability to play workplace politics or understand team dynamics. As shared by some participants, it was mentally-taxing to them to decode these, almost as if it was a foreign language they could not comprehend. At the same time, this inability to either play or understand others playing politics was, as shown in responses, a massive barrier to promotion or maintaining employment.

> I am usually the first one losing (in) this kind of games. I don't have the kind of skillset, or toolset for playing these games (...) it takes, at least 50% of my energy per day to just understand the social structure within this team. (Participant A)

Decoding team dynamics was closely related to difficulties in reading social cues, knowing when to join in conversations and responding adequately. Therefore, responses showed that manoeuvring within the world of social interactions was challenging and frustrating at times. Two core difficulties in the physical work environment appeared in most responses: the brightness of fluorescent lights and the noise, both being major sources of discomfort.

> (...) I had to turn off the lights in my office because I couldn't function, it was too bright for me. (Participant D)

Another source of distress was noise and two participants reported that they would rather not go on their lunch breaks to avoid this over-stimulating environment. They found it difficult to filter out the noise and their way of dealing with it was to either take breaks when it was quiet or find an alternative place to go to. Participants often applied their problem-solving skills, for example they tried to switch these lights off whenever they could. Whereas the most popular solution to office noise was to use headphones or earplugs as sometimes it was the only way to work efficiently.

Supportive Work Environment

Three sub-themes were identified under this theme: (A) Factual Communication Style; (B) Knowledge Sharing; (C) Recognition for Work. In spite of some participants having a history of dealing with unsupportive former bosses, overall, they reported working currently in a reasonably supportive environment. Although some encountered bosses who were unwilling to make adjustments, even after a diagnosis disclosure, one participant's current manager understood the sensory overload difficulties allowing this employee to have a short break outside every time they felt overwhelmed.

> (...) my boss is considerate, and, like, he tries to understand me and so, me and him, have, it's kind of like (...) we have a bond where we work well together. (Participant F)

Many enjoyed the fact that there was no micromanagement and they were given some degree of independence in their work. Others mentioned how much it meant to them for their manager to be open to inventive ideas and consider their suggestions. There was also no miscommunication as they often suggested having brief meetings with their managers to clarify any issues and receive feedback. Interestingly, they preferred their managers to be upfront. For employees with AS, managers' ability to listen, their honesty and openness to innovative ideas, combined with a willingness to assist with any work-related issues were essential.

> (...) in other jobs, I'd feel anxious all the time that I am doing something wrong or that I, you know, there's an issue with something but they are being polite about it and they are not telling me. (Participant C)

Apart from directness, they prioritise factual communication and prefer to keep the small talk to an absolute minimum, focussing on discussing work-related matters when consulting their work. As per responses, communication, ideally, should be direct and work-focussed with professional interactions among team members indicating that these employees struggle with the unnecessary, in their opinion, conversation fillers. The fact that they wish to focus on work-related discussions explains why they are often very productive and have a strong work ethic, as discussed earlier.

> (...) Just being really uncomplicated getting (a) quick question to a colleague, without any personal ego issues in the middle. (Participant A)

Knowledge sharing between different departments was equally important, but from one participant's point of view, unfortunately, a silo mentality was prevalent. It is also evident that asking work-related questions means a lot to them, as discussed by several participants. However, as observed by one participant, this may not always be welcomed by their colleagues as these questions were often highly-detailed. In their responses, participants expressed the importance of knowledge sharing within a team. Although working from home was distraction-free, one participant admitted they genuinely enjoyed being in the office as it gave them an opportunity to exchange ideas with others.

> (...) they let me sit in on other department's meetings, but it was still in the technical department and, so then I could ask questions and then I knew that the part that I was doing was helping develop the frontend for this person's backend. You know, and it was just very enjoyable. (Participant C)

Seeking recognition was a recurrent pattern identified in many responses. Most participants reported that their managers recognised their good work, by, for example, acknowledging their organisational skills or initiative. However, some of them said that they did not always feel their effort was appreciated. One of the participants admitted that difficulties in decoding social cues could have resulted in them overlooking the appreciation expressed by their superiors. In some cases, participants either decided to move jobs when they felt underappreciated or their work was only recognised when they returned to the previous workplace. The need for recognition was evident in responses; this was expressed mainly as a wish to be appreciated for their contribution to work and receiving acknowledgement and support from the manager after tasks completion.

> My boss (...) she won't necessarily tell you, you were brilliant, but you'd very soon know if there was a problem. (Participant D)

> I constantly look for validation of people, say: "Thanks very much for that" (...). (Participant F)

This theme represents how participants recognised AS's symptoms in people they worked with. Two sub-themes: (A) Understanding Neurotypicals Unawareness; (B) Supported Employment were identified. Interestingly, they nearly downplayed the severity of their own symptoms, while they could easily spot issues others had. It was as if they have that ease of almost diagnosing others.

> I am convinced my manager possibly, well, my old manager, possibly would have had Asperger's herself. (Participant B)

One participant described their experience of being diagnosed with Asperger's prior to the amalgamation of diagnoses into ASD and that they went through the phase of denial and did not want to be classified as autistic, which they perceived as much more severe than Asperger's. Others disclosed that they felt they had it easier in comparison to others, their symptoms were milder and potentially because they were more self-aware. They often responded they were doing fine, were good in hiding their symptoms and did not really need any special adaptations but acknowledged others who, in their opinion, needed more assistance.

> (...) I find ways to cope with it anyway, so, but the thing is, it's barely noticeable nowadays because (...) the situation forced me to overcome those symptoms as well, which was a good thing. (...) So these days it's barely noticeable (...). (Participant E)

Their responses suggest that they are observant, empathetic and value their self-sufficiency, whereas self-awareness makes them more mindful of others around them and some made a clear distinction between autism and Asperger's. Employees with AS do not necessarily expect others to understand their difficulties. They often acknowledged the fact that their colleagues may not have sufficient knowledge of AS. Some also understood that others' reactions to their struggles came from not understanding the condition rather than from malice.

> I can't really expect everyone (by me just saying) I am just saying: 'I'm autistic' or 'I have Asperger's, by the way' that they'll understand what it means. (Participant A)

They also acknowledged differences in reasoning between themselves and their colleagues and believed that to be better understood and to minimise miscommunication, it was also their responsibility to educate others on Asperger's. Some shared their positive experiences of availing supported employment while job searching. One participant, for example, highly recommended contacting specialist AS employment services for anyone on the spectrum who struggled with securing employment, while the other was in the middle of the recruitment process with a perspective of getting a job offer.

> So, with (Identifier Removed), they were sort of, they were unbelievably helpful (...) I had been searching for work for three years, so, I think that anyone who is searching for work and who has been long-term unemployed but who actually is definitely looking,

> like, who is eager to get work, I'd say (Identifier Removed) are definitely the first, like, I'd definitely put them as the first port of call (...). (Participant E)

However, one participant was hesitant and a bit sceptical about receiving assistance from organisations specific to supporting employees with AS. They expressed their concerns about the salary levels and that if they ever moved jobs, such work experience on their CV would need to be explained to their subsequent employer. As a result, it could be stigmatising and enforces the diagnosis disclosure prior to an interview. Responses show that it was a choice and conscious decision of each and every individual on the spectrum whether to secure employment with the assistance of specialist AS employment services or seek jobs independently.

Discussion

Results of the current study revealed that employees with a diagnosis of Asperger's perceive themselves to be highly-competent and professional workers. They discussed having a can-do-attitude and effective problem-solving skills. Moreover, interviewees gave numerous work-related examples that support their perspective that they are productive workers with a strong quest for upskilling. As per the findings of the current study, we suggest that their evident problem-solving skills were then translated into increased efficiency and meeting the expected KPIs. The findings of the present study align Wareham and Sonne (2008) who found that employees with a diagnosis of AS outperformed their work colleagues. Whereas the current study's findings are in opposition to some degree of uncertainty expressed by Scott *et al.* (2015) proposing that, perhaps, the diagnosed employees were not as efficient. Participants reported that their current managers were reasonably supportive although some of them admitted they sought more recognition for their hard work and contribution. Some of them specifically said that their ideal manager should be receptive to innovative ideas. Both recognition for work and open-mindedness correspond with the inclusive culture concept, as suggested by Scott *et al.* (2015).

Participants reported that they did not fear work-related challenges (for example to take on more demanding work tasks) and although some reported they did not necessarily enjoy unexpected changes within their work environment, overall they all sought opportunities at work to step outside their comfort zone. Interviewees also admitted that they had been making a great effort in areas they believed needed improvement, for example their social skills and more effective communication with other team members. Nonetheless, despite making an effort, several participants admitted that they experienced difficulties in decoding social cues in their teams. These findings correspond with results by Vogeley *et al.* (2013), however, this study's findings additionally revealed that employees with AS found participation in workplace politics mentally draining, consequently impairing their work performance and potentially hindering career progression. That, perhaps, explains why they prefer work-related interactions to be factual and believe knowledge sharing among team members is essential. Contrary to the study by Parr, Hunter and Ligon (2013), the current findings indicate that employees with AS are team players and through knowledge-sharing or seeking work-related advice, they effectively cooperate with their colleagues. This could also be interpreted as a means of communication with a team.

Employees with AS reported a preference for honest feedback from their managers, some reported taking the initiative to regularly have one-to-one meetings with their managers, again, evidencing a willingness to communicate. Moreover, many participants emphasised that direct communication with their team could minimise misunderstandings and prevent miscommunication. Wareham and Sonne (2008) reported similar findings that direct communication resulted in better communication across the whole organisation. Therefore, the current study's findings suggest that employees with AS are considerate team members who are willing to use effective communication strategies with consideration to healthy dynamics within their whole team. However, their strong sense of competence and work ethic could sometimes create frictions within the team as these could be perceived by others as overconfidence. As a result, their productivity, self-improvement or initiative could be entirely misunderstood by their colleagues, similarly. Their factual communication style, as discussed by Hedley *et al*. (2018), can be perceived as arrogance. An interesting finding of the present study was that participants described being proactive and self-sufficient at work and shared that they genuinely neither wanted major accommodations nor expected everyone to understand some of the difficulties they experienced at work. Perhaps, for that reason, they worked twice as hard on self-development.

Some of the recurrent themes found in participants' responses touched upon hurdles to either career-progression, or self-improvement, which included their inability to play and decode workplace politics. Whereas traditional interviews' styles were one of the barriers mentioned most frequently by participants, as these interviews were often a major source of distress, frustration or anxiety. As mentioned by Hendrickx (2008), apart from the understandable unwillingness or simply, fear of diagnosis disclosure at the interview stage, employees with AS who participated in the current study believed that job interviews they attended were not AS-friendly. A similar critique of the traditional interview process was mentioned by Austin and Pisano (2017).

Findings of the current study also revealed that environmental factors such as noisy surroundings like canteens and bright fluorescent lights were problematic to most employees with AS. Similarly, these environmental barriers were also highlighted by Parr and Hunter (2014) and Hedley *et al*. (2018). Although participants were resourceful and applied their problem-solving skills to alleviate these issues by either switching the lights off or avoiding the canteen during peak times at lunchtime, their responses showed that an over-stimulating environment compromised their well-being and comfort. Consequently, these findings suggest that decreased job satisfaction or considering the option of supported employment may occur for employees with AS.

Interestingly, despite some barriers or difficulties experienced at work, employees with AS nearly downplayed their symptoms whereas they easily identified AS traits in others. Moreover, participants believed that the symptoms they experienced were not as severe in comparison to others on the autistic spectrum. Similarly to Kite, Gullifer and Tyson. (2013), in the current study these responses were interpreted as a way of distancing from autism and its negative connotations thereby protecting themselves from prejudices or being stereotyped by others as having special needs or a disability. This corresponds with the doubt one of the participants of the current study shared during their interview. The dilemma was whether to avail of the services offered by

supported employment or search for jobs independently to prevent being stigmatised when applying for prospective jobs. However, other participants had a positive experience with AS specific employment assistance services, and in the case of some participants, it resulted in being hired by the organisation which advocates and values inclusive culture. Moreover, they described greater job satisfaction in comparison to participants who never used the assistance of AS employment assistance services to find employment. This study's results correspond with the strengths of AS employment assistance services, as outlined by Austin and Pisano (2017). However, the current study gathered both advantages and disadvantages of this type of employment and this provides additional and, perhaps, more balanced insight. Supported employment services therefore may be less suitable for those who are unsure whether they wish their diagnosis to be known. As explained by Lorenz and Heinitz (2014), the diagnosis of AS could be stigmatising and detrimental to the self-worth of an employee, but the current study's findings did not find evidence to support it. In fact, this study's findings indicate that employees with AS described having stable self-esteem and believed their diagnoses were not obstacles to successful careers. Similarly to Krieger et al. (2012), participants of the current study emphasized how proud they were of their work accomplishments.

The current study is a valuable contribution to the existing research in workplace integration, through the exploration of experiences of adults with a diagnosis of AS, which may help to address the dearth of literature in this area and specifically within an Irish workplace context. The use of semi-structured interviews which resembled natural conversations, gave participants space and opportunity to share their workplace experiences (Vogeley *et al*., 2013; Pietkiewicz and Smith, 2014). As a result, the data gathered is rich in content. As already noted by Vogeley *et al.* (2013), previous studies narrowed their focus to the population of diagnosed children or their parents. Since autistic boys have been researched the most, this study has another asset: 66.7% of the sample were females. Up until now, studies including adult women with a diagnosis of AS have also been sparse. It needs to be considered that girls with a diagnosis of AS become women, but they do not grow out of AS. Therefore, we suggest that future research should include more female adults due to the existing gap in the literature. Another suggestion for future research is to give participants the option of giving written responses to interview questions. This would allow including the insights of participants who may find face-to-face communication with a stranger (i.e. a researcher) intimidating or anxiety-provoking (Griffith *et al*., 2012). It was recommended by Benford and Standen (2011) that this method of data collection is less energy- and mentally-taxing to some individuals with AS.

It is, however, worthwhile to note limitations of the current study, for example using the snowball sampling method which is prone to sampling bias. Its findings, though, could be limited to specific employees' population as 50% of them had a background in computer science. Moreover, either the age or gender of the researcher could have had an impact on participants-researcher interactions during interviews. As noted by Pietkiewicz and Smith (2014), female participants might have replied differently if a researcher was male. Since all participants extensively researched the topic of AS, the findings of this study represent their self-perceived beliefs and thus, should be interpreted with caution.

Additionally, as mentioned by Hedley *et al*. (2018), it might be worth conducting more studies that would also focus on the population of managers and work colleagues of employees with a diagnosis of AS which may allow exploring both sides of the story and balancing out currently available research on the topic of employment and Asperger's. The current findings could be utilised when designing the workplace environment and may be a valuable source of information when developing training workshops to educate about creating an inclusive workplace environment. Such training may be a beneficial preventative measure used for stigma and existing stereotypes reduction. Moreover, such training may minimise misunderstandings, prevent conflict escalations caused by different communication styles or simply, as noted by Randel *et al.* (2017), reduce staff turnover. As a result, perhaps to some staff members with a diagnosis of AS, these workshops, by encouraging an open discussion on Asperger's, could bring relief and alleviate the apprehension to disclose their diagnosis.

The current study's findings could have some practical applications, particularly at the hiring stage. This emphasises the role of HR and how they could help candidates with a diagnosis of AS to show their strengths at the interview. Based on these findings, it is suggested that the traditional interview style may need some modifications to better support AS candidates. Modifications refer to including more knowledge-based questions and emphasising the assessment of these candidates' practical skills (Austin and Pisano, 2017). Another idea, as proposed by one participant, is to audio-record interviews and reduce the interview panel to just one interviewer. Large numbers of people on panel-based interviews was a major source of distraction to the interviewee.

Managers who supervise AS employees may consider utilising more their problem-solving skills, whereas to motivate AS employees, they should clearly communicate recognition for their efforts and hard work but at the same time, when necessary, give them honest feedback on areas that need improvement. Participants disclosed they valued honesty, work relationships based on mutual trust and clarity in communication, and preferred constructive critique. Moreover, a lack of feedback on their performance makes them feel unsettled. Furthermore, the findings of this study suggest that AS employees benefited from regular one-to-one meetings. In line with Parr, Hunter and Ligon (2013) and Randel *et al.* (2017) that employees with AS sought a structured workplace, with clearly described, and communicated work goals. Also, managers should be approachable and, preferably, advocates of supportive and inclusive culture (Scott *et al.*, 2015). In accordance with Parr, Hunter and Ligon (2013), the authors of this study additionally suggest that such an empowering leadership style was found to be the most suitable for employees with AS. The current study's findings also suggest that these employees excel when they work in innovation-promoting work culture as they reported they sought sufficient work-related challenges. However, to maximise their potential and increase job satisfaction, environmental factors as previously discussed may need to be addressed first.

This study's findings revealed that the diagnosis of AS is irrelevant to having a fulfilling career and that its participants expressed the universal basic human need to be appreciated for their hard work. Thus, regardless of the diagnosis, it is only natural that workers seek recognition for their efforts. Employees with Asperger's who

participated in this study described themselves as productive, professional, and ambitious problem-solvers. Nonetheless, as found by Hedley *et al.* (2018), their self-confidence could be misread as arrogance. That is why, to minimise such misunderstandings and to improve overall communication in the whole organisation, the authors suggested that brief educational workshops raising awareness on AS should be organised for all staff members. Based on the previous research by Parr and Hunter (2014) and Vogeley *et al.* (2013) and this study's findings, the authors concluded that AS employees are resilient individuals and high-achievers who often have successful careers in spite of numerous obstacles to and within their employment.

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Work-Life Balance versus Work-Life Merge: a Comparative and Thematic Analysis of Workplace Well-Being

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Abstract
The aim of this mixed-methods research study was to test the traditional concept of work-life balance, which suggests workers can experience better well-being by being able to psychologically switch on and off. Participants were 133 full-time workers, split into two groups according to where their job was performed strictly at their place of business, or from a combination of workplace and home. Each participant completed quantitative online surveys that measured their perceived stress, life satisfaction and job satisfaction. Results indicated participants who worked from a combination of the workplace and home had significantly greater job and life satisfaction levels than their workplace-based counterparts. However, no significant difference was found between the two groups on perceived stress. Participants also answered qualitative questions about how their job impacted their personal life, how their job might be changed to improve personal time, and what motivated them to work. A strong emergent theme centred around time. Many complained of long working hours, giving them very little time to spend with family, friends or on personal pursuits. For some, stress and worry about their jobs bled into their home life, culminating in moodiness and difficulty in psychologically switching off. Whilst others were happy with the balance between their working and private lives, many wished for fewer and more flexible working hours. Conclusions drawn suggest there is real merit in offering flexible constructs to today's workers in order to harvest better psychological well-being in the workplace.
Keywords: Work-life Balance; Work-life Merge; Job Satisfaction; Life Satisfaction; Perceived Stress.

Introduction
Work-life balance (WLB) is characterised by achieving a state of balance, where the demands of a person's occupation and personal life are equivalent. Time and energy are evenly split between work and home life (Gyanchandani, 2017). The concept of WLB has been a focus of organisational psychologists since the 1990s (Cooper and

Cartwright, 1994), but it was not until the turn of the millennium that research into this area started in earnest (Chang, McDonald and Burton, 2010; Gambles, Lewis and Rapoport, 2006; Hughes and Bozionelos, 2007; Warren, 2015). Researchers have suggested that workers can successfully achieve WLB once they have clearly defined hours of work, effectively allowing them to psychologically switch on and off (Messersmith, 2007; Warhurst, Eikhof and Haunschild, 2008).

However, the validity of the traditional WLB viewpoint has been called into question (Warhurst, Eikhof and Haunschild, 2008), evidenced with findings of almost 70% of US workers reporting they are struggling to balance work and personal obligations (Schieman, Glavin and Milkie, 2009). Even the use of the term balance has been subjected to criticism (Day, Kelloway and Hurrell, 2014) by those who see it as misleading and not representative or relevant for today's Information Age workers (Day, Kelloway and Hurrell, 2014). The Information Age has changed the landscape of the organisation considerably with work driven by technology rather than physical labour. This has resulted in a change of lifestyle for employees and an increasing desire to work outside of the office (Attaran, Attaran and Kirkland, 2019). It may be useful to consider the implications of blending work with non-work hours as work-life merge (WLM) (Hinsliff, 2013). In the present study, WLM was examined to capture the lack of boundary between personal and working time that characterises employment arrangements for some individuals today.

Those working under conditions of WLB and WLM were compared across the well-being indicators of perceived stress, job satisfaction, and life satisfaction. To gain a greater understanding of the needs of today's workers, responses to three qualitative questions were also examined. These covered the impact and influence of work on one's personal life, and sources of work motivation.

Rationale for Research

Despite the concept of WLB being debated for decades, very few feasibility studies have been carried out on identifying psychologically healthy work environments and the impact, whether positive or negative, on employee well-being (Day, Kelloway and Hurrell, 2014). A meta-analysis by Chang, McDonald and Burton (2010) of 245 empirical WLB peer-reviewed research studies yielded inconsistent results. The researchers concluded that improvements in sampling frames and surveys/measures used were needed to identify and better understand how workplaces might impact the psychological well-being of their workers. Kelloway and Day (2005a) posited and stressed the importance of adopting a broad approach when analysing well-being in the workplace, embodying physical, psychological and societal contributing factors. Their holistic model looked at consequences in terms of individual outcomes, including physical, psychological and behavioural, organisational outcomes covering both employee and financial turnover, and societal outcomes such as government initiatives (Kelloway and Day, 2005b).

The shortcomings in previous studies are the key driving force behind the present research, which will strive to evaluate, analyse and understand the psychological well-being levels of today's Information Age workers. By drawing on Kelloway and Day's (2005b) holistic approach of encompassing outcomes pertaining to individuals,

organisations and societal factors, it is hoped these findings will give employers greater insight into the needs of their workforce, and help them create psychologically healthier workplaces. Further, it was envisaged that the richness of data obtained through responses to the qualitative questions included in this study would offer unique insight into the perceived needs of today's employees.

Literature Review

Work-life merge

As an alternative to WLB, WLM has gathered traction with the emergence of the Information Age. Employees may not have the luxury of psychologically switching off once their workday is complete. This is especially true for those who work flexible hours (Chen and Karahanna, 2018). Such employees may have instant fingertip access to servers, email accounts and clients through portable devices, meaning jobs may be performed outside of the traditional workplace environment. However, this flexible work model can result in the lines that once very precisely separated work and personal lives being eroded. IT workers, for example, can reboot servers from home at night and take time off in lieu. They may also choose to work remotely during peak commuting times and use the time the next day to run a personal errand or visit a doctor. While this concept of WLM is relatively new, the seeds were first sown as far back as the 1990s, when an increasing number of organisations began to offer flexitime to employees (Kossek and Ozeki, 1999). However, Kossek and Ozeki (1999) found employees were slow to take up such opportunities due to existing company cultures, coupled with ignorance around its effectiveness both from an employee and employer perspective. Three decades later, the introduction of remote wireless technology has made the workplace virtually unrecognisable. Such technology has brought with it a surge of interest by jobseekers looking to work remotely, as evidenced in 2017 by one online Irish jobs search engine (Gordon, 2018).

This new way of working introduces a departure from the traditional WLB way of living, and presents new challenges for researchers interested in analysing well-being. For example, what are the consequences, if any, for workers who are permanently switched on psychologically?

Job and life satisfaction

The link between a satisfied workforce and greater productivity has received longstanding attention by theorists and researchers (e.g., Chmiel, Fraccaroli and Sverke, 2017). In the 1950s, psychologist Frederick Herzberg posited that making a job more interesting rather than simply increasing pay led to greater job satisfaction, as well as harvesting employee psychological growth (Herzberg, 1987). His two-factor motivation-hygiene theory suggested that motivation was the key to improved job satisfaction. Poor hygiene factors such as salary and environmental conditions lead to job dissatisfaction. Herzberg was quick to add that dissatisfaction is not the opposite of satisfaction, i.e., an improvement in hygienic factors is not sufficient to create satisfaction (1987). Hackman and Oldham (1975) constructed their job characteristics model consisting of five core dimensions: skill variety, task identity, task significance, autonomy and feedback. They suggested these factors influenced three critical psychological states relating to meaningfulness, responsibility and results. When

these states were realised, increased motivation, performance and satisfaction would result, with decreased turnover and absenteeism (Hackman and Oldham, 1975).

More recently, Judge *et al.* (2001) conducted a meta-analysis of the relationship between satisfaction and performance. Their analysis of 312 correlations revealed a significant, yet moderate, corrected association of .30. The authors concluded that further evaluation of the mechanisms of the satisfaction-performance relationship was warranted. Zelenski, Murphy and Jenkins (2008) found a strong and consistent link between positive affect and productivity. Participants in their study were 75 middle managers employed in either the public or private sector. Links between affect and productivity were found at trait and state levels respectively: happy people were more productive, and people were more productive when happier.

Oswald, Proto and Sgroi (2015) determined that there are many advantages to achieving healthy levels of psychological well-being among employees. These included increased productivity and revenue, a more satisfied workforce, and ultimately, happier shareholders (Oswald, Proto and Sgroi, 2015). Greater well-being at work may bring about an improvement in employee creativity, productivity and loyalty, resulting in enhanced customer care (Sgroi, 2015). Such renewed positivity amongst the workforce may also benefit society at large, as well-being plays a key role in creating strong and thriving communities (Jeffrey *et al*., 2014).

In the present study, the job satisfaction measure used was affective rather than cognitive. Affective job satisfaction centres on workers' overall positive emotional judgment of their job (Moorman, 1993). It focuses on emotions by asking respondents about moods and feelings experienced when working. Positive feelings and positive mood are indicative of high job satisfaction. The first hypothesis of the present study was that there would be a significant difference between work-life balance (WLB) workers and work-life merge (WLM) workers on levels of affective job satisfaction (AJS).

Stress and flexibility in the workplace

Workplace stress is bad for business, with annual costs to employers in the region of $300 billion in the US (Smith, 2016) and £5 billion in the UK (Russell *et al*., 2018). Recognising that employees are a company's most valuable resource is a must in today's fast paced and competitive working environment (Hyacinth, 2017). If companies place increasing shareholder value above workforce well-being, they may find themselves severely out of pocket or even bankrupt due to costs of fighting cases brought by disgruntled employees (Hyacinth, 2017).

Legislation in Ireland and the EU outlines a 'Duty of Care' employers have to their employees to ensure they are not unduly compromised at work (Health and Safety Authority, 2018). The Economic Social and Research Institute recently identified several key work stressors amongst workers in the UK and Ireland, including emotional demands, time pressure, bullying/harassment/violence, physically demanding work, effort-reward imbalance, and long working hours (Russell *et al.*, 2018). The effects of such stressors may be reduced through creating support structures, developed through partnership between managers and co-workers

(Russell *et al.*, 2018). For example, Kelly *et al.* (2014) found that introducing increased supervisory support, with greater work schedule flexibility, resulted in decreased work-family conflict, employees feeling more in control of their lives, and an increase in life satisfaction. Participants also reported receiving adequate time to spend with loved ones, delivering much-needed psychological boosts (Kelly *et al.*, 2014).

Positive outcomes may be realised when employees are offered properly controlled flexible work options. This was demonstrated by Barnes (Ainge Roy, 2018). In an effort to improve employee well-being, the researcher ran a trial four-day working week, but still paid employees for five days. The result was increased job satisfaction and reduced stress. At the same time, the company suffered no loss of revenue or quality of service to its clients. As part of their extra four days off per month, each employee was obliged to work voluntarily in their local community one day per month (Ainge Roy, 2018). Volunteer work such as this not only serves the community, but also gives the employee an opportunity to give something back. Increases in both psychological well-being and self-reported health have been found among volunteers, particularly those who had a lower level of social integration than their counterparts (Piliavin and Siegl, 2007).

However, when not controlled properly, flexible offerings by employers can negatively impact employees and company performance. Research carried out at a large UK supermarket uncovered abuse in the management of zero-hours contracts implemented in order to keep costs down (Wood, 2016). Zero-hours contracts require employees to be available a certain number of hours per week, without specifying when. Wood (2016) found that the people working under zero-hour contracts experienced stress, negative effects on their personal lives, and poor feelings towards their employer. The Irish government recently outlawed the use of zero-hours contracts except in cases of emergency (Employment (Miscellaneous Provisions) Act 2018; Department of Employment Affairs and Social Protection, 2019), resulting in enhanced rights for workers. Employers can also benefit from such legislation. Researchers Motro, Ordonez and Pittarello (2014) found that zero-hours contracts can lead to lost revenue associated with dissatisfied customers, employee sick leave and legal challenges. Research from both self- and peer-reported studies of life satisfaction and subjective well-being strongly suggests that subjective well-being is a far-reaching and lasting phenomenon, not just a spur of the moment judgement (Pavot *et al*., 1991). In the present study, the second hypothesis was that there would be a significant difference in levels of well-being measured as a) perceived stress (PS) and b) satisfaction with life (SWL) between WLB and WLM workers.

Wood and Michaelides (2016) discovered that not all workers who wish for more autonomy and flexibility by being their own boss could escape the hazards of work-related stress. They found that as demands on freelancers increased, so did their anxiety and stress levels. The researchers determined that an increase in working hours alone was not detrimental to well-being, but rather brought calmness and greater enthusiasm. If workload difficulty was increased, however, home life was negatively impacted. Interestingly, less time spent at home was associated with less work-family/non-work interference (Wood and Michaelides, 2016). This demonstrates that longer hours alone may not be an issue for employees, but if demands are

unreasonable and workloads increase, stress can result. The third hypothesis of the present investigation was that there would be a significant difference in levels of satisfaction between WLM workers who have flexible working arrangements (WLM Flexi) and those who do not (WLM Non-flexi). Satisfaction was measured as both SWL and AJS.

Qualitative research has proven useful in providing perspective on work and non-work roles. Gyanchandani's (2017) qualitative study on work life balance reinforced the importance of uncovering and understanding employees' needs relative to their work, life, self and other issues, when implementing effective work-life policies. Murthy and Shastri (2015) found that gaining a greater understanding of coping strategies that workers employ to balance their work and home life may help organisations in designing employee-focused policies. In the present study, open-ended questions were used to examine participant perceptions of work motives, and the relationship between personal and working lives

Methodology

Participants

A convenience sample of 133 individuals voluntarily took part in this investigation. All gave informed consent for participation. Fifty respondents were male and 83 female. They ranged in age from 18–65 years. All were presently employed and worked a minimum of 20 hours per week.

Based on responses to questions on place of work, participants were assigned to either a WLB or WLM group. WLB (n=90) employees worked solely from their place of business. WLM (n=43) persons worked partially from their organisation and from their home. According to reported availability of in-place flexible work arrangements with their employer, WLM participants were further classified as either WLM Flexi (n= 31) or WLM Non-flexi (n=12).

Materials

Questionnaires included items measuring the demographic variables of gender, age group, average hours worked per week, and place of work. Incorporated pre-developed measures included the Perceived Stress Scale (Cohen, Kamarck and Mermelstein, 1983), the Satisfaction with Life Scale (Diener *et al*, 1985), and the Brief Index of Affective Job Satisfaction (Thompson and Phua, 2012). Three qualitative questions developed for the present study were also included: How does your job impact or affect your personal life? What would you change about your job to enhance your personal life? What motivates you most about working?

The Perceived Stress Scale (PSS) is a self-report instrument designed to measure an individual's perception of stress during the past month (Cohen, Kamarck and Mermelstein, 1993). For the present study, a shorter 4-item version of the Perceived Stress Scale was used (PSS-4). This has been found to be a sufficient and suitable tool for assessing perceived stress levels (Vallejo *et al.,* 2018). Sample items include: "In the last month, how often have you felt that you were unable to control the important things in your life?" and "In the last month, how often have you felt confident about your ability to handle your personal problems?" Items are rated on a 5-point Likert type

scale ranging from never (0) to very often (4). Scores are totalled for a possible range of 0-16. Higher scores indicate greater perceived stress. In the present study, internal reliability (Cronbach's α) for this scale was .75.

The Satisfaction with Life Scale (SWLS) measures the judgemental component of subjective well-being. Diener *et al.* (1985) reported a moderate to high correlation between SWLS and other scales measuring subjective well-being, providing evidence of construct validity. The SWLS consists of five items. An example is: "So far, I have gotten the important things I want in life." Each is rated on a 7-point Likert type scale, ranging from strongly disagree (1) to strongly agree (7). Scores are totalled, and range from a low of 5-9 to a high of 31-35. During the present investigation, internal reliability (Cronbach's α) for this scale was calculated at .90

The Brief Index of Affective Job Satisfaction (BIAJS) was designed in response to criticism of previously developed measures of affective job satisfaction. Other scales were lengthy, and measured job satisfaction cognitively rather than affectively (Thompson and Phua, 2012). The BIAJS consists of four items and three distractor questions. Each is rated on a 5-point Likert type scale ranging from strongly agree (1) to strongly disagree (5). A sample item is "I find real enjoyment in my job." Total job satisfaction is indicated through summed responses, ranging from a low of 4 to a high of 20. Higher scores are indicative of greater job satisfaction. In the present study, internal reliability was indicated with a Cronbach's α coefficient of .88.

Design and Analysis

A prospective, mixed-methods research design was used. Between-subjects analysis provided comparison of self-reported levels of perceived stress, satisfaction with life, and affective job satisfaction across participant groups. A qualitative thematic examination was carried out on responses to the three open-ended questions examining the relationship between work and personal life, and determinants of work motivation. Braun and Clarke's (2006) six-steps of thematic analysis was used. The process began with familiarisation with data, followed by the creation of initial codes and identification of themes and sub-themes. Thematic maps were constructed, and acted as visual guides as themes and sub-themes were repeatedly reviewed and refined. Finally, a thematic report was then created, supported by direct quotes from participants.

Procedure

Participants were recruited through an online link which was posted on Facebook, LinkedIn and WhatsApp. An information sheet advised participants of the nature of the study, and that it would take approximately 5-10 minutes to complete. As a pre-requisite to participation, respondents were asked to indicate whether they were 18 years of age or older, worked a minimum of 20 hours per week, and consented to take part in this survey. Online surveys, created through Google Forms, were then completed anonymously.

Results

SPSS v.25 was used to run descriptive and inferential statistical analysis. NVivo v.12 was used to carry out the thematic analysis of responses to the three qualitative questions.

Descriptive statistics

Of the 133 participants, 50 were male and 83 female. They ranged in age from 18-65. The largest proportion belonged to the 46-55 age group (36.1%), and the second most frequently indicated was the category of 26-35 (26.3%).

Sixty-eight percent of the sample reported working solely from their place of employment (WLM); Thirty-two percent performed their jobs from a combination of their organisation and home (WLB).

Participants indicated the number of hours they worked on average per week. These are presented for the WLB group in Figure 1. For this group, hours ranged from 20-29 per week (16%) up to 50-59 (9%). Most persons (76%) reported working in the overall range of 30-39 or 40-49 hours. A different pattern emerges for participants in the WLM group, as shown in Figure 2. Here, respondents indicated a wider variety of hours worked per week, with a close 3-way split between the categories of 20-29, 30-39 and 40-49. A slightly higher percentage of the WLM merge group worked over 50 hours per week (11%), compared to WLB participants (9%). The WLM group, alone, indicated a small percentage of persons working over 60 hours per week.

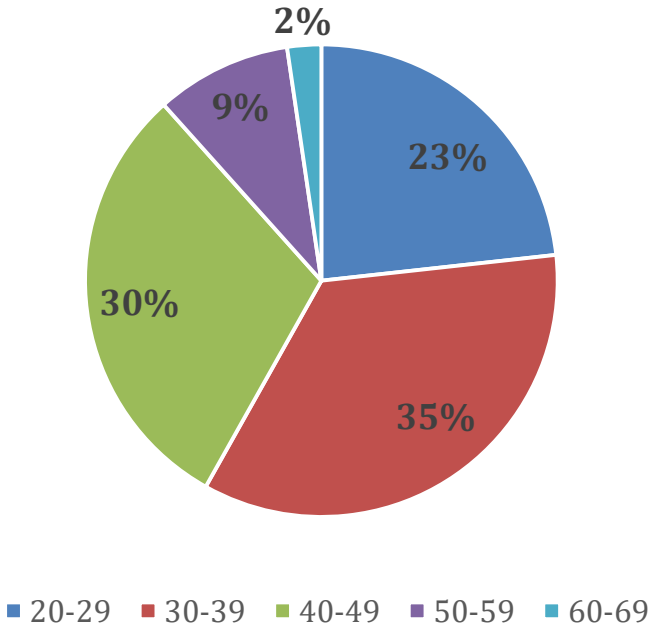

Figure 1: Average hours worked per week by the work-life balance group.

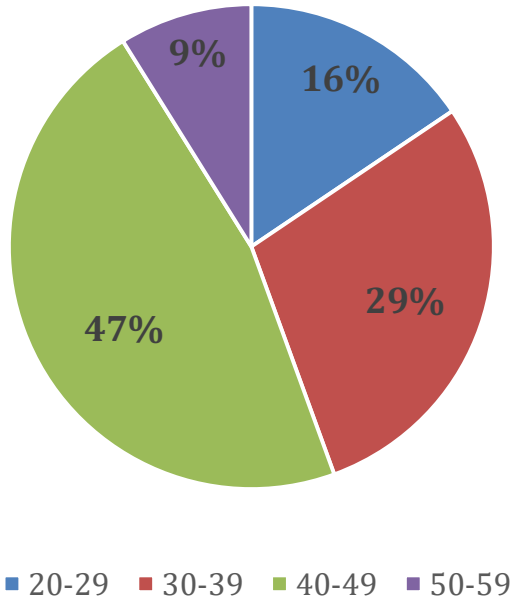

Figure 2: Average hours worked per week by the work-life merge group

Descriptive statistics for each of the scales completed by participants are presented in Table 1. Cronbach's alpha levels indicated acceptable internal consistency for each measure.

Table 1: Descriptive Statistics for Scales

Scale	N	Mean	SD	Cronbach's α
PSS	127	6.20	2.76	.75
SWLS	132	24.43	6.36	.90
BIAJS	132	14.60	3.04	.88

Preliminary analysis of the data indicated violations of parametric assumptions. Therefore, non-parametric Mann-Whitney U tests were used for inferential analyses. A Shapiro-Wilk test was conducted for each of the scales to test hypothesised distribution normality. Results are shown in Table 2. For each scale, scores significantly ($p < .05$) deviated from a normal distribution. Accordingly, non-parametric analyses were used to evaluate differences between groups.

Table 2: Results of Shapiro-Wilk Tests of Distribution Normality

Scale	W	n	p
PSS	.98	125	.035
SWLS	.94	125	.000
BIAJS	.98	125	.000

Inferential Analyses

The first hypothesis was tested by comparing affective job satisfaction across WLB (n = 90) and WLM (n = 42) groups. A Mann-Whitney U test revealed that the WLB condition (Mdn = 15) and the WLM condition (Mdn = 16) significantly differed in affective job satisfaction levels (U = 1.97, p = .049, r = .17). This provided support for Hypothesis 1.

The second hypothesis compared WLB and WLM participants on a) satisfaction with life (SWL), and b) perceived stress (PS). Significant differences in SWL were indicated through a Mann-Whitney test (U = 2.17, p = .030), comparing the WLB (n = 89, Mdn = 28) and the WLM groups (n = 43, Mdn = 28). However, no significant difference (U = -.40, p = .690) was found between the two groups in PS (WLB n = 86, Mdn = 6; WLM n = 41, Mdn = 6).

The third hypothesis examined satisfaction with life and affective job satisfaction across the WLM Flexi and WLM Non-flexi groups. A Mann-Whitney test indicated significant differences in SWL between the two groups (U = -3.05, p = .002, r = .47; WLM Flexi n = 31, Mdn = 30; WLM Non-flexi n = 12; Mdn = 21.5). However, no significant difference in affective job satisfaction was found between WLM Flex (n = 30; Mdn = 16) and WLM Non-flex participants (n = 12; Mdn = 15.5; U = -.38, p = .736).

Qualitative Analysis

Familiarisation with data and initial coding

The raw data was reviewed to establish familiarity before generating initial codes using Braun and Clarke's thematic analysis (2006). Initial codes were then expanded into themes identifying similar trends amongst responses, e.g., complaints about long working hours, negative impacts on health, positives aspects of working in structured environments, and relations between work and desired standard of living. The themes were continually refined and grouped together, yielding the thematic models shown below.

Themes

Question No. 1: "How does your job impact or affect your personal life?"

Four overarching themes were identified in response to the question of how one's job impacts or affects their personal life. These included potential drawbacks, such as "Takes up too much time"; "Negatively affects mental health." Positive effects were also found, as indicated through themes of "Brings benefits and positivity"; and "Brings structure and balance". Figure 3 illustrates links between emergent themes and sub-themes.

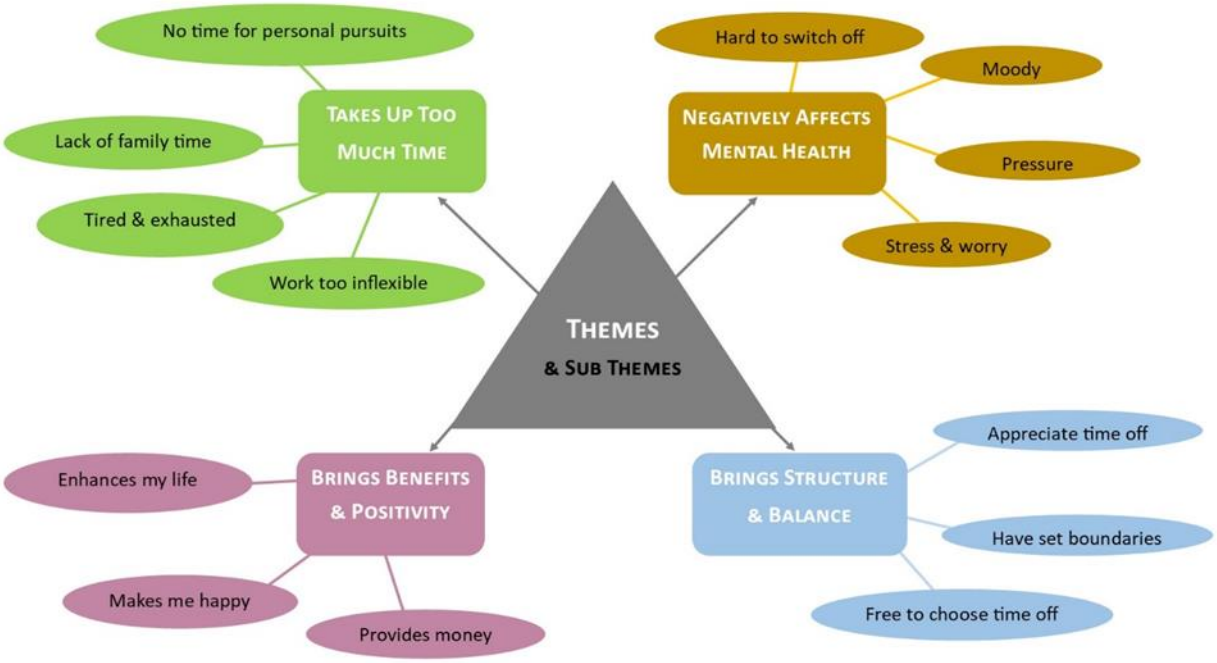

Figure 3: Thematic map: How does your job impact or affect your personal life?

Theme 1: Brings benefits and positivity

Participants spoke of the many benefits and positive affect their jobs had on them. Some viewed their job as an enhancement to their personal life. For example:

> Participant 99: "If work is going well it helps my personal life too."
>
> Participant 22: "I am happy with my job therefore happy with my life."

Others spoke of how remuneration from their job enabled them to fund their personal life and enhance their standard of living:

> Participant 118: "It provides me unique opportunities and a gold standard of living."
>
> Participant 21: "Gives me satisfaction and money to fund my personal life."

Theme 2: Takes up too much time

A strong theme throughout the answers given was around the issue of time and the negative impact of its restriction on their personal life. Participants also spoke about lack of flexibility with work hours resulting in less time for family or personal pursuits:

> Participant 25: “It takes a lot of my personal time and as such it prevents me from fully enjoying my family.”

> Participant 10: “Restricted with flexibility - main problem. I have to work 9-5:30 no exceptions.”

Others acknowledged the role technology played in blurring the boundaries between work and personal time:

> Participant 89: “It somewhat impacts due to new technologies breaking down the divide between work time/personal time.”

Some took a more pragmatic viewpoint when acknowledging the impact of technology, and its resultant merge between personal life and work:

> Participant 83: “Extensively.... but I accept the nature of the role I'm in is labour intensive (in stints). By accepting that and being aware, it makes other of my life easier to assess and manage. Of course, at times, it’s straining on my personal life and I've probably lost out on some interests but I'm playing the long game and you must sacrifice to get places. If you think emails are on my phone, research is on my phone, etc... there isn't much getting away from it so I see it that my life and profession are to be managed as one entity as opposed to "my Life and my Job".”

Tiredness as a result of working long hours was also an issue for many participants, resulting in having limited time with family and friends. It also brought on feelings of guilt for some:

> Participant 111: “My job is so tiring mentally that I do not want to have many interactions once I am off work. It also impacts the people with whom I spend personal time.”

> Participant 12: “It's hard to juggle family life and work with young children. Feelings of guilt and being tired.”

Theme 3: Brings structure and balance

Some participants spoke of being able to establish boundaries between their working and personal lives, and having good work-life balance. This seemed to be easier for those who had greater flexibility in their work:

> Participant 94: “It is great because I can choose my own days off to a degree as I am my own boss.”

> Participant 69: “Not really as I am free to choose my time off.”
>
> Participant 7: “My job doesn't affect my personal life adversely. I have a fairly good work life balance.”

Other participants regarded the impact their work had on their personal life as something they could control in order to minimise negative effects:

> Participant 45: “Tend not to bring work physically nor mentally home with me. This is something I learned to rather than instructed to do.”
>
> Participant 4: “I have established boundaries around work and home to make sure they don't impact each other”

Theme 4: Negatively impacts mental health

There was a strong theme around mental health and the negative impact of work on it. Strong feelings were expressed, with many describing how hard it was to mentally switch off from the stress of their job. Worrying about work when at home was a common complaint amongst some participants:

> Participant 18: “Can be worried about managing well in work. Worry at home then.”
>
> Participant 19: “Hard to switch off. Lot of support expectations.”
>
> Participant 127: “It can be hard to let go, I am often left with the emotions, stress, worry, anxiety, fear, self-doubt, feeling not good enough, inadequate. These feelings can be hard to shake off and so are sometimes clouding who I am in my personal life.”

Not being happy in work had the potential to negatively impact participant mood and feelings of happiness:

> Participant 35: “It often causes me unhappiness.”
>
> Participant 87: “Feel sometimes unsatisfied and therefore more moody in my personal life.”

Question No. 2: “What would you change about your job to enhance your personal life?”

Five overarching themes merged in response to the question of what could be changed about one’s job to enhance one’s personal life. These spanned increasing pay and changing jobs, improving work structures, and freeing up personal time. An additional theme indicated that some would not change anything about their present job. Themes, along with their sub-themes, are presented in Figure 4.

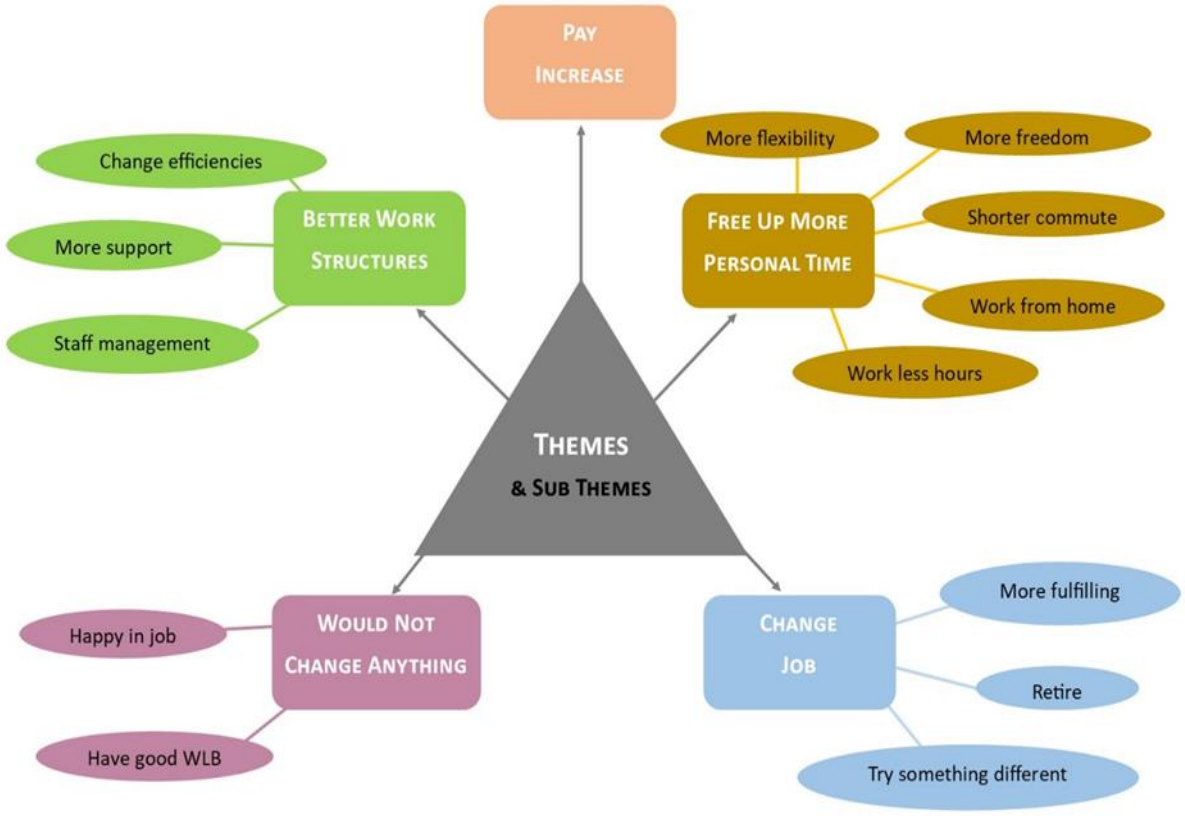

Figure 4: Thematic map: what would you change about your job to enhance your personal life?

Theme 1: Pay increase

For some participants, the only change they would make to their jobs in order to enhance their personal lives would be an increase in earnings:

> Participant 30: “Better salary!”

Theme 2: Better work structures

Some participants expressed frustration about in-place work structures, and felt that improvements were needed to foster engagement and better use of skillsets.

> Participant 111: “I would have a job that allowed me to utilise my skills, not one that dealt with so many topics which I find exhausting and uninteresting.”

> Participant 93: “Make it more challenging.”

> Participant 127: “More support, training, time to do paperwork, team building, skills developing.”

Theme 3: Free up more personal time

Many participants indicated a strong desire to change their working hours, to avoid interference with personal time:

> Participant 43: “I would like to be able to plan my work commitments/ tasks so they better align with my personal life's commitments. This is not very realistic though.”

> Participant 64: “Minimising the amount of work I need to take home.”

Some participants spoke of taking control over any encroachment on non-work hours:

> Participant 83: “I think it's important if you have access to "work" outside of work, on your phone or otherwise, that you decide when you are offline. This is probably the one thing I've changed, and had to change…”

A greater level of flexibility and freedom in the workplace was also a common thread found throughout the answers:

> Participant 10: “Having more flexibility in my working hours.”

> Participant 48: “Would like to be able to work slightly less hours. Getting home earlier in the evening would make a huge difference.”

Many participants expressed a wish to have the option of working from home and a reduced commute. Others wanted to work shorter days or change over to part-time work. Some believed this could be achieved with better use of technology and/or hiring more staff:

> Participant 46: “Either a combination of working from home and the workplace or hire additional staff to reduce the long days of work.”

> Participant 103: “Less travel from Donegal to Dublin for meetings/greater use of technology.”

Theme 4: Would not change anything

Some participants had no desire to change anything about their jobs and were happy with the status quo. Those who elaborated further on their reasons for being happy with their current work set-up spoke of an element of freedom and autonomy existing in their lives:

> Participant 125: “Not much, I'm very lucky in the sense that my job has a great work/life balance and allows for exploration of interests.”

> Participant 62: “I have created my job and I really like it.”

> Participant 69: “It does not impact my personal life as I can do my work as I see fit most of the time.”

Theme 5: Change job
Some wished to change their roles entirely, retire, or try something different to gain greater fulfilment, even with less pay:

> Participant 82: "My current role is not what I would like to do long term. I am well paid so appreciate that I need to work hard and am happy to do so but I would prefer to do this in a role that I truly enjoy even if that involves lower pay."

Question No. 3: "What motivates you about working?"

Figure 5 presents emergent themes and subthemes in response to the question on work motivators. Over-reaching themes encompassed internally experienced "Learning and improving" and "Job satisfaction". Additional themes included the opportunity for "People interaction" and "The pay cheque".

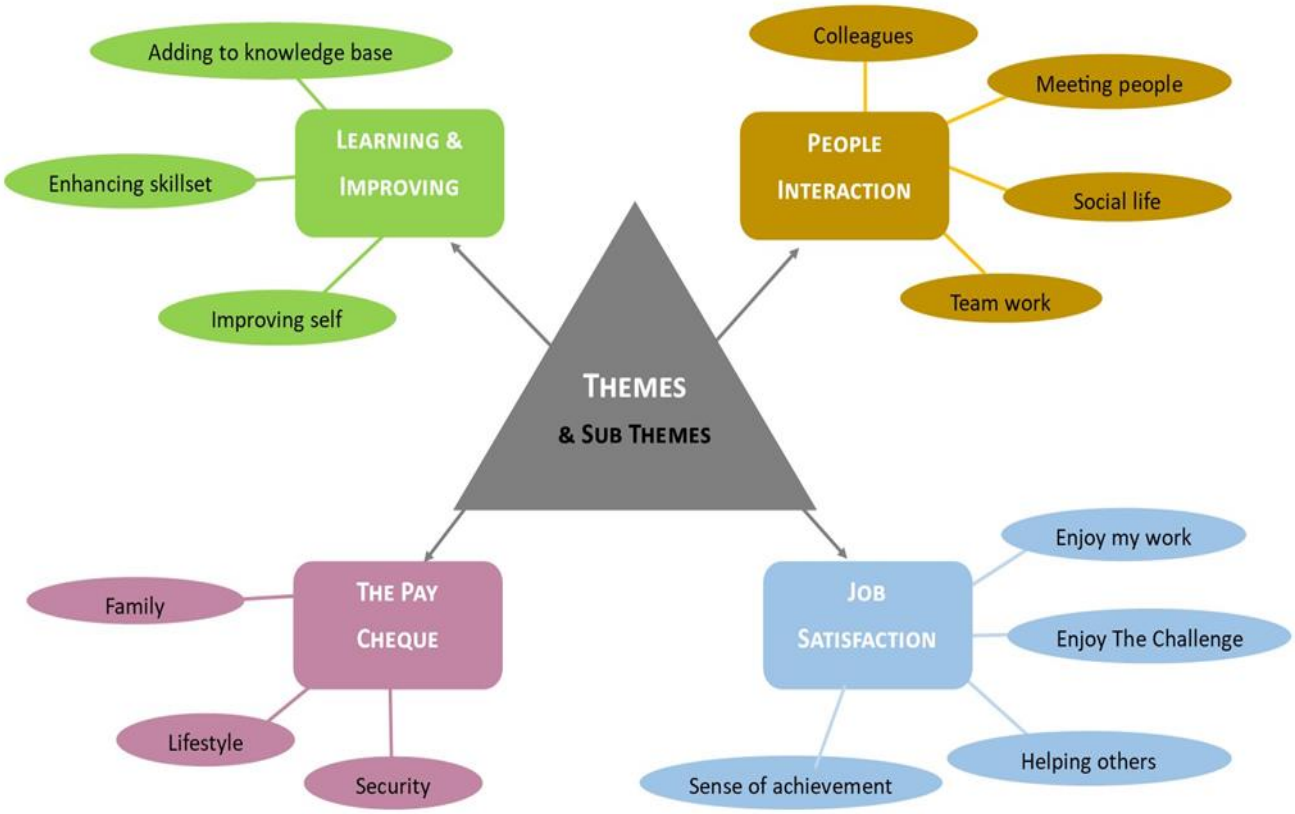

Figure 5: Thematic map: what motivates you about working?

Theme 1: Learning and improving
Learning new things and improving their skillset acted as motivating forces for some participants, for example:

> Participant 90: "The challenge to continuously improve myself and learn new things."

> Participant 128: “Learning new things and bettering skills I have.”

Others found that the challenge of each day being different served as a motivator:

> Participant 118: “Every day can be different, but all with the same background of technology consulting. Different clients and different technologies, but all technologies.”

Some wanted to make a difference in the lives of others, while at the same time bettering themselves:

> Participant 110: “The idea of making a difference in someone's life and wanting to constantly become better at what I do.”

Theme 2: People interaction

A strong motivating force for many was the positive experience gained through interacting with others, whether clients, customers or fellow colleagues. Participants were quite enthusiastic about this aspect of their working lives:

> Participant 12: “I love what I do, teaching something I am very passionate about and interacting with people.”

> Participant 90: “The possibility of changing a person’s life.”

> Participant 41: “Making a difference to as many people as possible.”

Those who developed good relations with colleagues and enjoyed teamwork were further motivated by these experiences:

> Participant 82: “Being in a collaborative environment where a small a team we try to achieve goals is a real motivator for me.”

> Participant 120: “Great colleagues, interesting work.”

The social life and simply experiencing the positives of being with others was another force identified:

> Participant 51: “Being useful, having a purpose, socialising.”

> Participant 17: “I love to interact with people.”

Theme 3: Satisfaction

Deriving satisfaction was a very strong theme among respondents both from a professional and personal point of view, with a link between job satisfaction and personal satisfaction:

> Participant 68: “Job satisfaction. I can see that what I do has a positive impact on the children I work with.”

> Participant 88: “Personal fulfilment.”

> Participant 52: “Personal satisfaction and money.”

Satisfaction also stemmed from helping others, with a knock-on effect of making some participants feel good about themselves:

> Participant 22: “The fact that I make people feel good.”

> Participant 45: “I work in training and education so seeing others achieve makes me feel good about myself.”

Some participants were motivated by the feelings they got from accomplishing tasks and from feeling useful. Others were encouraged when their efforts were acknowledged by their employer. Some enjoyed the challenge of a job well done as well as helping the business to be successful:

> Participant 13: “Feeling of accomplishment and being useful.”

> Participant 131: “Acknowledgement from my employer of my work.”

> Participant 109: “Doing things right and to the betterment of the business.”

Theme 4: The pay cheque

Some participants cited money as their sole reason to work, as it was necessary to meet basic requirements:

> Participant 49: “Got to pay the rent and bills.”

> Participant 35: “Security.”

Others indicated that while money was the main driving force for work, personal interest in their job was also important:

> Participant 43: “Interest in the work itself is a factor but mostly it is down to pay.”

> Participant 96: “Money. And career progression and achieving/exceeding targets. But mainly money.”

But for some, it was all about the pay cheque:

> Participant 37: “Pay day. I have zero self-worth invested in my job. I'm not a career person.”

Others were keen to believe that money could not be the only driving force behind going to work. Some linked achieving their goals with basic survival, which brought with it a sense of reward:

> Participant 83: “I think we all work for money but there has to be more to it to be satisfied. My role is very goal-orientated because if we don't achieve our goals we're out of a job. The whole process gets me up and motivated as a result... it's rewarding work I guess.”

Discussion

The purpose of this mixed-methods research study was to test the traditional work-life balance concept that workers experience better well-being by being able to psychologically switch on and off. By bringing in both elements of quantitative and qualitative analyses, it was hoped the findings would offer a deeper understanding surrounding workplace well-being, as well as garnering valuable insights pertaining to workers' thoughts and needs in this Information Age.

As hypothesised, results indicated significantly higher levels of both life satisfaction and job satisfaction among WLM participants compared to WLB members. Previous research suggests that satisfied employees can result in better performance output (Zelenski, Murphy and Jenkins, 2008) and increased revenue (Oswald, Proto and Sgroi, 2015). Enhanced employee productivity was also found to be linked to greater levels of loyalty and customer care (Sgroi, 2015), as well as the formation of strong and thriving communities (Jeffrey *et al*., 2014).

In this study, the WLM group was split into two groups—those with and without flexible arrangements in their jobs—and, as hypothesised, the more flexible group reported significantly higher life satisfaction levels. This suggests there is real merit as demonstrated in previous research (Kelly *et al*., 2014) in management intervening and constructing the correct level of support and flexibility for workers.

Qualitatively, participants were asked to describe how their jobs impacted their personal lives, what they would like to see changed, and what motivated them to work. Themes that were identified ranged from positive impacts such as structure and financial security, to negative mental aspects such as worry, stress and unhappiness that spilled over into workers' personal lives. Such findings highlight the value of Kelloway and Day's holistic model that addresses many of these concerns (2005b).

A strong complaint amongst participants was they did not have enough time to spend with family or on personal pursuits. Desired changes ranged from better work structures to more flexible working arrangements. Some suggested that these alterations should be possible with today's remote technology. A growing interest amongst Irish employees in working from home (Gordon, 2018) highlights a need for progress in this area. Some participants were quite happy with the ratio of work-life balance they had already achieved in their lives.

Motivating factors ranged from the pay cheque to a real desire to want to learn more and improve skills. Many participants expressed how work challenges, plus interacting with clients, customers and colleagues, were key motivators for them. Many also had a strong desire to help others.

Whilst a few participants in this study spoke of achieving a good work-life balance, the majority indicated struggles with long working hours and commutes leaving them too exhausted to enjoy personal pursuits. This is consistent with Day, Kelloway and Hurrell's (2014) consideration of balance as a misleading representation of what today's workers achieve across their work and personal lives.

The findings of the present study reinforce the importance of separating work and non-work hours. Job and life satisfaction levels were higher for workers who were not tied to the workplace every day. This suggests that a degree of flexibility may be key in achieving greater well-being. Wood (2016) similarly found that restricted flexibility had a negative impact on workers.

Participants expressed a need for more support and better work structures in the workplace. They indicated how much they were motivated by new challenges, learning, and helping others. Interestingly, this suggests that despite extensive research on work-life over the past three decades, there remains a need to create opportunities which allow for employee development and growth. The importance of addressing higher order needs in the workplace was posited in the early motivational theories of Herzberg (1987), and Hackman and Oldham (1975). It appears that related work-based opportunities remain an important consideration to employees today.

Based on findings from this study, a need for organisations to address basic, lower order needs also continues to influence workers. A strong theme of exhaustion from participants working and commuting over long periods emerged, as well as complaints of pressure to perform whilst 'off the job'. Some participants spoke of how today's technology blurs the lines between their work and private lives. This was either accepted as a new way of living, or found too intrusive and invasive.

The strengths of this study lie mainly in its attempt to learn and understand more about the well-being of today's Information Age workers by giving them an opportunity to put their thoughts and needs into their own words. None of the qualitative questions presented were compulsory, yet many chose to take the time to talk about themselves—some quite personally. The quantitative element of this study used well-established scales. Findings were enhanced by the richness of qualitative data gathered and analysed. The sample size was quite adequate, with a good split between numbers in the WLM and WLB groups. Participants provided a good representation across age and sex.

Conclusion

The findings in this study call for a need for a more contemporary approach by researchers when analysing and addressing variables that help to promote psychologically healthy workplaces, and for these new learnings to be communicated effectively to employers and policymakers. Psychological well-being in the workplace is an area that has been heavily researched by organisational psychologists, but perhaps what is lacking are real practical models that are fit for purpose in creating healthy work environments and healthy minds. Employers may not fully understand and recognise the far-reaching and mutual benefits to be had by adopting and managing flexible work constructs. Failure to be cognisant of peoples' needs comes with serious consequences, as has been evidenced across the globe in recent years. Herzberg (1987) spoke of how people want to be interested, motivated and engaged, but not forgotten, ignored or left behind. Significant findings, such as those found in this study and comparable studies, coupled with Kelloway and Day's (2005b) holistic model of adopting a broad approach, should act as a blueprint for future researchers,

policymakers and management interested in harvesting psychological well-being in today's workplaces.

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Psychometrics at Work: How to Ensure Test Results You Can Trust

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Abstract
Psychometric testing is considered as the intersection of the fields of psychology and business, with potential benefits to both employees and employers. Recommendations for maximising contributions of occupational testing are presented. These are evaluated across five phases of the assessment process. The first is choosing a test, bearing in mind both psychometric and practical qualities of measures. Next, ways to increase positive responses to testing are discussed. The process of administration is examined, with suggestions for improved accuracy. Recommendations for score interpretation are provided, taking measurement error into account. Finally, implications for communicating test results are drawn. It is explained that these facets of psychometric testing are key in ensuring accurate, meaningful and trustworthy workplace measurement.
Keywords: Psychometric testing; Selection; Employee assessment; Test user.

Introduction

Psychometric testing is now a well-engrained part of employee decision making within organisations. Assessment results are used to help evaluate suitability for hire, determine match with organisational values and culture, examine best-fitting career options, build effective work teams, and ascertain potential for leadership (Bailey, 2017; Kantrowitz, Tuzinski and Raines, 2018). Standardised testing offers the potential for accuracy, validity and fairness. Through tests, detailed information on candidates can be easily compiled and compared. As a result, decisions may be made in an efficient and cost-effective way.

Psychometrics, Psychology and Business

Psychology and business intersect at the point of psychometric testing. Psychology contributes the mechanisms of psychometric measurement, including test construction and validation (e.g., Kline, 2005). It also provides a pathway for understanding the impact of testing on individual employees. Businesses provide an avenue to widely apply test results, and to realise associated gains.

In applications such as selection, psychometric testing offers businesses the chance for improvements in the efficiency, validity and utility of employment assessment

(Schmidt *et al.*, 1979). Testing makes it possible to provide transparent and fair comparison of employee attributes. Positive impressions of employers may result. Those participating in work-related assessments may gain self-understanding, personal development, and defined opportunities for change and growth.

Key considerations are discussed below, with recommendations on how to ensure test results that are meaningful, useful and trustworthy.

1. Choose the Right Test

Before selecting a test for workplace applications, what needs to be measured must be clear. A systematic job or work analysis should determine the knowledge, skills, abilities and key characteristics required for a position (Cook, 2016). Based on this analysis, a job specification can be prepared, identifying the personal attributes needed to perform the work (Riggio, 2013). Informed decisions on how to best assess those qualities can then be made. Testing may be a useful option for measuring attributes needed for the job.

A multitude of work-related tests are available today. These include measures of ability and aptitude, ranging from job-focused administrative or mechanical skills to advanced reasoning. Tests of work values, motives and interests may help to ensure the right match between employees and their organisations. Measuring capacity for emotional intelligence, coping or resilience may be useful for career and leadership development. Personality type assessments such as the Myers-Briggs Type Indicator® can promote self-understanding and team building, while more in-depth trait measures like the NEO personality inventory and the 16pf® are invaluable in selection and talent management. Regardless of the kind of test, decisions as to which to use should take into account evidence of the psychometric qualities of the instrument. These include:

Reliability and Validity

Evidence for reliability, or consistency of the test, and the validity, whether it measures what it claims to, may be available from the test publisher. It is up to the test user to determine whether or not there is sufficient evidence of these qualities to meet the purpose at hand. For example, is there evidence that similar scores can be expected over brief periods of time? In other words, is there sufficient test-retest reliability? This question becomes important if a test will be used both for remotely administered, unproctored screening of job candidates and securely managed re-assessment to verify applicant scores before hiring.

Standardised scoring

With normative tests, performance is determined through comparison with scores from a group of persons who previously completed the assessment. In this way, scores are translated from raw data into standardised formats such as percentiles, t-scores or stens.

A question for consideration is whether the comparison or norm group used for a specific measure appropriately matches the present testing participants (e.g., Miller and Lovler, 2019). For example, when assessing verbal reasoning ability for a group of office administrator applicants, could a comparison group of professionals and managers be used? If so, the administrator candidates might be disadvantaged. The

professional/managerial group may have high verbal ability scores due to advanced education or beneficial experiences. This would result in the administrator scores comparing poorly. A more suitable comparison group might be drawn from a general working population, representing persons from backgrounds that include office administrators.

Practical considerations should also play a role in determining which test best matches present assessment requirements. For example:

Accessibility
Is the test accessible, based on the purchaser's qualifications and background?
Specific training or qualifications are often necessary to purchase and work with psychometric measures. Requirements vary by the type of test and proposed use, so it is important to check with a test's publisher on qualifications needed to purchase or use the test. If regular work with psychometric measures is anticipated, it is helpful to complete a course such as the British Psychological Society/European Federation of Psychologists Associations (BPS/EFPA) Occupational Test User training (BPS, 2019). With in-depth measures, additional specific instruction may also be required in order to purchase and work with the test.

Pricing
Does use of a test fit within allowed budget?
Pricing varies widely across different kinds of assessments. Factors affecting costs include the format for administration, method of scoring, and type of report or results required.

Generally, ability and aptitude tests are less costly than in-depth measures of traits or complex attributes. For example, Selection by Design offers on-line tests of verbal, numerical and abstract reasoning for under €15. Complex, in-depth measures are generally priced higher. Selection by Design's 16pf competency reports range in price from €20 to €35, while personality reports range from about €25 for a profile report to around €85 for audience-tailored, comprehensive personality evaluations (https://www.selectionxdesign.com/16pf-report-options/). Similar patterns of pricing can be found across UK based test publishers, such as PSIonline, Criterion, and Hogrefe.

Paper and pencil formats and hand-scoring may offer savings, but are time consuming to administer and score. Many test companies are presently moving towards only offering on-line assessment and computer-generated results reports.

Security
Choice of format will also depend on needs for security. This relates to the question of how the test will be administered to test-takers.

As outlined by Bartram (2006), four different modes of test administration may be considered. These range from the open, uncontrolled mode to the very secure, managed mode. Many tests used in employment settings require either a single use login link, or supervised administration in a controlled setting. If remote testing is initially used, it may be followed with secured, in-person re-assessment to verify

scores. Options available for administration mode vary by test, so it is best to check with the publisher on whether present needs can be accommodated.

For computerised administration, individually-tailored test versions created through adaptive modelling or randomised item ordering may be available. For example, with the Smart-aptitude series by PSIonline, items interactively adapt to the individual's response pattern as they progress through the test. Correct responses lead to more difficult items being presented for attempt, as increased ability is indicated. Each test taker may receive a unique set of questions. Adaptive tests, therefore, offer the potential to decrease the risk of cheating and improve security (Kantrowitz, Dawson and Fetzer, 2011; Sanderson, Chockalingam and Pace, 2011).

2. Maximising Engagement and Encouraging Honest Responses

Accurate measurement through testing depends on the process of administration. Steps taken prior to testing will influence the candidate's engagement with the assessment.

Maximising engagement during assessment means motivating candidates to work earnestly and honestly as they complete their tests. People need to see the value of putting effort into testing, and to consider potential outcomes of psychometric assessment worthwhile. To maximise engagement, make sure the process and purpose of testing is clearly explained to each test-taker. Consistent with this, a meta-analysis by Truxillo *et al*. (2009) indicated that job applicant motivation and performance were positively associated with explanations as to the job relevance of their selection procedures, such as testing.

Many work-related assessments involve high-stakes testing. Decisions based on test results may have important consequences for an individual's career, salary, and professional opportunities. Failing to land the "perfect" job or being bypassed for a promotion may have negative emotional, attitudinal, cognitive and financial effects on a person. Negative responses to assessment can also have long-term implications for organisations. For example, McCarthy, Hrabluik and Jelley (2009) suggested that discontentment with testing may deter candidates themselves from entering future competitions for promotion, and even lead to discouraging their colleagues from taking part. A reduced pool of applicants may make it difficult for a company to best fill job openings.

It is important that candidates trust the assessment process to be accurate, fair, and useful in identifying the best applicants. This is another way of saying that testing should be standardised, reliable and valid. It is up to those interacting with persons throughout the testing process to communicate these qualities in easily understood, non-technical terms. These practices are consistent with general recommendations for ensuring an effective employee selection process (Bauer *et al.*, 2012).

Reactions to testing will be improved if a test has both face and faith validity. Face validity relates to whether or not the test appears to be a good measure for its purpose (Bornstein, 1996). Does it look the part? Faith validity is the users' belief that the test really will deliver the benefits it claims (Bailey, 2017). Again, this is about the test-taker's impression of the measure. Face and faith validity are both subjective reactions

that can make a significant difference in how a test is undertaken and responses to being assessed. In a meta-analysis examining job applicant reactions to the process of selection, Hausknecht, Day and Thomas (2004) found a sizable overall correlation of .60 between perceptions of face validity and procedural justice. This implies that applicants may consider the selection process fair if they see the job relevance of a test. Impression is important!

It is also helpful to explain clearly why candidates should respond accurately and truthfully when completing a test. This can include emphasizing why and how the test results will be used. Benefits to the person and the business can be clarified. For example, scores can help applicants decide whether they are a good match for a particular job.

It may be useful to ask applicants to sign an honesty contract (e.g., Bartram and Tippins), particularly if tests will be completed remotely and without proctoring. An honesty contract requires signed agreement from the test-taker on conditions such as completing the assessment independently and responding truthfully. The consequences of failing to do so should be explained. For example, will the person be eliminated from further consideration in the present campaign if they respond dishonestly? Means used to verify test results should be communicated. Will respondents be asked to re-take a test at a later point, particularly to check scores from unproctored assessments?

Drawing from Fahey (2018), highlighting the importance of honesty as a moral standard can reduce moral hypocrisy. Creating honesty is particularly powerful when combined with raising objective self-awareness. Moral hypocrisy is the tendency to act in ways that maximise self-benefit while maintaining an impression of adhering to ethical standards (e.g., Batson *et al.,* 1997).

Fahey (2018) further suggests the importance of using impression management scales to detect persons who endeavour to ‘fake good’ on personality tests. Such scales may be included within complex personality assessments. For example, both the 16pf and the Eysenck Personality Scales include social desirability subscales (British Psychological Society, 2020). Stand-alone measures may alternatively be used, such as the well-established Crowne-Marlowe social desirability scale (Crowne and Marlowe, 1960). Scores may then be examined to evaluate, or control for, potential misrepresentation when answering test questions.

Unlike other employee selection methods, tests often directly incorporate techniques to detect cheating. If tests are administered on-line, potential analyses include overall time taken to complete the full test as well as individual items, and patterns of incorrect vs. correct answers to questions which vary in difficulty (Sanderson, Viswesvaren and Pace, 2011).

3. Administering the Test

The way a test is administered affects the accuracy of results. Measurement through psychometric testing is not perfect, even under the most careful conditions. Classical test theory (e.g., Lord and Novick, 1968) posits that a test score is likely an approximate indication of one’s actual ability or trait level. Results may also reflect

random environmental influences. Examples include aspects of the physical testing environment, such as lighting or noise. The administrator may be another influence on scores. An untrained or inexperienced administrator may provide test instructions that give advantages to some test-takers, but hinder performance of others. In addition, the mood, physical and emotional state of the test-taker will affect concentration and performance, shifting scores in one direction or the other.

Consistency and control over the assessment processes help to keep unwanted influences from affecting test scores (Coaley, 2014). Psychometric assessments typically have specific and standardised instructions for administration. These may include time allowed, a script for introducing the test, appropriate methods for administration, and ways to maintain security and maximise honest responding. Strictly adhering to these guidelines helps to ensure recommended procedures for testing are in place, and maximises the opportunity for accurate measurement.

4. Interpreting Results

Verify test scores

Test results should be treated as hypotheses rather than as flawless indicators. As stated by Cripps (2017, p. 18), “Scale scores on all instruments should be regarded as expectations or hypotheses and subject to movement.” Accordingly, verifying results is an important part of interpreting test scores. In part, this is accounted for by considering measurement error. Additional data from alternative sources may also be taken into account. For selection, this could include examining competencies through structured interviews. Ratings from others who know or work with the test-taker might be used as part of 360-degree feedback for development.

Candidates themselves can provide useful perspectives, including the way that they approached assessment and how they feel they performed. This may take place through an interactive, two-way discussion following assessment (Duggan, 2017). Information shared by the individual can indicate whether or not they were focused, motivated and optimally engaged in test-taking. If so, their scores are more likely to indicate their true attribute levels. If not, caution is in order.

Use Confidence Intervals

As discussed under ‘Administering the Test’, errors in measurement occur with testing. The use of Confidence Intervals considers error when interpreting scores.
Confidence intervals may be constructed using a statistic called the Standard Error of Measurement (Coaley, 2014). The interval is a range of scores that is likely to include an individual’s actual ability or attribute level. This range should be interpreted as an indication of performance, rather than assuming that a single score point (e.g., a ‘raw score’ of 57, or a percentile of 68) is completely accurate. Using confidence intervals increases the chance that you have really 'captured' or identified the person’s true performance. For example: You may not be completely certain that Mary’s score of 70 precisely indicates her computational skills, but you can be 68% certain that her numerical skills fall within the range of 62 to 78.

By taking standard errors and confidence intervals surrounding test scores into account, you can more fairly and justifiably make comparative decisions among candidates. This will require considering error surrounding both test-takers' scores.

For example: two candidates are being considered for progression to the interview stage of selection decisions. Steve's verbal ability test score is 53. Frank's score on the same test is 57. Are these scores different enough to justify choosing Frank for the job? If you are not sure, imagine how Steve would feel, or what his reaction would be!

Carefully choose cut-off points

Give careful consideration to where to place a passing cut-off point for test scores. As illustrated by the Taylor-Russel model (1939), a choice of cut-off score is a key determinant of correct decisions being made as to who should be selected or progressed to the next stage of assessment. High requirements, such as the upper levels of a percentile range of ability tests, increase the chances that all persons passing will have very strong skills. For example, a cut-off point of the 75th percentile on a verbal reasoning test will result in the top 25% of persons considered as passing. Whether this is justifiable depends on the level and importance of verbal reasoning for the job in question. An important question becomes whether succeeding on that particular job really requires such high levels of this ability. Overqualified candidates may be a poor fit for work.

In addition, very high cut-off scores may result in adverse impact by eliminating persons from minority or protected groups. Bailey (2017) suggested that a conservative point of the 30th percentile may be used towards removing the lowest third of scores, while controlling for the likelihood of adverse impact.

5. Communicating and Storing Test Results

Communicating results

It is essential that the results of assessment are communicated to the intended audience in a way that is sensitive, confidential and understandable.

With work-related testing, test results or feedback from a single campaign may be needed for multiple audiences. Human resource management may require psychometric details on score results across numerous candidates. Non-technical reports are appropriate for audiences with limited backgrounds in testing, potentially including managers and the test-takers. Test publishers may offer reports tailored to user requirements and technical background (e.g., PSIonline, Hogan). An alternative option is for the test user to prepare their own reports tailored to audience and purpose.

Test data storage

Policies on test data storage, access and maintaining security vary from company to company. The BPS recommends that practitioners or businesses develop a test user policy, specifying practice in each of these areas (BPS, 2018). It is essential that test results are used, stored and shared in a way that is consistent with local requirements and legislation such as the General Data Protection Regulation (GDPR) and the Data Protection, Act, 2018.

Conclusion

Based in psychology and applied to businesses, psychometric testing has a great deal to offer both employees and employers. As discussed, wide-ranging benefits can be realised through including psychometric testing as part of workplace decisions.

However, ensuring accurate measurement requires planning and preparation across the stages of test selection, administration, result interpretation and communication.

Businesses may capitalise on the contributions of testing by incorporating suggestions across five areas: Begin with a careful choice of psychometric test. Take steps to maximise positive responses from test-takers. Carefully plan administration. Interpret results cautiously, seeking verification of apparent scores. Communicate test results sensitively, considering legal requirements for data protection.

Incorporating the recommendations presented throughout this paper will maximise the chance of achieving assessment results that can be trusted – the key to effective workplace testing.

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Consumers' Purchasing Decisions for Confectionery and Savoury Snack Food Items on and off Promotion

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Abstract

Food retail outlets, by making food accessible, available and affordable, contribute significantly to consumers' food choices, including snack food choices, and ultimately their longer-term health status. Therefore, the food retail environment may represent an opportune place to harness marketing power to implement anti-obesity measures. The study aimed to understand consumers' purchasing decisions for confectionery and savoury snack food items both on and off promotion. Associated objectives sought to identify what influences consumers' food buying decisions and understand if these differ by food product category or promotional status, particularly in respect of single versus multi-pack confectionery/savoury snack food items, to inform retail promotional strategies and anti-obesity policymaking. In order to gain an insight into consumers' motivations, attitudes and behaviours, an ethically compliant, quantitative survey was designed which collected data from 302 respondents aged 18-75. Three-quarters (76%) of those surveyed believed promotions are more prevalent for less healthy foods compared to healthy foods. Promotions were found to have a significant impact on consumer behaviour, causing 64% to purchase greater volume of an item and 76.5% to purchase confectionery and savoury snacks more readily. Respondents made unintended purchases regularly with the highest incidence among those shopping four to six times per week, while 72% of all unintended purchases were attributed to promotional activity. Findings highlight the clear effect promotions have on consumers' buying behaviour. The main enabler reported to encourage consumers to make healthier food choices was "if healthy food was cheaper". Additionally, the findings also suggest that increasing the price of less healthy foods (such as confectionery and savoury snacks) could also impact positively on consumers' purchasing behaviours. The research indicates the potential for future supermarket health

promotion initiatives to encourage consumers to make healthier food choices which could play a vital role in improving public health and subsequently reduce obesity levels.
Keywords: Retail Food Promotions; Healthy; Less Healthy; Savoury Snack; Confectionery.

Introduction

There has been increased interest/research effort surrounding the role of food environments in contributing to consumers' food choice (Young *et al*., 2016). As stated by Vandevijvere *et al.* (2018, p.1) "Food environments are the collective, economic, policy and social surroundings, opportunities and conditions that influence people's food and beverage choices and nutritional status". This increasing attention is warranted given the stark rise in obesity levels which according to the Organisation for Economic Co-operation and Development (2017) are set to continually rise until 2030. Additionally, Butland *et al.* (2007) predicts by 2050 obesity at a global rate will affect 60% of men, 50% of women and 25% of children. In particular there is concern surrounding food retail promotions and their effect on consumers' food choices as Stones (2013) suggests that promotional activities tempt shoppers to buy more food than they need, and therefore helps to fuel obesity. The purpose of this paper is to understand how purchasing behaviour differs for confectionery food items on and off promotion. Although there is sufficient research to indicate that the presence of promotions has a short-term impact on the sales of a promoted item (Ailawadi *et al*., 2009), there is little research on consumers' attitudes towards promotions and understanding of what motivates consumers to purchase certain promotional items. The overall aim of this study was informed by an online, self-completed questionnaire. The research suggested evidence-informed conclusions and recommendations to inform potential retail interventions which could be adopted across the UK to improve food choice and, as a result, prevent obesity.

Factors influencing food choice

Obesity is the biggest public health crisis facing the United Kingdom (UK) today (Academy of Medical Royal Colleges, 2013, p. 3). It is a major risk factor for non-communicable diseases such as diabetes, heart disease and cancer, significant disability and premature death (Ofei, 2005). The World Health Organisation has predicted that almost three-quarters of men and two-thirds of women in the UK will be overweight or obese in 15 years' time (Meikle, 2015). A change in diet and lifestyle has contributed to the worldwide obesity epidemic; individuals have increased their caloric consumption from food coupled with reduced energy expenditure in today's increasingly sedentary environment (Hill, Wyatt and Peters, 2012). Furthermore, there has been a shift from the traditional three meals per day norm towards a habit of snacking and grazing, in addition to an increased demand for convenience food (Bevis, 2012). Chu (2016) suggests that the increased reliance on convenience food may be explained by a shift in traditional gender roles that has resulted in an increase in women working, along with a decline in home cooking skills. These factors combined with other environmental factors such as increasing portion sizes, ease of accessibility to energy-dense foods, affordable price of calorific food, prevalent advertisements and promotions have been cited as the main drivers of the current obesity epidemic (Nederkoorn, 2014).

The economic environment has a significant impact on consumers' food choices. Dennis (2015) states that consumers are becoming more promotion-sensitive with shoppers citing an increased cost of living and increased cost of food as the main drivers to seek out promotions. Inflation and tight budgets have led to consumers trading down to less expensive brands (Research, A.M, 2015). A study of Irish consumers reported a rise in shoppers trading down to cheaper brands from 39% in 2014 to 42% in 2015 in a bid to save some extra cash (Anon, 2015). According to Wynne-Jones (2015, p.79) "It is now easier than ever for consumers to 'trade down' due to the rise of discounters".

The rise of discounter stores is evident when analysing Gale (2018), who states that Aldi and Lidl have a combined growth of 80% since mid-2013. As Falck (2017, p.92) states, "these discounter stores rely on everyday low prices as well as aggressive price promotions to excite and attract customers". The continuous success of these stores indicates a demand for low prices and promotions and is further highlighted by Price (2013) who reveals that more than seven in ten Britons report that they like the thrill of getting a bargain. Likewise, customers reported that store offers are a major aspect in attracting them to a store (Goswami and Mishra, 2009).

Price promotions

Price promotions are used to boost sales by reducing the price of products as well as attempting to stimulate impulsive purchases by increasing the prominence of items in stores (Nakamura *et al.*, 2015). This can be achieved through the use of tags and product placement to create a visually attractive display in a convenient location which can enhance consumption and customer satisfaction (Aloysius and Binu, 2017). Promotions include coupons, price reductions, bulk discounts and standalone offers which according to Smith *et al.* (2017 cited, Hawkes, 2009) incentivise consumers to purchase a food or beverage more quickly, more often and in greater volume.

The effects of price promotions are further explained by Ailawadi *et al*. (2009) who highlight that in addition to the substantial increase in sales of the promoted item, promotions in a store can have a 'halo' or a 'sales momentum' effect meaning the presence of a promotion in one category can also influence sales in other categories. Ailawadi *et al*. (2009 cited in Ailawadi *et al*., 2006) found that for every unit of gross promotion lift, 0.16 units of some other product are purchased elsewhere in the store. This research highlights not only the significant impact promotions can have on sales of the promoted item, but also how consumers can make unintended purchases because of in-store promotions on their purchasing behaviour. Not only can promotions result in consumers purchasing a larger volume of the promoted item or other unrelated items, they can also have an effect on brand loyalty. Sun, Neslin and Srinivassan (2003, p.389) highlight "it is a fundamental finding that promotions cause consumers to switch from Brand A to Brand B". Due to the increased cost of living, price is becoming a key factor in influencing purchasing decision and therefore the presence of promotions may be contributing to consumers becoming less brand loyal. Gammall (2015) reveals that shoppers now feel loyalty to just seven brands, down more than 50% compared to five years ago. As the grocery market responds to the demand for promotions and contends for shoppers' attention it is clear that promotions have become an ingrained part of the food retail environment (Price, 2013).

The majority (59%) of consumers in the Republic of Ireland (ROI) continue to look for savings on household expenses, which are above the EU average, and coping strategies include switching to grocery products that represent better value to them and actively seeking promotions (Collins, Kavanagh and George, 2012). An ROI study (Furey *et al.*, 2019) provided an overview of the types of foods on price promotion in a sample of retail outlets in the ROI. The research concluded that more than one-third (35%) of the total sample of food and drinks audited were categorised as high in fat, sugar and salt, a clear over-representation of their distribution in the food pyramid. In the UK consumer expenditure on price promotions is the highest in all of Europe, double that of countries such as Spain, France and Germany (Sparks and Burt, 2016). This highlights the significant role promotions play in the UK grocery market. Despite a misconception that promotions are more prevalent for less healthy foods, research by Hollywood *et al.* (2015) suggests that this is not the case. The Food Standards Agency research, which was conducted to determine the healthiness of food promotions using the Front of Pack Labelling system, found that nearly half (47%) of all online food retail promotions were categorised as red (less healthy) while the remaining 53% were categorised as amber/green (healthy/moderately healthy). Findings by Hollywood *et al.* were further confirmed by similar research published in the American Journal of Clinical Nutrition, which also showed similar results stating, "on the whole less healthy items were no more frequently promoted than healthier ones" (Nakamura *et al*., 2019, p. 813).

Regardless of research confirming that less healthy foods are no more frequently promoted than healthy foods, McDonald and Milne (2016) found that discretionary foods such as savoury snacks and confectionery were more frequently purchased on promotion compared to the healthier categories such as fruit, vegetables and starchy carbohydrates (50% versus 30%). This research confirms that the increase caused by promotions is greater in the less healthy category. Yan *et al.* (2017) contend that price promotions have a stronger effect on less healthy foods due to consumers having less self-control and greater impulsive urges towards less healthy food. In contrast, Martin, Bauld and Angus (2017) suggest another reason for a greater uptake of promotions for less healthy food. They found that despite a balance of healthy and less healthy promotions, less healthy food promotions offer a greater reduction in price or a greater volume for a set cost compared to promotions for healthy food and drink products.

Although promotions are recognised as "an important tool in the marketing mix of food retailers" (Empen, Loy and Weiss, 2015 p.736), Nakamura *et al.* (2015, p. 808) express concern about some promotional activities stating "they may contribute to poor dietary choices and lure consumers away from healthier, higher priced options". According to Lawrence, Wallington and Lyons (2010, cited Hawkes, 2009) promotional messages encourage consumers to buy and eat more, and these messages contribute to the increasingly obesogenic environment.

Obesogenic environment

An obesogenic environment is defined by Lake and Townshend (2006, p.262) as "the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations". A study by Powell *et al.* (2016) into

the frequency of promotions found that larger versus smaller product packages had significantly higher prevalence of price promotions activity. In supermarkets, promotions were more evident for family-size soda, orange and juice drinks than individual or regular sizes, and larger and family-size snack packages were promoted to a greater extent than smaller pack sizes. In a study of the Scottish retail market, McDonald and Milne (2016) had similar findings, reporting that promotions for less healthy foods were aimed at driving purchases (y for £x and multibuy) compared to the staple, healthier categories. It is evident promotions of less healthy food focuses on volume and as Powell *et al.* (2016) express such promotional activity can lead to an increase in consumption due to consumers stockpiling products on offer. Powell *et al*. (2016, p.107) state "the stockpiling of less healthy foods may prove to be problematic for public health when the food items are high in sugar, fat, or sodium." It is likely that purchasing a greater amount of a product can lead to overconsumption due to the convenience afforded by stockpiling. Therefore, if consumers are being influenced to buy less healthy food in bulk due to the presence of promotions, they are likely to overconsume, which can consequently have a negative effect on their health.

A change in the type of promotions may also be driving sales of less healthy foods as research by Mintel has reported that there has been a shift away from "x for y" promotions towards a focus on round pound deals (Price, 2013). Wilson (2016) has reported that on an all-Ireland basis, between 2017 and 2021, confectionery sales are expected to grow by 4.6%. It was suggested that the reason for such a rise was due to increased multipack offers at supermarkets as they attempt to respond to the rise of discounter stores and retailers, such as Poundland, who are selling multipacks for £1, therefore contributing to the rise in chocolate sales.

It is no surprise that Brown (2017) found that more consumers are reaching for these sharing bags, as they are often better value and, as previously highlighted, consumers are seeking the best deal when filling their food basket due to macro and micro economic concerns. Cadbury has revealed confectionery is one of the most successful categories within the sector worth more than £300 million (Fleming, 2013) which is concerning considering the findings indicating consumers are not buying them to share. Morley (2018) reports that 22% eat the sharing bags alone, in one go, with the figure rising to 35% among 16 to 24-year-olds. As Action on Sugar (2018) states, research carried out at Queen Mary University of London found that some "sharing" bags contained four times an adult's maximum daily sugar intake.

As Benson (2009, p.16) suggests, "the introduction of over-sized portions by the snack industry is aggravating obesity by encouraging over-consumption and promoting larger portions as a viable alternative to standard sizes". When these items are then promoted, consumers are encouraged to a greater extent. A Twitter poll carried out by Action on Sugar found that 85% of consumers agreed that price promotions on confectionery sharing bags should be banned (Smith, 2018). Furthermore, a professor of cardiovascular medicine responded to the news regarding the sugar content of sharing bags suggesting that companies were exploiting and manipulating consumers into buying these larger bags cheaply (Woodfield, 2018). This highlights civic and health professional support to tackle the issue, and it is interesting to learn that

consumers have negative feelings towards such promotions which can easily influence them to purchase and subsequently result in overconsumption.

Retail interventions to improve food choices

As a result of the increasing burden of obesity and other diet-related chronic illnesses, this has prompted research into approaches to improve food choices among consumers. As Vandevijvere *et al*. (2018, p.971) state, "an important setting for potential intervention is the in-store retail food environment, defined as that which customers encounter when buying food, including the cost, quality, and availability of food". As Sparks and Burt (2016, p.3) state, *"*There is a need to understand the retail environment presented to customers in store as this drives consumers' decisions*"*. Cameron *et al.* (2016) suggests using the four Ps of Marketing (Product, Price, Place and Promotion) as a useful structure for nutrition-related interventions in supermarkets.

Price

According to Andreyeva *et al.* (2010) the potential of price changes to improve food choices is evident from growing research on how relative food prices affect dietary quality and obesity, especially among those most at risk for obesity, younger consumers and lower income populations. Geliebter *et al.* (2013) conducted a study in Manhattan (USA) to establish how discounting low energy dense foods would affect consumers' purchasing, intake and body weight. The study found that between the discount group and the control group (who received no discounts) the discount group purchased and consumed significantly more fruit and vegetables over the eight weeks. After reflecting on the study during the baseline period, it was found that the discount group continued to purchase and consume more fruit and vegetables which indicates a sustained effect of the intervention. The results support Andreyeva *et al*. (2010) who previously discussed the potential benefits to consumers' diets by changing the price of food.

Promotion

Escaron *et al*. (2013) report that low-income populations purchase a high proportion of their food as prepared foods and from small stores, which has implications for intervention development. Stead *et al*. (2017) carried out a study to determine whether lowering prices and providing recipe suggestions for low income consumers was effective or not. The study targeted low-income consumers who live in disadvantaged postcode areas and used EPOS and customer membership data to identify consumers who had poor purchasing habits. These consumers were then targeted with price promotions and offered healthy eating advice and recipe suggestions, which were informed by their habits and preferences. Results from the study show how promotions combined with healthy eating advice and recipe suggestions have a modest, short-term effect on low-income consumers and are feasible, although further approaches are needed to sustain such changes. As Glanz, Bader and Iyer (2012) indicate, in-store food marketing plays a key role in influencing consumers' food choices and warrants increased attention given the dramatic rise in obesity.

Place

Cameron *et a*l. (2016 p.130) propose the impact of changing the healthiness of the supermarket environment is likely to be much greater than changing smaller outlets.

This is likely due to supermarkets being the main source of readily available and accessible food for many consumers (Levy, 2010) as well as the 'Big Four' supermarkets accounting for two-thirds of the UK grocery market share (Kantar, 2018). One possible area in supermarkets which could be modified to encourage healthier food choices is at checkouts. Liberato, Bailie and Brimblecombe (2014, p.1) state: *"*Point-of-sale is a potentially important opportunity to promote healthy eating through nutrition education and environment modification*".*

Not only does the placement of less healthy products at the checkout promote healthy eating, it also appeals to consumers as Winkler *et al*. (2016) identified consumer concern and annoyance with placement and promotion of less healthy snacks, after an intervention to remove the less healthy snacks received positive feedback from consumers.

A study by Van Kleef (2012) into the impact of shelf assortment and arrangement of food at checkouts on consumer choice found that there was a higher probability of healthy snack choice when 75% of the assortment consisted of healthy snacks compared to conditions with 25% healthy snack assortments. The results are encouraging for other future strategies demonstrating how increasing the availability of healthy snacks and limiting the availability of less healthy snacks can promote sales and influence consumers to make better choices. Hollywood *et al.* (2016) also found that larger stores promoted a greater quantity of less healthy products in prominent locations and suggest that there is a strong potential for prominence to be used positively to encourage consumers to make better-informed choices. Furey *et al.* (2019, p.54) in the Irish context similarly recommends retailers "increase the frequency and prominence of healthy promotions in-store … to encourage their uptake". It is clear that there is no easy way to tackle the obesity crisis but, as suggested by Davies (2016), if retailers recognised their role and helped by ensuring promotions and promotional activity did not encourage consumers to make less healthy food choices, progress could be made.

Overall research aim

The overall aim of this study is to understand consumers' purchasing decisions for confectionery and savoury snack food items on and off promotion. The associated objectives are:

- To describe both the frequency and consumer perceptions around food shopping and promotional offers;
- To understand further unplanned purchases of confectionery and savoury snacks;
- To examine the motivations for sharing/non-sharing bags of confectionery and savoury snacks; and
- To explore how price and promotional type influence consumers' healthy and less than healthy snack choices.

There has been considerable research conducted in the area of food promotions with a focus on prevalence, prominence and effect on sales. As highlighted by Ramathan (2010 cited in Hollywood *et al*., 2016, p.29) "most academic research focuses on how sales promotions affect aggregate sales of the promoted brand, and not on individual

consumer responses to promotion." As the prevalence of price promotions has already been well documented by Powell *et al.,* 2016 and other scholars, a survey was deemed the most appropriate data collection method.

Methods

The purpose of the survey is to gain an understanding of how food retail promotions affect consumers' purchasing decisions with a particular focus on confectionery and less healthy savoury snack foods. The survey will support the understanding of how purchasing behaviour differs for items on and off promotion and comprehend what motivates purchasing behaviour for less healthy snack items.

Survey design and development

The overall structure of the questionnaire was informed by an in-depth review of the literature to allow for comparisons to be drawn literature to allow for comparisons to be drawn and trends identified. In order to ensure the survey design met the overall research objectives a range of survey question types was utilised. The survey comprised three sections: Buyer habits to identify respondents' general buying habits such as frequency and location of shopping; a confectionery and savoury snacks section to identify how respondents viewed and responded to confectionery and snack food promotions; and demographics.

Survey administration

The questionnaire was piloted to collate feedback on any issues and make necessary changes to enhance the reliability of results for the final data collection. The quantitative data were collected using a self-completion questionnaire and distributed online using social media sites such as Facebook, Twitter and LinkedIn, and through email. Using the Internet allows data to be collected from a large sample of people. As highlighted by Wright (2005), using the internet to conduct surveys has many benefits such as access to difficult to reach participants, convenience of having automated data collection, as well as reduced time and costs. A final sample of 302 respondents completed the survey.

Data analysis

The questionnaire responses were imported into SPSS (v24) to carry out analysis. Statistical analyses included frequencies reporting and Chi square tests (to measure statistical associations between variables such as age and gender). These analyses facilitated the comparison of how the different variables impacted on the research results.

Ethical considerations

Ethical permission was sought and granted from Ulster University Research Ethics Filter Committee. All respondents (aged 18-75) gave their informed consent to participate in the survey. Anonymity of the respondents was assured throughout by ensuring that no respondent was identifiable from their answers.

Results

Demographics

Table 1 shows the demographic breakdown of the respondents. The research aimed to gather data from a range of respondents aged 18-75, although as can be seen in Table 1 consumers aged 60-75 are underrepresented in the sample. This may be as

a result of distributing the survey online and through social media as Statista (2018a, 2018b) indicates only 17% of UK Facebook users were aged 55+, while UK Twitter users aged 55+ accounted 11% of users.

Table 1: Demographic breakdown of the sample

Demographic	**% of Respondents**
Age	18-24 - 29%
	25-39 – 35%
	40-59 – 33%
	60 – 75 – 3%
Gender	Male – 28%
	Female – 71%
Employment Status	**Full time job – 61%**
	Full time student – 18%
	Part time job – 13%
	Part time student - 1%
	Retired – 3%
	Unemployed – 4%

Frequency of shopping

It is clear from Figure 1 that respondents shop frequently, with half (51%) of consumers visiting a shop/supermarket between two and three times per week. Additionally, one-third visit a food retailer more frequently; almost a quarter (24%) shop for food between four and six times per week, and 9% report visiting a shop or supermarket daily. No differences in shopping frequency for age or gender were discovered.

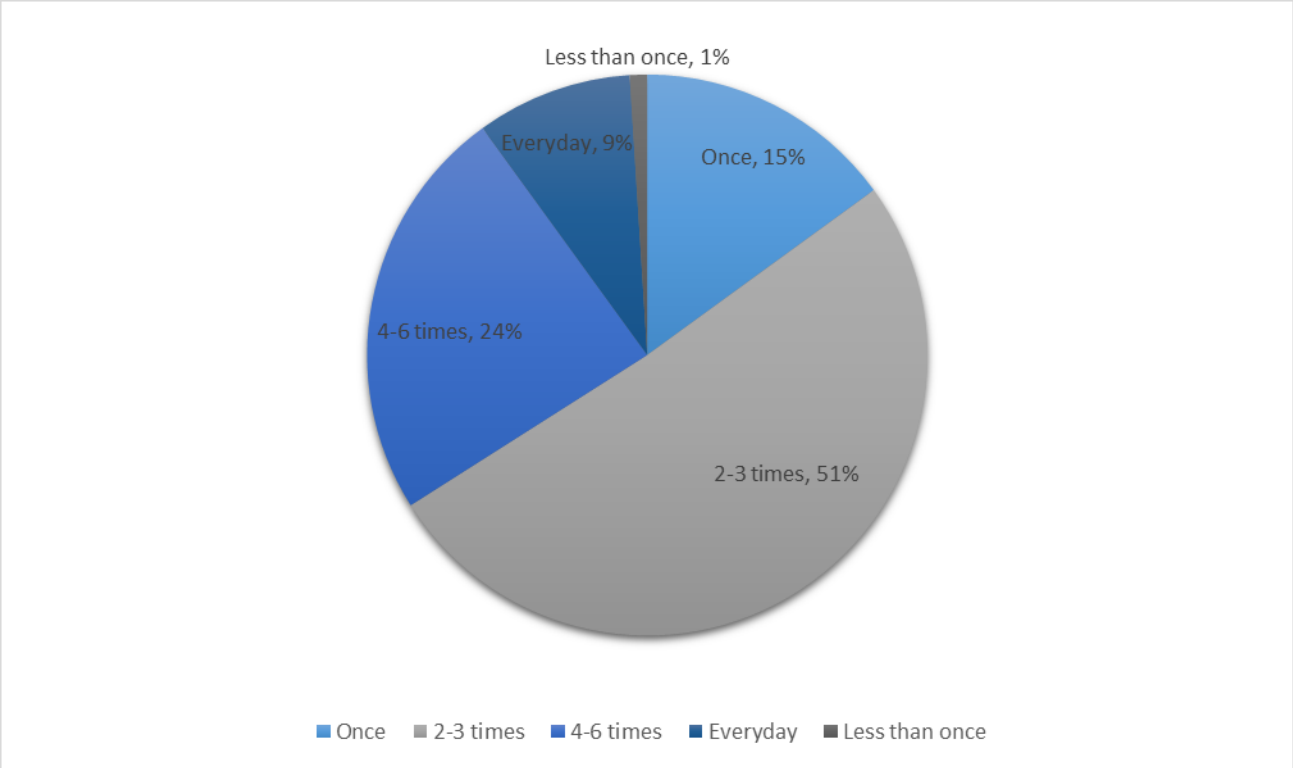

Figure 1: Frequency of shopping among respondents

Perception of promotions

When asked about the balance of healthy and less healthy promotions, 76% of respondents reported that they thought promotions were more prevalent for less healthy foods. This is important given that the majority (84%) are visiting a shop at least twice per week and therefore observing promotional activity often. Only 15% felt that promotions were balanced, while 3% thought that healthy foods were promoted to a greater extent, and the remaining 6% were unsure. Although no statistically significant difference was observed, it was interesting to note a difference among males and females. Males were more likely than their female counterparts to report they did not know whether promotions were more prevalent for healthy or less healthy food (12% versus 3% respectively).

Unplanned purchases of confectionery and savoury snacks

Almost one-quarter (24%) of respondents surveyed make unplanned purchases of confectionery or savoury snacks every time they visit a shop or supermarket, while 28% of respondents make unplanned purchases 'often' and a further 41% 'fairly often'. As already identified, those shopping frequently outnumber those shopping once per week or less. Even though no statistically significant difference was observed, results found that unplanned purchases of less healthy foods were more prevalent among those shopping four to six times per week, compared to other shopping frequencies. The same cohort was also most likely to make an unplanned purchase every time they visited a shop (18%) compared to only 10% of daily shoppers making unplanned purchases on every occasion. Although it is unknown if unplanned purchases are a direct result of promotions, 36% of respondents agreed that special offers dictated the content of their shopping basket. Almost half (45%) of respondents reported purchasing share bags 'often', and a further 35% reported purchasing them

'sometimes'. Among respondents, 'better value' was the main reason for purchasing share bags for over half of consumers (51%), while an additional 30% cited 'sharing with family' as the reason for buying sharing bags.

Sharing bags of confectionery and savoury snacks

The research presented concerning results that 21% of consumers reported eating sharing bags of confectionery/savoury snacks in one go, while 14% said they ate them throughout the day (Figure 2 refers).

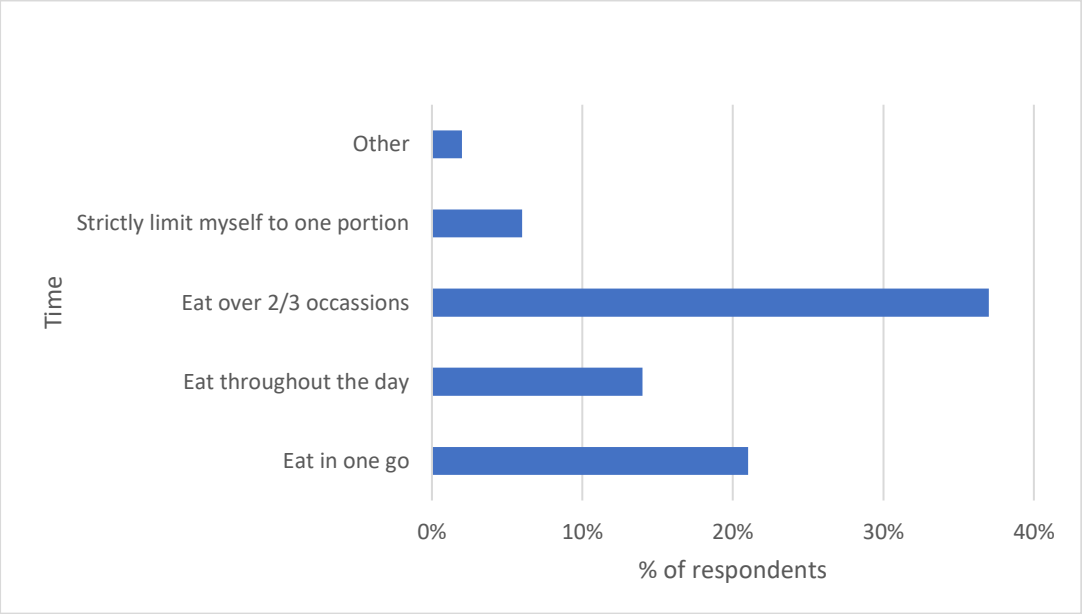

Figure 2: Time taken to consume sharing bags

As appreciable from Table 2, a substantial proportion of respondents reported eating sharing bags in a single sitting. An exception exists for those in the 60-75 age category, which may be explained by the lower response rate from this demographic. However, a clear trend has emerged that those aged 18-24 are more predisposed than their older counterparts to eat share bags in a single serving.

Table 2: Demographic breakdown of age versus time taken to consume share bags

Time taken to consume sharing bags	**Age (years)**			
	18-24	*25-39*	*40-59*	*60-75*
Eat in one go	37%	33%	27%	3%

Eat throughout the day	36%	43%	21%	0%
Eat over 2/3 occasions	26%	36%	36%	2%
Strictly limit myself to one portion	35%	52%	12%	0%

Findings also found that 16% reported the reason for buying these bags was due to habit; 74% of respondents reported that promotions encourage them to purchase confectionery and savoury snacks more readily; and 64% of respondents purchased a greater volume of items on promotion. Furthermore, a greater percentage of those purchasing due to habit were aged 18-24, the same sub-group that is more likely to consume these bags in a single sitting.

Preference for type of promotion

Although many respondents reported that they purchased a greater volume of items due to the presence of promotions, the research found that for both healthy (64%) and less healthy foods (62%) consumers preferred price reductions. It was particularly interesting to note a difference, however marginal, for consumer preference for bulk buy promotions i.e. “Buy One Get One Free” with 35% preferring this type of promotion for healthy foods and 39% preferring it for less healthy foods.

Importance of price

It is clear that consumers regard price as important, given that price reductions were the most appealing form of promotion. The research also revealed that more than half (53%) of respondents agreed that price was the most important factor to them. The results also highlight how the majority of respondents (78%) were of the opinion that healthy food is more expensive than less healthy food. In contrast, only 4% thought that healthy food was less expensive than less healthy food, and a further 16% believed there was no difference. These findings - combined with the fact that the majority of consumers think promotions are more prevalent for less healthy foods - could have implications for their dietary choices, particularly as 66% of respondents report that they would purchase more healthy food if it were cheaper.

In contrast, respondents were asked if confectionery were more expensive would it change their purchasing behaviour. Figure 3 highlights respondents’ estimated spend on confectionery and savoury snacks per week.

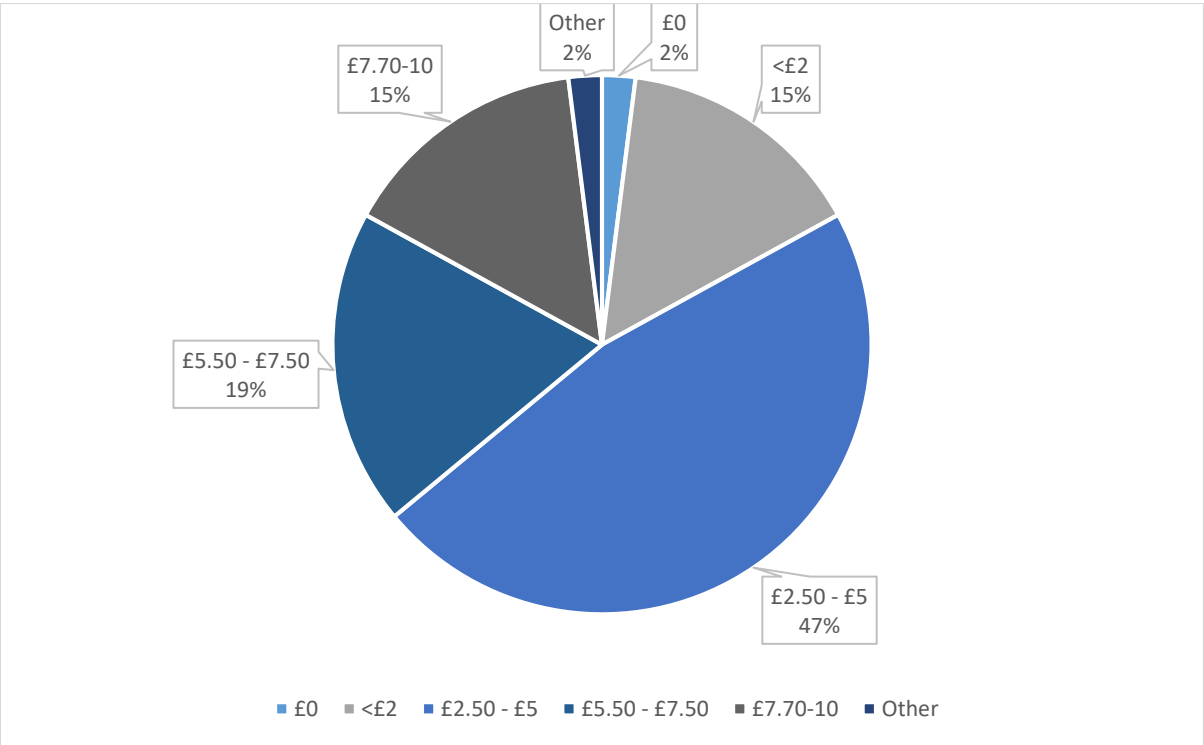

Figure 3: Consumer spend on confectionery per week

Three-fifths (61%) agreed to some degree that it would affect their purchasing behaviours while 26% disagreed. These findings move beyond recounting the benefits of making healthy food cheaper but also making less healthy food more expensive. However a clear trend emerged indicating those who spend more on confectionery (£7.50 - £10) per week, were less likely to think increasing the price would affect their purchasing behaviour (Phi = 0.325, $p < .05$). Respondents' spending on confectionery and savoury snacks on promotion per week can be seen in Figure 3. Almost half (47%) spend between £2.50 and £5.00 while 34% spend between £5.50 and £10. It should be noted that these results only refer to promotional spend and therefore are likely to be higher including non-promotional purchases.

Factors influencing healthy food choices

The research confirms the purposeful positioning of nutritional food products as a potentially beneficial way to support consumers to make healthier choices as a third (34%) of respondents reported that if promotions were more prominent for healthier food it would result in them making healthier choices. Making the in-store environment more healthful could also include the less-prominent positioning of less healthy food items. Results from the study showed that placing less healthy snack foods at the till caused 12% of respondents to make unintended purchases of confectionery. Therefore, by replacing these items with healthier alternatives, it may improve food choice.

Figure 4 depicts the factors that would be more likely to encourage consumers to make healthier food choices. As established previously, price is a key factor, but it is also evident that convenience is regarded as important, given that meal suggestions (38%), a greater shelf life (37%) and increased prominence (35%) were the most popular options after price.

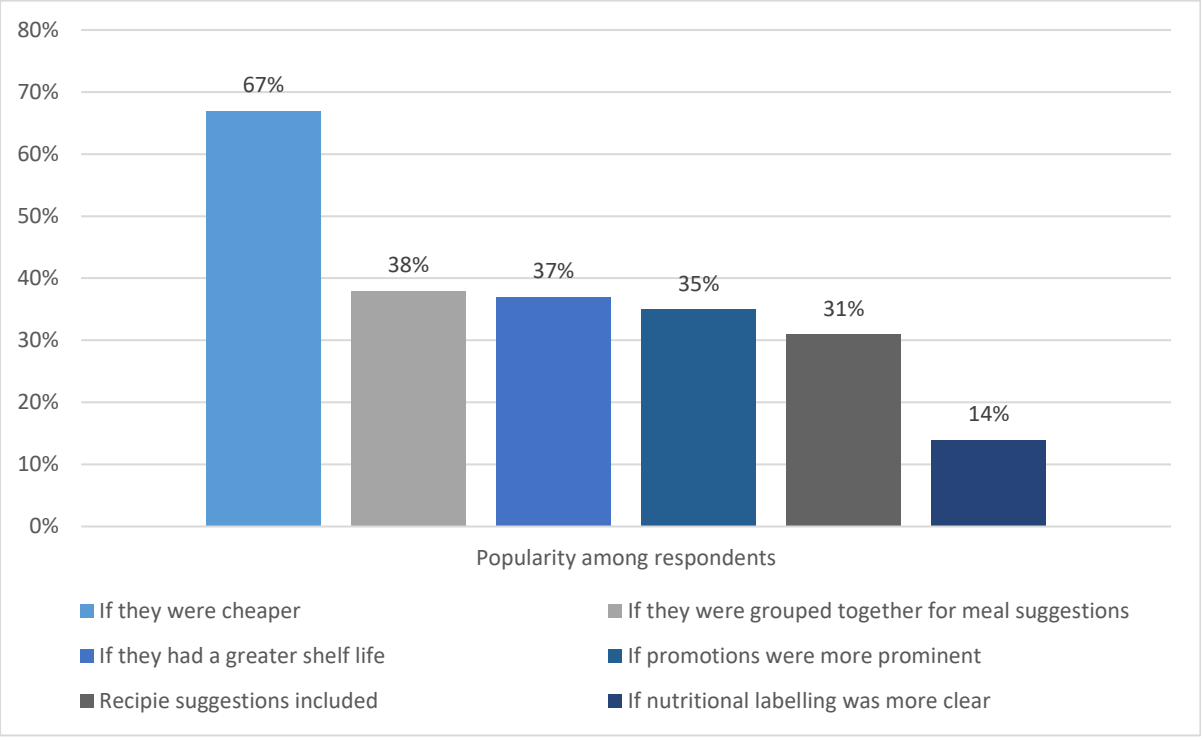

Figure 4: Factors which would encourage consumers to make healthier choices

Demographic considerations

A series of chi-square tests for independence was conducted. There were some statistical differences between variables which have been discussed throughout although, from the research, it can be determined that promotions have a similar effect on those of different ages, gender and occupation. Table 3 below outlines the tests conducted regarding key themes in the research. Findings indicated that there was only one significant associated reported between variables. Age was statistically associated with whether the individuals bought larger packs of confectionery; with those from older age groups more likely to state 'no' to buying larger packs of confectionery than what would have been statistically expected (X^2 (6) = 14.727, $p < .05$). However, in general, it was observed that most respondents did state 'sometimes' or 'yes' to buying larger packs of confectionery. Overall, demographic associations with each of the main perceptions failed to yielder any significant association, suggesting that the perceptions they hold about snacks, their promotion, purchasing or size is not dependent on their gender or education.

Table 3: Associations between background factors and perceptions

	Perception of healthfulness of promotions	Frequency of unplanned purchases	Consumption of share bags of confectionery/ savoury snacks	Do you buy larger packs of confectionery
Gender	X^2 (302, 2) = 1.085 Phi = 0.061	X^2 (302, 4) = 6.624 Phi = 0.149	X^2 (302, 7) = 2.278 Phi = 0.098	X^2 (302, 2) = 0.520 Phi = 0.042
Age	X^2 (302, 6) = 7.855 Phi = 0.249	X^2 (302,12) = 17.447 Phi = 0.241	X^2 (302, 21) = 17.121 Phi = 0.155	X^2 (302, 6) = 14.727 Phi= 0.221*****
Occupation	X^2 (302,10) = 7.172 Phi = 0.709	X^2 (302, 20) = 19.987 Phi = 0.258	X^2 (302, 35) = 36.817 Phi = 0.394	X^2 (302, 10) = 10.337 Phi = 0.188

Note: * = p<.05

Discussion

Frequency of shopping

The results regarding respondents' frequency of shopping for food are noteworthy in terms of how often consumers are exposed to the retail environment and therefore subject to promotions and promotional activity. The findings correlate with Hope (2014) who suggests that the era of the once-a-week 'big' shop is nearing an end, as consumers now shop more frequently. The fact that there was no gender difference among respondents in respect of their shopping frequency may be as a result of households moving towards a shared shopper paradigm (Skrovan, 2017). According to Sandberg (2016), a higher prevalence of households sharing the responsibility of food shopping is due to factors such as an increase in working women.

Perception of promotions

Despite Hollywood *et al*. (2016), Nakamura *et al*. (2015) and Albright (2015) confirming a balance among healthy and less healthy promotions, it is interesting to discover consumers' perceptions on the healthfulness of promotions being skewed more prevalently towards less healthy food items. The observance of a greater percentage of males reporting they were unsure about the balance of promotions may be explained by Mortimer and Clarke (2011), who find males take less time to shop and are less likely to comparison shop for the best deal and therefore they may be less observant of promotions and the retail environment.

A disparate view also appears in the literature: Martin, Bauld and Angus (2017, p.11) found "promotions offered on unhealthy foods on average gave a greater reduction in price or offered a greater product volume for a set cost than for healthier foods". Therefore, a greater discount/deal on less healthy foods compared to healthy foods may result in consumers acknowledging these promotions largely and explain the consensus of the respondents.

In addition, consumers' perceptions of the healthfulness of promotions may be due to promotional activity of less healthy foods such as shelf space, signage or prominence within stores as findings by Hollywood *et al.*

(2016) propose larger stores promote a greater quantity of less healthy products in prominent locations. Additionally, Ravensbergen *et al*. (2015) found that in Dutch supermarkets less healthy foods were more frequently advertised than healthy foods through supermarket flyers. Therefore, such promotional activities could elucidate consumers' less healthy perception of promotions. The increased promotional activity for less healthy foods could also be partly attributed to sweets and confectionery remaining at the top of unplanned grocery purchases in the UK (Glaberson, 2017).

Unplanned purchases of confectionery and savoury snacks

According to Rudi and Cakir (2017), a higher shopping frequency leads to less healthful food purchase due to factors such as product placement, prominence, shelf space and also due to consumers being less likely to have shopping lists for more frequent trips. It is therefore worrying to discover how often consumers are making unplanned purchases of less healthy foods. The frequency of unplanned confectionery and savoury snack purchases raises important questions regarding their consumption. It is likely that these unplanned purchases often feature larger sharing bags given the growing popularity of this format of confectionery and savoury snacks. Research confirms the demand for sharing bags as Nieburg (2016) reports that in convenience stores sales of these chocolate sharing bags increased by 8.7% driven by promotions while traditional single bars have declined slightly. Additionally, Randall (2020) reports that sharing bags of crisps now account for over a quarter (26%) of the crisp market. The research finding that 80% of respondents 'sometimes' or 'often' bought sharing bags indicates an increase in this consumer behaviour, as Statista previously indicated (2014) that 46% of consumers said they did not buy share bags.

The reported increase in purchasing sharing bags occurs simultaneously to concerns in the literature about whether these large bags intended for sharing are actually shared. Yale University psychologist, Geier, describes them as another example of portion inflation (Fleming, 2013). While for consumers these share bags are often a more viable alternative to standard sizes (Benson, 2009), larger portion sizes can lead to overconsumption, a commonly cited factor of the current obesity crisis.

Sharing bags of confectionery and savoury snacks

The prevalence of solitary consumption of sharing bags uncovered by this research is supported by Morley (2018) who found that 22% eat sharing bags in one go with the figure rising to 35% among 16-24 year olds. This may be due to a decrease in sensory specific satiety (SSS), as a study by Tey *et al*. (2012) concluded habitual consumption of high energy dense snacks results in a decrease in SSS which can ultimately lead to a higher energy intake of the snack. The consumption of sharing packs by individual consumers as a finding has important implications for public health as Action on Sugar (2018) report that certain chocolate confectionery sharing bags contain 29 teaspoons of sugar - which is four times an adult's reference nutrient intake. It is evident that sharing bag versions of confectionery and savoury snacks are facilitating

overconsumption. Additionally, the presence of promotions for these items may have catastrophic effects on future public health by incentivising consumers to a greater extent or possibly increasing the volume purchased.

Potential exists for promotions to affect the volume of a food purchased, as Powell *et al.* (2016) propose that promotions are more prevalent for larger versus smaller packs and also have a higher level of promotional activity. Moreover, Powell *et al*. (2016) also expressed concern that promotions can lead to stockpiling and subsequently (over)consumption. As explained by Nakamura *et al. (*2015, p.813*):*

> Products from less-healthy food categories are often non-perishable, whereas those from healthier food categories (in particular fruit and vegetables) are perishable. Therefore, stockpiling during a promotion may be more likely to happen for less-healthy food categories.

Therefore, the fact that almost two-thirds (64%) purchased a greater volume of items on promotions may be concerning due to the fact consumers are more likely to stockpile less healthy foods. Furthermore, the stockpiling of foods can lead to an increase in consumption due to the easy accessibility to the consumer (Poelman *et al.*, 2014).

Preference for type of promotion

Respondents' preference for price-based promotions contradicts Chandon and Wansink (2010, cited Mishra and Mishra, 2011) who suggest that consumers preferred price discounts for "vice foods" (less healthy foods) but preferred bonus packs to price discounts for virtue foods (healthy foods), thereby justifying price discounts for "vice foods".

Importance of price

This research highlighted how price may be a potential barrier to healthy eating for some consumers in agreement with research by Which? that found that 29% of shoppers reported finding it difficult to eat healthily as healthy food is more expensive than less healthy food (Quinn, 2016). The research suggests that intervening to make healthy food more affordable could have the potential to increase the healthfulness of consumers' purchases. Therefore, the findings suggesting that altering the price of confectionery could potentially lessen 61% of respondents' spend on confectionery and subsequently reduce consumption of these foods are extremely important.

Additionally, research by Julia *et al.* (2015) with regard to consumers' acceptance of a sugar tax for sweetened beverages in France found that 58% supported the sugar tax, perceiving it as helpful to improving the health of the population. Therefore, a sugar tax on confectionery could be a potential way to tackle the obesity issue and improve the diet and health of consumers.

Factors influencing healthy food choices

It is clear that in-store marketing plays a key role in influencing consumers' food choices (Glanz, Bader and Iyer, 2012). Black *et al*., (2014) suggest that making in-store environments more healthful, such as selling quality healthy food and placing

them in prominent locations to prompt purchasing, could promote healthful food purchases. Equally, a study by Winkler *et al.* (2016) concluded how making checkouts healthier appeals to consumers.

Limitations

Although non-probability sampling was the most convenient way to gather responses, if more time and resources were to be allocated another method may have been more reliable. Stratified random sampling could have been used to ensure the entire population was represented equally. In addition, most respondents were in employment; it may have been useful to include a question regarding income. This would have allowed for analysis of how promotions affect those with higher or lower incomes.

Conclusion

On average across Western Europe, more than one-quarter of food and drink sales volume (28.6%) is now sold on promotion (French, 2003). Price promotions have been shown to be extremely effective in altering consumer behaviour with a 200-1,000% uplift in product sales (Hamlin, Lindsay and Insch, 2012), albeit in the short-term (Jetter and Cassady, 2006). Promotional spend on confectionery was extremely high among respondents compared to figures from 2010 indicating £1.22 per person per week was spent on confectionery in the UK (DEFRA, 2020). Additionally, the frequency of unplanned purchases of less healthy foods was inflated among respondents, with 24% making unplanned purchases every time they visited a shop. This is concerning due to the number of times respondents reported shopping per week. The research also identified the popularity of sharing versions of confectionery and savoury snacks and associated consumption habits. The majority (80%) of respondents reported they purchased sharing bags, with 21% consuming the entire bag in one sitting or throughout the course of a day (14%). This is concerning given that some of these bags containing up to four times an adult's recommended daily sugar intake. The main reason cited for purchasing these larger bags was 'better value' which highlights the role price and promotions can play in food choice. Although promotions are not the solitary reason for consumers' purchasing products, they have a considerable impact as Hill (2016) estimates that once a product is placed on promotion 58% of sales are due to the offer, whereas 42% happen without the promotional incentive. The research concluded that price reductions were by far the most appealing form of promotion for both healthy and less healthy foods, which further indicates the role price plays in consumers' food choices.

From the findings it can be argued that promotions, especially for less healthy foods, can be a contributing factor to poor dietary choices and subsequently the development of obesity. Obesity is a complex, multifaceted condition that has no easy or obvious solution (Butland *et al*., 2007). However, the research has identified a number of potential interventions which may prove significant in preventing obesity and improving food choice among consumers. While more systematic research is needed to improve food choice and encourage healthier diets, the potential benefit of altering the price of food, shifting the balance of promotions from less healthy foods to healthy foods, and providing more convenience to consumers is promising. As Cameron *et al*. (2016) indicate, the nutrition environment of supermarkets has the potential to significantly

influence the eating behaviour of populations. Therefore supermarkets and shops need to take steps to create healthier in-store environments as consumers do not require further incentivisation to purchase less healthy foods. These foods already have a strong appeal to consumers due to their nutrient composition and addictive nature.

Concretely, several recommendations can be suggested in order to facilitate healthier consumer choices in the food retail environment. Firstly, regarding the presence of promotions for less healthy foods: these foods should not be given prominence over healthy foods as consumers already find energy dense foods appealing and readily available throughout their shopping experience. Secondly, retailers should not be striving for a balance between healthy and less healthy food; they should be more ambitious in terms of contributing to the public health agenda and, as healthy food contributes more recommended nutrients than does less healthy food, therefore the retail environment should reflect and encourage this. Additionally, these healthy foods on promotions should be marketed in-store as meal suggestions to meet rising consumer demands for convenience and allow consumers to make healthy choices in an accessible, timely manner.

In conclusion, the research clearly identifies that consumers' purchasing behaviour is predominately price- and promotion-orientated as 36% agreed that their shopping basket is dictated by offers while 55% agreed that price is the most important factor to them when shopping. The majority of consumers (72%) purchase confectionery and savoury snacks more readily due to promotions as well as purchase a greater volume (64%). There is a general consensus that healthy food is more expensive than less healthy food and in order to change eating behaviour among consumers reducing the price of healthy food is a potential solution as 67% of consumers believe that if healthy food was cheaper it would encourage them to eat more healthily.

Importantly, food retailers should be encouraged to recognise their corporate social responsibility and public health as well as profit obligations. Given their significance as the point of access for consumers' food choices, food retailers have an important role to play in making the healthier choice the easy choice for consumers.

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Workplace Violence in Social Care Settings: Traumatic Stress and Burnout in Staff

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Abstract
The aim of this study was to examine the relationship between frequency of exposure to physical violence/aggression and traumatic stress and burnout in social care workers (SCWs). One hundred SCWs were surveyed using non-experimental, cross-sectional, quantitative correlational study design with three questionnaires: Demographic Questionnaire, Revised Impact of Events Scale and Maslach Burnout Inventory. Responses were analysed using SPSS quantitative software and utilised descriptive statistics, and non-parametric correlational tests. Results indicated statistically significant positive relationships between the frequency of exposure to physical aggression/violence and traumatic stress and burnout measures. Results also indicated significant positive correlations between traumatic stress and burnout. Furthermore, exposure to workplace violence/aggression, traumatic stress, and burnout also positively correlated with SCWs desire to leave the profession in the next five years. Finally, results indicated a significant relationship between frequency of self-care and levels of traumatic stress and burnout subscales in SCWs.)
Keywords: Workplace Violence; Traumatic Stress; Burnout; Social Care Workers.

Introduction

The Current Landscape of Social Care Work in Ireland

Social care workers (SCWs) and Assistant Support Workers (ASW) plan and provide front-line care to vulnerable adults and children who experience disability, disadvantage, and marginalisation in a variety of settings. The role of SCWs and ASWs involves advocating, caring for, and supporting individuals to achieve their full potential (Lalor and Share, 2013). However, there are many physical and psychological challenges which SCWs often encounter daily which may have a profound impact on the quality of life of these primary care givers. The extent of these challenges is only coming to light in recent years.

Social Care Ireland published the Crisis, Concern and Complacency report in 2016 (Keogh and Byrne, 2016), which found that 90% of SCWs in Ireland have experienced

regular abuse, threats, and physical violence in the workplace, while 100% of SCWs working in children's residential services experienced workplace violence (Keogh and Byrne, 2016). The authors also suggest there appears to exist a culture of complacency and normality/desensitisation to workplace violence at present. This culture was found to extend up to management and agency level (Keogh and Byrne, 2016). Many other studies have highlighted the risk of workplace violence SCWs are exposed to and this risk is increasing (Alink *et al*., 2014; Colton and Roberts, 2006; Franz, 2010; Harris and Leather, 2012; McAdams, 2002). The Health and Safety Authority defines workplace violence and aggression as 'any incident where staff are abused, threatened or assaulted in circumstances related to their work' (Health and Safety Authority, 2014).The Economic and Social Research Institute (ESRI) found that demand for public and private health and social care services in Ireland will increase exponentially by 2030 (Wren *et al*., 2017). These changes will have significant and profound impacts on the health and social care sector which is already characterised by challenges of staff retention (Keogh and Byrne, 2016; Barak, Nissly and Levin, 2001).

The type of care setting is also important in terms of workplace violence, for example, SCWs in disability services have been found to be exposed to high levels of workplace violence (Hensel, Lunsky and Dewa, 2012), while those working in settings such as family support and community services may be at a lower risk. Staff retention rates seem to differ depending on the care setting and this may suggest that exposure to workplace violence may have a direct link to SCW retention rates (Keogh and Byrne, 2016). Residential care in particular can be a complex and unpredictable environment characterised by the spectrum of diagnoses and unique personal circumstances of each service user, combined with difficulties associated with communal living, all of which can have considerable effects on service user's behaviour (Clough, Bullock and Ward, 2006). Furthermore, young people in residential care may have experienced disproportionately high levels of social disadvantage and trauma prior to entering residential social care that may also influence their behaviour towards care givers (Brodie, 2005). Howard (2014) stresses that residential care can be chaotic, ambivalent, turbulent, unpredictable, and often dangerous for staff and young people (Howard, 2014).

Literature Review

The Impact of Workplace Violence

Routine exposure to workplace violence can have significant deleterious effects on quality of life for SCWs/ASWs and indeed the service users they care for. Studies have found that incidents of aggression/violence can result in primary, secondary and tertiary victims including service users who may experience traumatic stress and anxiety (Hastings and Brown, 2002; Rippon, 2000). SCWs may experience feelings of despair, sadness, annoyance, anger and anxiety when faced with violent incidents (Emerson and Hatton, 2000). Growing evidence is highlighting the extent to which SCWs/ASWs are exposed to workplace violence and the potential consequences. However, the full ramifications of this working environment are still lacking. Furthermore, the Crisis, Concern and Complacency report highlighted the fact that

very little attention has been paid to this situation by policy makers since the first report in 2001 (Keogh *et al*., 2001; Keogh and Byrne, 2016).

The personal cost of experiencing violence include the immediate physical injuries, some of which may be significant, but may also cause various immediate and long-term psychological effects and a complex range of emotions (Lovell and Skellern, 2013). Fear, stress, frustration, guilt, anger, annoyance, and anxiety have been identified as common impacts on SCWs and social workers who experience violence (Keogh and Byrne, 2016; Littlechild, 2000; Smith and Nursten, 1998). Fear responses linked to direct and vicarious exposure to violence were found to be related to subsequent depression, anxiety and had a negative impact on the well-being of SCWs (Schat and Kelloway, 2000). These emotional states may cause distress to SCWs and may lead to feelings of being unsafe, sleeplessness, anger, and irritability (Keogh and Byrne, 2016). The multifactorial nature of SCW can also place emotional demands on staff, and staff may benefit from regular support groups and supportive supervision (Taylor, 2011). These emotional and psychological effects are not only felt after violent incidents but may also be felt prior to violent incidents, whereby SCWs may experience anticipatory anxiety by predicting/anticipating incidents in advance. Some SCWs reported feeling relieved after behavioural outburst had occurred which may remove the tension and fear of anticipated violence (Keogh and Byrne, 2016). Other sentiments that SCWs reported feeling after a violent incident included feelings of failure, disillusionment, disappointment, powerlessness, and embarrassment (Keogh and Byrne, 2016). More alarming are statistics disclosed by the Office for National Statistics (2017), in its report 'Suicide by Occupation, England: 2011 to 2015'. Analysis found that care workers of both genders were at risk of suicide at almost twice the national average (Office for National Statistics, 2017).

While emotional and psychological issues may arise for many SCWs in response to exposure to violence/aggression, others may become desensitised and view incidents as a 'normal' part of working life (Lundström, Åström, and Graneheim, 2007), and while not acceptable, violence may be considered as tolerable in some care settings (Lovell and Skellern, 2013). The World Health Organization (WHO) identified social and cultural norms that are seen as rules or expectations of behaviour within certain groups and can become the standard of acceptable or unacceptable behaviour. These expectations of behavioural norms within certain groups can even encourage violence and aggression (Keogh and Byrne, 2016; World Health Organization, 2009). As many SCWs perceived violence as part of the job (Keogh *et al*., 2001), incidents of workplace violence have been significantly underreported (McKenna, 2004). This may be due to a belief that nothing would be done if they reported it, potentially as a result of previous reports not being acted on. Staff may also be fearful of being perceived as unskilled, not up to the job, or could be experiencing the strain of the role and may not have time to fill out incident reports (Keogh *et al*., 2001). Colton and Roberts (2007) identified the need for organisations to clearly convey to all individuals participating in care settings that workplace violence is unacceptable by ensuring there are sound, research-informed strategies to prevent, manage and support staff after violent incidents (Colton and Roberts, 2007). As many organisations do not currently have adequate support structures in place for staff, this can lead to high levels of stress and may ultimately be

a significant contributory factor in staff burnout and also SCWs perceiving their profession as a stepping stone to other employment areas (Colton and Roberts, 2007).

Traumatic Stress and Burnout

The most reported personal impact of workplace violence in SCWs was stress with 98% of SCWs surveyed reporting this effect (Keogh and Byrne, 2016). In social care settings, regular verbal and physical threats of violence and aggression can have an impact on SCWs stress levels and may even result in post-traumatic stress disorder (PTSD) in some individuals and this may impact staff retention (Balloch, Pahl and McLean, 1998; Colton and Roberts, 2006; Colton and Roberts, 2007; Hastings and Brown, 2002; Keogh and Byrne, 2016; Santos *et al*., 2009; Whitaker, Archer and Hicks, 1998). Chronic stress can bring SCWs to the point of burnout and this impacts the individual, the entire care team, and wider social networks (Keogh and Byrne, 2016).

Burnout is a type of psychological stress, sometimes referred to as occupational burnout (Ruotsalainen *et al*., 2016). Burnout is a syndrome characterised by three types of feelings; emotional exhaustion, depersonalisation, and low personal accomplishment (Maslach *et al*., 2016). Burnout can negatively impact quality of life, can be personally distressing (Freudenberger, 1975), and can have numerous health consequences (Honkonen *et al*., 2006). Burnout may also be an important risk factor or precursor to compassion fatigue/secondary traumatic stress (Collins and Long, 2003). Compassion fatigue, like burnout, can challenge SCWs ability to provide adequate care and maintain personal and professional therapeutic relationships. While burnout is a gradual process, compassion fatigue can be sudden and acute (Collins and Long, 2003; Figley 1995). Lloyd, King and Chenoweth (2002) found that social workers may experience higher levels of stress and burnout than comparable occupational groups (Lloyd, King and Chenoweth, 2002). Maslach (2016) predicted that burnout would be related to the desire to leave one's job (Maslach *et al.,* 2016). Healy, Meagher and Cullin (2007) highlighted high levels of staff turnover and retention challenges in the care profession as a result of stress and burnout (Healy, Meagher, and Cullin, 2007).

The relationship between exposure to aggression/violence and burnout has been highlighted in previous studies investigating this link in various professions including: nurses (Galián-Muñoz *et al*., 2016), nursing home caregivers (Isaksson *et al*., 2008), police officers (Kop, Euwema, and Schaufeli, 1999), psychiatrists (Kumar, 2007), and social workers (Beaver, 1999).

Rationale, Aims and Hypotheses

The current research study aimed to investigate whether SCWs/ASWs who have been exposed to workplace violence report a significant level of traumatic stress and burnout symptomology. Furthermore, does the frequency of workplace violence impact the levels of traumatic stress and burnout in SCWs? This study also aims to examine the potential protective role of self-care in moderating the perceived effects of workplace violence/aggression on traumatic stress and burnout in SCWs.

Hypothesis 1 (H1): There will be a significant positive relationship between the frequency of exposure to workplace aggression/violence and levels of traumatic stress.

Hypothesis 2 (H2): There will be a significant positive relationship between the frequency of exposure to workplace aggression/violence and burnout symptomology.

Hypothesis 3 (H3): There will be a significant positive correlation between traumatic stress and burnout.

Hypothesis 4 (H4): There will be a significant positive correlation between the frequency of exposure to workplace aggression/violence and desire to leave the SCW profession.

Hypothesis 5 (H5): There will be a significant positive correlation between traumatic stress scores and desire to leave the SCW profession.

Hypothesis 6 (H6): There will be a significant correlation between Maslach burnout subscales and desire to leave the SCW profession.

Hypothesis 7 (H7): There will be a significant negative correlation between self-care and traumatic stress and burnout.

Methodology

Participants

Participants were SCWs and ASWs currently working in front-line care positions in the private sector within Ireland. Participants (n = 100) were invited to complete an in-person paper-based survey which took approximately 5-10 minutes. The mean and standard deviation of participants age among other descriptive variables was ascertained. Inclusion criteria for participation required participants to be over 18 and have current or previous experience of workplace violence in social care settings. Participation was voluntary as per section 1.3.7 of the PSI Code of Professional Ethics and was anonymous. No monetary incentives were provided, and participants were informed how their responses would be used and presented. To gain access to participants, prior consent was given by the person in charge of residential units.

Design

A quantitative correlational study design was employed to investigate relationships between variables. Each participant, recruited through non-probability purposive sampling, completed the same survey. The survey was comprised of a demographic questionnaire, the revised Impact of Events Scale (IES-r) and the Maslach Burnout Inventory – Human Services Survey (MBI-HSS). Predictor variables were: Frequency of exposure to physical aggression/violence, length of service, self-care. Criterion variables were burnout and traumatic stress, measured using the MBI-HSS (Maslach *et al*., 2016) and the IES-r (Weiss and Marmar, 1997) respectively.

Materials

Demographic Questionnaire

A demographic questionnaire was administered to gather role specific information for the purpose of using as predictor descriptives. Questions asked and responses available included: 'Have you experience physical violence in the workplace' (Yes/No), 'Gender you identify with' (Female/Male), 'Age' (__Years), 'Work Schedule' (Full/Part Time), 'Years of employment as Social Care Worker or Assistant Support Worker' (__Years), 'Current role' (Front line staff/Management), 'Main area of work' (Day service/Residential service/Outreach/Community service/Other), 'How often do you personally experience physical aggression/violence' (Daily/ Weekly/ Monthly/ Yearly/ Never), 'How often do you witness physical aggression/violence against colleagues' (Daily/Weekly/Monthly/Yearly/Never), 'Do you feel like there is a culture of normality towards being exposed to physical violence' (Yes/No), 'Do you feel like being exposed to physical violence is expected of you from your employer' (Yes/No), 'Do you feel like the current supports available to you as a social care professional are adequate to maintain your physical and mental wellbeing' (Yes/No), 'Do you engage in self-care activities, e.g. exercise, mindfulness, making time for yourself etc.' (Daily/Weekly/Monthly/Never), 'Do you see yourself or wish to see yourself in the social care profession in 2-3 years' time' (Yes/No), 'Do you see yourself or wish to see yourself in the social care profession in 5 years' time' (Yes/No).

Impact of Events Scale – Revised Edition

The IES-R is a self-administered, 22-item questionnaire based on three types of symptoms identified in the Diagnostic and Statistical Manual of Mental Disorders, third edition, as indicators of posttraumatic stress disorder (PTSD) (Spitzer and Williams, 1980). The three types are: Intrusion (INT), Avoidance (AVD) and Hyperarousal (HYP). The IES-R is not a diagnostic or screening tool for PTSD, rather, it relies on self-reporting of symptoms after a traumatic event. Participants are asked to indicate the degree of distress for 22 symptoms according to a five-point scale: 0 indicates the symptom occurs "not at all"; 1, "a little bit"; 2, "moderately"; 3, "quite a bit"; and 4, "extremely" (Weiss and Marmar, 1997). A score of 24 or more may represent a clinical concern for PTSD (Asukai *et al*., 2002). A score of 33 or more represents the best cut off for probable diagnosis of PTSD (Creamer, Bell and Failla, 2003). A score of 37 or more is high enough to potentially suppress immune system function for as much as ten years after the traumatic event (Kawamura, Kim and Asukai, 2001). The revised Impact of Event Scale is one of the most widely used self-report measures for traumatic stress and has high reliability and validity scores (Beck *et al*., 2008).

Maslach Burnout Inventory – Human Services Survey (MBI-HSS)

Maslach Burnout Inventory (MBI) is recognised as the leading measure of burnout and the MBI-HSS is the original and most widely used version of the MBI. It was designed to capture feelings of burnout among people working in human services, where professionals such as SCWs spend considerable time interacting intensely with clients (Maslach *et al*., 2016). The reliability of the MBI-HSS exceeds the recommended levels for research instruments and the validity has been demonstrated by numerous studies and meta-analytic reviews confirming hypotheses regarding relationships between job characteristics and burnout (Maslach *et al*., 2016).

The MBI-HSS analyses three central aspects of burnout: emotional exhaustion (EE), depersonalisation (DP), and lack of personal accomplishment (PA). The frequency by which participants experience feelings related to each scale is assessed using a seven-point scale (Maslach *et al*., 2016). When interpreting results, it is important to note there is no definitive score proving participants are 'burnt out'. The mean scores are considered where they fall on the 7-point scale from 0 (Never) to 6 (Daily). For example, an EE mean score of 5.5 would indicate the participant felt emotionally exhausted several times a week on average, but not every day. The three MBI-HSS scores should be calculated and interpreted separately and should not be combined to form a single "burnout" score. For ease of interpretation, mean responses were calculated.

Procedure

This research was carried out between December 2018 and February 2019. The researcher attended several residential and day service units within a healthcare service provider in the midlands region of Ireland. The aim of the research was explained to staff at a time that was suitable for them and then information and consent forms in addition to the survey were provided to staff to complete. Written instructions were in the survey booklet. Any questions participants had were answered at the time. After completion, staff were checked to ensure they were okay. Support services were then outlined and signposted verbally and in the debrief form.

Ethical Considerations

Ethical approval was granted by Dublin Business School Ethics Board. Throughout this study the PSI Code of Ethics (Psychological Society of Ireland, 2010) was always adhered to.

Data Analysis

Descriptive and inferential statistics were employed during analysis. Mean scores and standard deviation results were used for demographic variables to highlight raw data. As data was not normally distributed, inferential statistics included Spearman correlations to test for relationships between predictor and criterion variables.

Results

Descriptive Statistics

Demographic Questionnaire Descriptives

Participants ranged in age from 21 to 54, with mean age of 32 (SD=7.56), with 56% females, and 44% males. The mean time employed as SCWs/ASWs was 5 years (SD=4.55), with the shortest serving 6 months and longest 25 years. Seventy-nine percent worked full-time, 21% worked part-time and 86% were front-line staff while 14% were management. Participants worked in day service (10%), residential service (87%), and outreach/community service (3%).

Age

The mean age (Years) of participants in the Daily (30.25), Weekly (30.77), Monthly (32.49), and Yearly (36) exposure groups was ascertained. The mean age in the

combined Daily-Weekly group and Monthly-Yearly group was 30.63 years and 33.6 years respectively.

Length of Service

The mean length of service (Years) in the Daily (3.25), Weekly (4.07), Monthly (5.08), and Yearly (7.83) exposure groups was ascertained. The mean length of service in the combined Daily-Weekly group and Monthly-Yearly group was 3.84 years and 5.95 years respectively and is outlined in Figure 1. This result highlights differences in length of time people have worked in each of the different exposure to aggression/violence groups.

Figure 1: Mean length of service (years) in each frequency of exposure to physical aggression and violence groups. Error bars denote the standard deviation around the means.

Frequency of Exposure to Physical Aggression or Violence

SCWs/ASWs described being exposed to physical aggression and violence daily (12%), Weekly (31%), Monthly (39%) and Yearly (18%). The number of SCWs exposed to physical aggression and violence Daily/Weekly comprised 43% of the sample and those exposed Monthly/Yearly comprised 57% of the sample. Interestingly, the mean length of service in each of these categories followed a pattern of decreasing length of service with higher levels of exposure to physical aggression and violence, as outlined in Figure 1.

Culture of Normality

When participants were asked if they thought there was a culture of normality towards being exposed to physical violence or aggression in the workplace, 92% indicated there was. This opinion was shared among all exposure groups, front-line staff and management.

Employer Expectation

When participants were asked if they felt being exposed to physical violence or aggression is expected of them from their employer, 81% felt this expectation was present. This opinion was shared among front-line staff and management and each exposure group.

Available Supports

When participants were asked if they felt current supports available to them were adequate to maintain physical and mental well-being, 33% indicated they did, while 67% did not. The majority of the Daily, Weekly, and Monthly exposure groups did not feel that adequate supports were available, while the majority of those in the yearly exposure group felt there were adequate supports available.

Self-care

Participants were asked how frequently they engaged in self-care activities, such as exercising, mindfulness, making time for themselves. Participants engaging in Daily (36%), Weekly (41%), Monthly (18%), and Never (5%) categories were ascertained.

Future Career Outlook

The choice of using a 2-3 year and 5-year career outlook was used to explore participants short-to-medium term career outlooks. In response to the question "Do you see yourself or wish to see yourself in the social care profession in 2-3 years' time", 68% of participants indicated they would, while 32% indicated they would not. When broken down into the different frequencies of exposure to aggression, we can see differing future career outlooks for each: Daily (Yes: 50%, No: 50%), Weekly (Yes: 58%, No: 42%), Monthly (Yes: 72%, No: 28%), Yearly (Yes: 89%, No: 11%). When looking at combined groups we see the Daily-Weekly (Yes: 56%, No: 44%) and Monthly-Yearly (Yes: 77%, No: 23%). See figure 2.

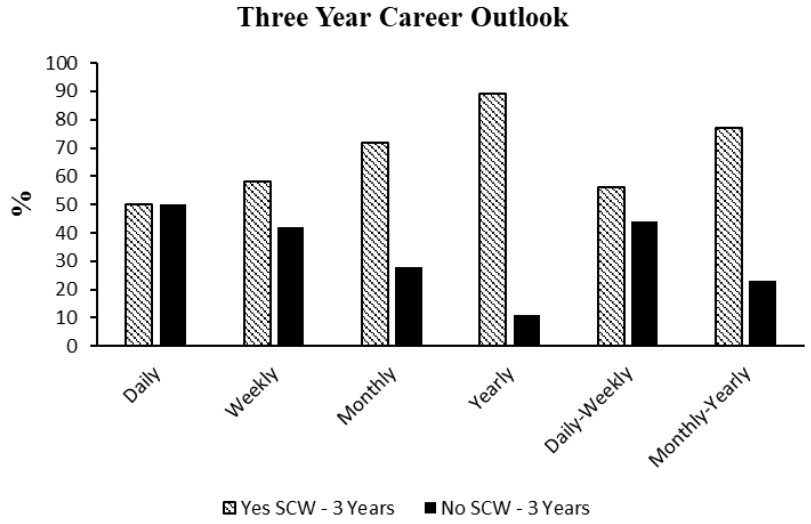

Figure 2: Three-year career outlook for SCWs. 'Yes SCW' indicates percentage who wish to continue in SCW in three years and 'No SCW' indicates percentage who do not wish to continue in SCW in three years. Exposure groups illustrated as Daily, Weekly, Monthly, Yearly and combined groups Daily-Weekly and Monthly-Yearly.

When asked their 5-year outlook, 57% indicated they did, while 43% would not like to be in SCW in 5 years. When broken down into the different frequencies of exposure to aggression groups, we can see differing future career outlooks; Daily (Yes: 42%, No: 58%), Weekly (Yes: 32%, No: 68%), Monthly (Yes: 67%, No: 33%), Yearly (Yes: 89%, No: 11%). When looking at the combined groups we see the Daily-Weekly (Yes: 35%, No: 65%) and the Monthly-Yearly (Yes: 74%, No: 26%). See Figure 3.

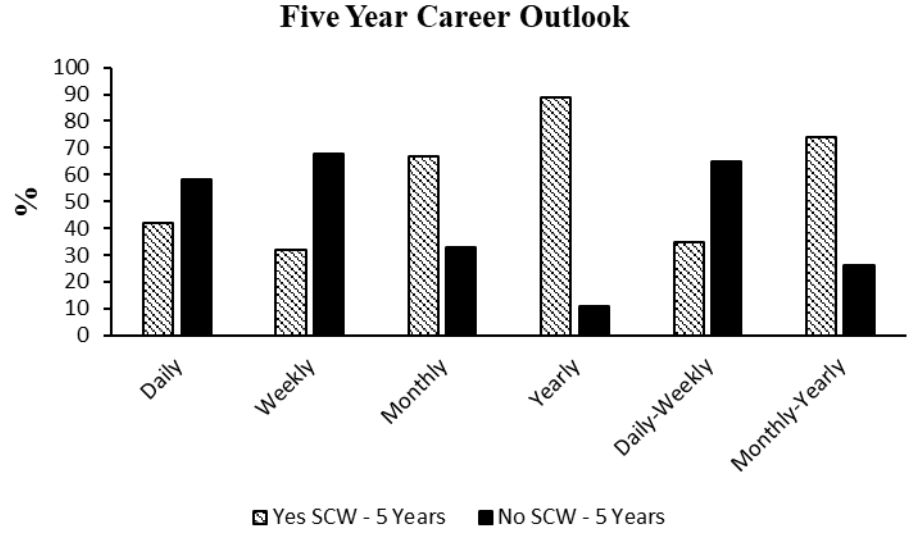

Figure 3: Five-year career outlook for SCWs. 'Yes SCW' indicates percentage who wish to continue in SCW in five years and 'No SCW' indicates percentage who do not wish to continue in SCW in five years. Exposure groups illustrated as Daily, Weekly, Monthly, Yearly and combined groups Daily-Weekly and Monthly-Yearly.

Post-traumatic Stress

The average total IES-r score for all participants was 22.56, with mean score of 1.02. To ensure meaningful reporting of results, highlighting relationships between workplace violence and stress/burnout in individuals exposed to different frequencies of physical aggression/violence, each exposure group and combined groups were analysed. Total and mean scores for individual subscales within the IES-r were calculated for all participants and each exposure group. *Daily Exposure* (n = 12)*:* Total IES-r (43.25) and Total Mean (1.96). Mean subscale scores: Intrusive thoughts (2.02), Avoidance (1.85), Hyperarousal (2.03). *Weekly Exposure* (n = 31): Total IES-r (24.61), Total Mean (1.12). Mean subscale scores: Intrusive thoughts (1.23), Avoidance (.9), Hyperarousal (1.23). *Monthly Exposure* (n = 39)*:* Total IES-r (19.21), Total Mean (.87). Mean subscale scores: Intrusive thoughts (.88), Avoidance (.91), Hyperarousal (.8). *Yearly Exposure* (n = 18)*:* Total IES-r (12.5), Total Mean (.57). Mean subscale scores: Intrusive thoughts (.54), Avoidance (.6), Hyperarousal (.56). *Daily-Weekly Exposure Combined* (n = 43)*:* Total IES-r (29.81), Total Mean (1.35). Mean subscale scores: Intrusive thoughts (1.45), Avoidance (1.16), Hyperarousal (1.45). *Monthly-Yearly Exposure Combined* (n = 57)*:* Total IES-r (17.09), Total Mean (.78). Mean subscale scores: Intrusive thoughts (.77), Avoidance (.81), Hyperarousal (.72).

Burnout

Mean scores for individual subscales within the MBI-HSS were calculated for all participants and each exposure group. *Total scores* (n = 100) were: Emotional Exhaustion (EE) (2.74), Depersonalisation (DP) (1.57), Personal Accomplishment (PA) (4.14). *Daily Exposure* (n = 12)*:* EE (3.86), DP (2.77), PA (3.6). *Weekly Exposure* (n = 31)*:* EE (3.27), DP (2.1), PA (3.56). *Monthly Exposure* (n = 39)*:* EE (2.42), DP (1.08), PA (4.43). *Yearly Exposure* (n = 18)*:* EE (1.76), DP (.94), PA (4.89). *Daily-Weekly Exposure* (n = 43)*:* EE (3.43), DP (2.29), PA (3.57). *Monthly-Yearly Exposure* (n = 57)*:* EE (2.21), DP (1.04), PA (4.58).

Inferential Statistics

Preliminary statistical analysis found some data was non-normally distributed. Accordingly, non-parametric tests, were used to analyse all variables. A summary of all correlational analysis can be found in Table 1.

Traumatic Stress (H1)

Spearman's Rho correlation coefficients indicated a strong significant positive relationship between frequency of exposure to physical aggression/violence and levels of traumatic stress in all measures of the IES-r except the Avoidance subscale, which had a medium significant positive relationship. IES-Total/mean score (r_s = .527, p < .001). Mean IES-Intrusion (r_s = .538, p < .001). Mean IES-Avoidance (r_s = .354, p < .001). Mean IES-Hyperarousal (r_s = .517, p < .001). Combined Daily-Weekly and Monthly-Yearly groups also found a medium significant positive relationship between frequency of exposure to physical aggression/violence and higher levels of traumatic stress in all measures of the IES-r except the Avoidance subscale which had a small significant positive relationship. IES-Total/mean score (r_s = .429, p < .001). Mean IES-Intrusion (r_s = .461, p < .001). Mean IES-Avoidance (r_s = .240, p = .016). Mean IES-Hyperarousal (r_s = .453, p < .001). Therefore, the null hypothesis was rejected; higher frequency of exposure to physical aggression/violence was related to higher levels of traumatic stress.

Burnout (H2)

Spearman's Rho correlation coefficients indicted a strong significant positive relationship between higher frequencies of exposure to physical aggression/violence and higher levels of burnout in two of Maslach's burnout inventory subscale; Emotional Exhaustion (r_s = .534, p < .001), Depersonalisation (r_s = .500, p < .001), and a medium negative relationship with the Personal Accomplishment subscale (r_s = -.476, p < .001). Combined Daily-Weekly and Monthly-Yearly groups also found a medium significant positive relationship between higher frequencies of exposure to physical aggression/violence and higher levels of burnout in two of Maslach's burnout inventory subscale; Emotional Exhaustion (r_s = .481, p < .001), Depersonalisation (r_s = .498, p < .001), and a medium negative relationship with the Personal Accomplishment subscale (r_s = -.469, p < .001). Therefore, the null hypothesis was rejected; higher frequency of exposure to physical aggression/violence was related to higher levels of staff burnout scores in the emotional exhaustion and depersonalisation subscales and lower levels of personal accomplishment scores.

Correlation between Traumatic Stress and Burnout (H3)

Spearman's Rho correlation coefficients indicated a medium significant positive relationship between total mean IES-r (traumatic-stress) and burnout in two of Maslach's burnout inventory subscales; Emotional Exhaustion (r_s = .497, p < .001), Depersonalisation (r_s = .484, p < .001), and a medium negative relationship with the Personal Accomplishment subscale (r_s = -.419, p < .001). Scatter plots were produced as both variables were scale data and can be seen in Figure 4.

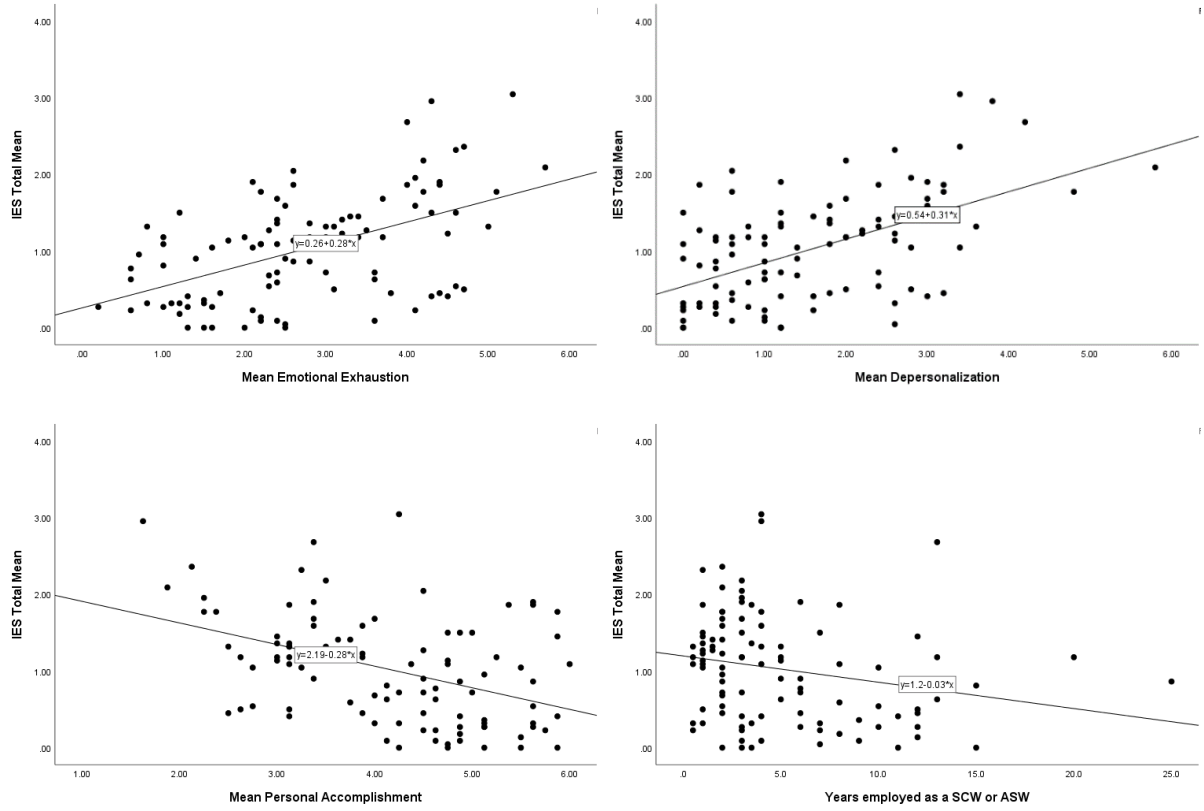

Figure 4: Spearman's Rho correlation between traumatic stress and burnout. Total Mean IES-r was correlated with 'Years employed as a SCW and Maslach Burnout subscales; Emotional Exhaustion, Depersonalisation, Personal Accomplishment.

Impact of Workplace Violence/Aggression, Traumatic Stress, and Burnout on Desire to Leave SCW

Exposure to Workplace Violence/Aggression and Desire to Leave SCW (H4)

Spearman's Rho correlation coefficients (n = 100) indicated a small positive relationship and a medium positive relationship between frequency of exposure to workplace violence/aggression and desire to leave SCW in the next two-to-three years (r_s = .263, p = .008) and five years respectively (r_s = .395, p < .001).

Traumatic Stress and Desire to Leave SCW (H5)

Spearman's Rho correlation coefficients indicated a small positive relationship and a medium positive relationship between total IES-r traumatic stress scores and desire

to leave SCW in the next two-to-three years (r_s = .266, p = .007) and five years respectively (r_s = .305, p = .002).

Burnout and Desire to Leave SCW (H6)

Spearman's Rho correlation coefficients indicated a strong positive relationship between Emotional Exhaustion scores and desire to leave SCW in the next two-to-three years (r_s = .516, p < .001) and five years (r_s = .602, p < .001).

Spearman's Rho correlation coefficients indicated a medium positive relationship between Depersonalisation scores and desire to leave SCW in the next two-to-three years (r_s = .366, p < .001) and five years (r_s = .453, p < .001).

Spearman's Rho correlation coefficients indicated a medium negative relationship between Personal Accomplishment scores and desire to leave SCW in the next two-to-three years (r_s = -.355, p < .001) and five years (r_s = -.482, p < .001).

Self-care

Self-reported frequencies of self-care engagement highlighted individuals who engage in Daily (n = 36), Weekly (n = 41), Monthly (n = 18) self-care and those who never engage in self-care (n = 5).

Self-care and Traumatic Stress (H7)

Spearman's Rho correlation coefficients indicated a small significant negative relationship between frequency of self-care and total levels of traumatic stress in all measures of the IES-r except the Avoidance subscale, which had a small non-significant negative relationship. *IES-Total/mean* (r_s = -.249, p = .012). *Mean IES-Intrusion* (r_s = -.225, p = .025). *Mean IES-Avoidance* (r_s = -.166, p = .099). *Mean IES-Hyperarousal* (r_s = -.297, p = .003).

Self-care and Burnout (H7)

Spearman's Rho correlation coefficients indicated a small significant negative relationship between self-care and burnout in two of Maslach's burnout inventory subscales; Emotional Exhaustion (r_s = -.293, p = .003), Depersonalisation (r_s = -.260, p = .009), and a medium positive relationship with Personal Accomplishment subscale (r_s = .392, p < .001).

Table 1: Summary of correlational data for inferential statistical analysis

	Years employed	Exposure to Violence	Self-Care	Traumatic Stress	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Years employed	1						
Exposure to Violence	-.276**	1					
Self-Care	0.118	-.217*	1				
Traumatic Stress	-.268**	.527**	-.249*	1			
Emotional Exhaustion	-0.027	.534**	-.293**	.497**	1		
Depersonalisation	0.017	.500**	-.260**	.484**	.726**	1	
Personal Accomplishment	0.096	-.476**	.392**	-.419**	-.527**	-.620**	1
* Significant at 0.01 level							
** Significant at 0.05 level							

Discussion

Interpretations

As previously highlighted, the demand for all types of public and private health and social care services in Ireland will increase exponentially by 2030 (Wren *et al*., 2017). Physical violence and aggression have been described as a characteristic aspect of SCW (Keogh and Byrne, 2016), and this has been linked to increased levels of stress and burnout in staff (Lloyd, King and Chenoweth, 2002). Maslach (2016), also predicted burnout would be related to the desire to leave one's job (Maslach *et a*l., 2016). Furthermore, the Crisis, Concern and Complacency report (2016) highlighted the fact that very little attention has been paid to this situation by policy makers since the first report in 2001 (Keogh *et al*., 2001; Keogh and Byrne, 2016). As a result of this information, it was important to investigate this area further to better understand the relationship between workplace violence/aggression and well-being in SCWs.

The aim of the current research was primarily to examine the relationship between the frequency of exposure to physical violence/aggression and traumatic stress and burnout in SCWs. Secondary analysis included whether there was a correlation between traumatic stress and burnout and also whether any of the predictor variables were found to have a statistically significant relationship with the criterion variables of traumatic stress and burnout. This research also aimed to elucidate whether the frequency of self-care may have a protective role against traumatic stress and burnout symptomology.

In summary, the findings of this research indicate a statistically significant positive relationship between the frequency of exposure to physical aggression/violence and traumatic stress and burnout measures. Current findings also indicate a significant positive correlation between traumatic stress and burnout. When the frequency of exposure to workplace violence/aggression, traumatic stress, and burnout scores

were examined in relation to SCWs desire to leave the profession in two-to-three years and/or five years, the findings indicate the presence of a significant positive relationship between the variables. Finally, the current findings indicate the presence of a significant negative correlation between self-care and traumatic stress and burnout. Detailed interpretations of each research hypothesis will now be discussed and followed by a critical evaluation of the present research.

Hypothesis 1 (H1): This research hypothesis was accepted; inferential analysis indicated a significant positive relationship between the frequency of exposure to workplace aggression/violence and levels of traumatic stress. Total average IES-r scores for the daily and weekly exposure groups were above the threshold for indicating potential clinical concern for PTSD (Asukai *et al*., 2002). The daily exposure group had scores high enough to potentially suppress the immune system function for as much as ten years after the traumatic event (Kawamura, Kim and Asukai, 2001). This finding is supported by the Crisis, Concern and Complacency report (2016) which found that 98% of SCWs exposed to workplace violence experienced stress (Keogh and Byrne, 2016). Rippon (2000) highlighted how violence is becoming a significant concern for healthcare professionals and that primary, secondary and tertiary victims may experience symptoms of PTSD (Rippon, 2000). The current findings indicate that traumatic stress resulting from workplace violence exposure may be dependent on the frequency of exposure, with higher frequencies resulting in higher levels of traumatic stress.

Hypothesis 2 (H2): This research hypothesis was accepted; Inferential analysis indicated a significant positive relationship between the frequency of exposure to workplace aggression/violence and burnout subscales of emotional exhaustion (EE) and depersonalisation (DP). Analysis also indicated a significant negative relationship between workplace aggression/violence and personal accomplishment (PA). This finding is supported by previous studies examining the role of exposure to violence and burnout in various professions including; Nurses (Galián-Muñoz *et al*., 2016), nursing home caregivers (Isaksson *et al.,* 2008), police officers (Kop, Euwema, and Schaufeli, 1999), Psychiatrists (Kumar, 2007), and social workers (Beaver, 1999).

Hypothesis 3 (H3): This research hypothesis was accepted; Inferential analysis indicated a significant positive correlation between traumatic-stress and burnout subscales EE and DP, and a significant negative correlation with the PA subscale. This result highlights the risk of burnout when SCWs experience elevated levels of stress and may predict desire to leave SCW (Maslach, 2016). A longitudinal study found stress and burnout subscales showed reciprocal causation and a study of clinical psychologists found a relationship between perfectionism, stress, and burnout (D'Souza, Egan, and Rees, 2011; McManus, Winder, and Gordon, 2002).

Hypothesis 4, 5, and 6 (H4, H5 and H6): This research hypothesis was accepted; inferential analysis indicated a significant positive relationship between; frequency of exposure to workplace aggression/violence, traumatic stress, burnout subscales (EE, DP) and desire to leave SCW. Analysis also identified a significant negative relationship between burnout subscale (PA) and desire to leave. The strength of correlation was strongest when SCWs considered their five-year career outlook. Descriptive analysis found that 43% of SCWs did not wish to be in the profession in

five years with the highest proportion of SCWs with a desire to leave experiencing daily (58%) and weekly (68%) exposure to violence/aggression. Interestingly, the mean length of service in the daily, weekly, monthly, yearly exposure to violence groups followed a pattern of decreasing length of service with higher levels of exposure to physical aggression/violence, as outlined in figure 1.

Hypothesis 7 (H7): This research hypothesis was accepted; Inferential analysis indicated a significant negative relationship between frequency of self-care and traumatic stress and burnout subscales EE and DP. Analysis also found a significant positive relationship between frequency of self-care and personal accomplishment. The current research indicated that 67% of SCWs did not feel available supports were adequate to maintain their physical and mental well-being. As the frequency of self-care during SCWs personal time has been indicated in the current research to have an ameliorative effect on SCW stress and burnout, it is important for employers to consider policy changes to allow self-care activities during work to reduce stress and burnout in staff. SCW is often characterised by a lack of dedicated lunch breaks and shifts can often be twelve hours in length with consecutive shifts. One policy change employers could make may be to provide additional support staff to allow SCWs to have guaranteed lunch breaks.

Limitations

Potential limitations may include the small sample size of 100 participants that may not allow for adequate statistical strength and confidence. Results may be more significantly impacted by outliers. The crisis, concern and complacency report by Keogh and Byrne (2016), which has informed this current study had 402 participants. Furthermore, the field of SCW is very diverse and most participants in this study worked in residential services (n = 87) which have been characterised as being complex and unpredictable environments (Clough, Bullock and Ward, 2006). Howard (2014) stresses that residential care can be chaotic, ambivalent, turbulent, unpredictable, and often dangerous for staff and young people (Howard, 2014). This may have resulted in the survey population being primarily composed of SCWs exposed to higher frequencies of physical aggression/violence. In addition to sample size, the method of investigation involved the use of self-reported questionnaires which have some flaws. Participants may not always have the necessary self-reflection skills to provide unbiased and accurate self-reporting. Participants may also be fearful of being perceived as unskilled or not up to the job (Keogh *et al*., 2001). As the survey was completed during working hours, time constraints may have resulted in participants not taking adequate time to fully consider each question and response.

Strengths

The current research has several attributes which may qualify as strengths. There was a gender balance (56% female, 44% male) and wide age range (21-54). Participants had a wide range of experience in SCW (6 months – 25 years). Both full and part-time staff and front-line and management participated in the study. The questionnaire was completely anonymous which may have given participants more confidence to give honest responses. Questionnaire length was relatively short (5-10 minutes), ensuring participants didn't lose patience or interest and would give each question sufficient attention and thought. This helped to give a 100% survey completion rate across

participants. This research may also be unique in that it examined the potential protective role of self-care in moderating the perceived effects of workplace violence/aggression on traumatic stress and burnout in SCWs

The revised Impact of Events Scale and Maslach Burnout Inventory (MBI) are well researched and validated. The reliability of the MBI-HSS exceeds the recommended levels for research instruments and the validity has been demonstrated by numerous studies and meta-analytic reviews confirming hypotheses regarding relationships between job characteristics and burnout (Maslach, 2016). The revised Impact of Event Scale is one of the most widely used self-report measures for traumatic stress and has high reliability and validity scores (Beck *et al*., 2008).

Future Research

Future research would benefit from addressing some of the limitations of this current research. For example, a larger sample size incorporating a wider and more diverse sample of SCWs in different settings may give a more accurate representation of the full spectrum of SCW experiences. To counteract weaknesses in self-report questionnaires, future research may also benefit from asking spouses/significant others to answer questions on behalf of SCWs. Future research may also benefit from investigating criterion variables pre-and-post self-care education and engagement.

Implications and Applications

The current research has implications and applications for social care policy, care providers and in supporting SCWs to ensure optimal well-being is maintained by encouraging self-care activities and by providing additional staff supports to allow rest periods and support during/after incidents of physical violence/aggression. Social care employers may introduce training and awareness of the important benefits of self-care in ameliorating the detrimental impact of stressful events, and in doing so may reduce the potential for staff burnout and desire to leave SCW. As previously discussed, the ESRI found that demand for public and private health and social care services in Ireland will increase exponentially by 2030 (Wren *et al*., 2017). These changes will have significant and profound impacts on the health and social care sector which is already characterised by challenges of staff retention (Keogh and Byrne, 2016; Barak, Nissly and Levin, 2001). By examining the factors that may lead to staff leaving their job and indeed the SCW profession itself, and also the factors that may alleviate this, there is an opportunity to improve social care policy and care provision. This may improve staff retention and all the benefits this entails, such as: consistency of staff/care, higher quality of trained/experienced staff, leading to higher quality of care provided, lower costs to care providers for recruitment campaigns and sick leave etc.

Conclusion

This study examined the relationship between frequency of exposure to physical violence/aggression and several variables. The results of this research indicate a statistically significant positive relationship between the frequency of exposure to physical aggression/violence and traumatic stress and burnout measures. Current findings also indicate a significant positive correlation between traumatic stress and burnout. Exposure to workplace violence/aggression, traumatic stress, and burnout

also positively correlated with SCWs desire to leave the profession in the next five years. Results also highlighted several interesting points, such as 92% of SCWs believing a culture of normality towards exposure to physical violence/aggression exists. Eighty-one percent of participants also believed their employer expected them to be exposed to workplace violence. The results also indicated the average length of time SCWs stay in the profession is five years. This decreases to three years and four years for SCWs exposed to physical violence daily/weekly respectively. Finally, these findings indicate the presence of a significant protective role of self-care activities in moderating the perceived effects of workplace violence/aggression on traumatic stress and burnout in SCWs. This protective role of self-care may help ameliorate current rates of traumatic stress and burnout in SCWs.

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Building Confidence in Employees with Dyslexia and other Neurodiverse Conditions: An Interview with Nicola James, CEO and Founder of Lexxic

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Introduction

I first met Nicola James when, at the invitation of a student, she ran a free workshop on Building Confidence in Students with Disabilities at Dublin Business School in February 2017. At this workshop, Nicola described her own experiences as a student with undiagnosed dyslexia, how she began to thrive academically after diagnosis and how this experience led to her founding Lexxic. Lexxic is a specialist consultancy that employs a team of psychologists to run workshops and interventions with neurodiverse employees within companies, providing them with strategies and techniques to build confidence in order to drive performance. Lexxic has now grown to a flourishing business whose clients include Deloitte, AXA Healthcare, the NHS, the UK Cabinet Office, and the General Medical Council, among many others. Lexxic recently launched the Neurotalent Unlocked online learning platform. Nicola has continued to deliver a free workshop in DBS annually.
Keywords: Educational Psychology; Occupational Psychology; Learning Disabilities; Dyslexia

JB: *What was your experience of the education system as a student who had undiagnosed dyslexia*?

NJ: I did not know that I was dyslexic until I went to university and I was not diagnosed until towards the end of my degree programme. I always remember feeling that my value as a student was defined by my grade and, when I saw the amount of effort I would put in and that my grade did not reflect the effort I had put in, it gave me a sense that I was not as good as the students who managed to get an A with seemingly little effort. I remember comparing myself to the academic students, feeling that I would never be good enough. I also found that during my time in education in the UK there was a lot of emphasis on academic standards but not much focus on all the other gifts people have that fall outside the norm: having ideas, being creative, emotional intelligence. I felt the system, on reflection, overpraised linear thinkers. Yet

running a business today, where when I started I recruited many psychologists who are more linear thinkers and manage academia much more naturally then myself, I started to realise that even though they were great at the detail and the linear thinking, they could not go into the clouds, think ten steps ahead and innovate like I do. It made me realise we need both linear and holistic brains as they really complement each other and, without all the neurodiverse people that work for me, we would have far less innovation and fresh ideas. I also worked with some Irish students who explained that only until a few years ago they would put on the academic grade certificate if you had extra help or not. This would have mortified me; this was not the same in the UK education system, but I think I would have felt stamped or labelled as someone different, someone not as good. I would be embarrassed and may never have even asked for extra time to avoid this happening.

JB: *How did your experience of university change when you received your assessment of dyslexia?*

NJ: When I was diagnosed with dyslexia in the third year of my degree, it felt like something just hit me in the face: that's why…now I understand. The reason I suspected I had dyslexia was when I wrote up an essay on the same subject I had presented on, and at the presentation I was given a lot of praise for understanding the subject in great detail, the same teacher said that I did not know what I was talking about in my essay. I actually knew so much on the subject, which was around psychology and mental health; I had read so much but I did not know how to get all my thoughts down on paper. For me the world of knowledge is like a mind map with lots of interconnecting parts and to get all this down in a linear 2000-word essay was impossible. I had never been taught how to write an essay in terms of structure, a beginning, a middle and an end. I just put my thoughts down. However, what I thought I was writing and what I actually wrote were sometimes two different things. So, when I received such contradictory feedback for work on the same topic, I got so upset. I burst into the lecturer's office and asked how dare she say I don't know what I am talking about and then I recited to her everything I knew, she looked speechless. Another lecturer came in and she turned out to be the disability support teacher. After a chat, I was then referred for a dyslexia assessment. I had already started to have an inkling that I could be dyslexic, but this just confirmed it. My dyslexia assessment made me relieved and angry at the same time, I understood but I was angry as to why I had not been diagnosed earlier, why no one had picked that up previously…..I felt let down. However, when I got support during my Master's degree, where even though I needed a 2:1 to get on the course and initially got rejected via the electronic assessment process for the course, when I wrote a letter explaining my diagnosis and had a phone interview I was then accepted on the course. And this is where I met the amazing Margaret Herrington, OMG the amount of light bulb moments I had during my dyslexia support sessions with her was a revelation! What I started to realise is that, as a dyslexic individual, I did not implicitly see structure in books of essays but when she pointed these out and started to teach me about how to structure things, I had so many "Oh yeah, Oh I see" moments. This also worked with reading. Before delving into very specific books on one topic area related to an essay, I would read a book or paper that gave me an overview so that I would have the bigger picture, which was what my brain liked. Then I could delve into the different topics because I

understood how they fitted together at the macro level. I still hated to read, I love audio books, but reading would involve lots of highlighting and rereading and crying when something just would not go in. The magic of the text-to-speech software changed my experience of this. Suddenly when reading off a screen, the words were highlighted as they were read out-loud by a voice, this gave me a visual colour imprint of a word as well as an auditory imprint. This changed my world. I no longer needed to proofread and check and then double-check and check again if what I had written is what I thought I had written. This technology created so much space for me and saved me so much time, my brain was starting to see that new ways of working were paying off. To be honest, at the end of my degree, I actually officially gave up and as soon as I gave up help seemed to appear. This technology reduced the rereading so much and my grades on my Master's started to increase to the extent that on my last essay, I got one point off a First. Margaret made such a difference to me and I would not be here today helping others if it were not for her help and persistence. She sometimes looked at me like I was very smart, this always confused me - she saw something in me, I now understand what that is but at the time I remember feeling like me…bright? …never…!

JB: *What was your experience in the workplace as a dyslexic person?*

NJ: When I was looking for a role, I avoided looking for a role where they used an assessment centre, as I knew with dyslexia my written work would suffer from this scrutiny. My first job was in Rolls Royce in a psychology, human factors role. This was just an interview. I was always good verbally at explaining things. I was shocked I got the job! I was starting to realise that maybe I could achieve after all. I really enjoyed the work, but when it came to writing reports, I started to struggle. When I declared my dyslexia, I would have one person proofreading my work and then it might move to another for the same piece of work, and as people had different writing styles, they would correct each other's changes. I remember arriving at work and crying to myself, I was so stressed by the proofreading and never getting there. I applied for an internal HR role, this had been my plan I thought if I got in a company then I could move across, I got this role and I was so relived as I was very stressed by this point with the proofreading. The team were always kind when I said I had dyslexia - they were doing their best, but I don't think they realised how hard it was on me.

JB: *Why did you set up Lexxic?*

NJ: Why is a great question! I had so many business ideas, for example, a consumer psychologist company, coaching, but I knew from some entrepreneurial events I had been to that I could not spread myself so thinly. So, I just went with where my heart was, where the passion was, to help people who are similar to me to avoid what I had struggled with because I did not want people to go through the same challenges and emotional rollercoaster as myself. The biggest thing is if you can get someone to go from 'they can't do' to 'they can do' by teaching them the strategies - this is such a great moment, the penny dropping, the light going on, because they will then start to see opportunity in the world rather than as a place that works against them.

JB: *What type of work do you do with employees in the companies?*

NJ: We work with a range of companies providing diagnostic assessment for neurodiverse conditions (i.e. dyslexia, dyspraxia etc.). We provide reports where we identify types of adjustment that can support the employee in their role; the biggest behavioural change comes through the assistive technology and the one-to-one dyslexia/neurodiversity coaching. This is where you see the person really become empowered and see positive progress within the role. We also work with organisations on neurodiversity strategy, for example, organisations looking for coding skills are more likely to find a pool of these skills in certain neurodiverse profiles.

JB: *What are the benefits to employees of your work?*

NJ: In Lexxic, when you bring together a team of neurodiverse and non-neurodiverse individuals, you can see why differences add so much to the workforce. For example, the ADHD sales person with 100 ideas and energy to grow the business: the dyslexic psychologist sharing their own personal experience with someone who has had the same challenges to overcome for success; the autistic coder who can see patterns that no-one else can in the coding, but if you expect them to be the most sociable person in the team, this may not be the case. When you bring difference together, you thrive and grow through different perspectives and talents. A group of linear brains may never come up with the creative ideas, a group of bigger-picture brains may never get to the detail….or have too many ideas they don't see them through, but together we can create such an amazing environment of innovation and implementation. However, if people recruit people the same as themselves, they may never get to see this.

JB: *What are the benefits to the companies from your interventions?*

NJ: When people have dyslexia or neurodiverse interventions and start to understand how they learn, suddenly they can work with how they learn using more effective ways to help them achieve the end goal, rather than rereading to the point that it feels like your brain is going to explode. The more you understand how you work and what works for you, the more you can navigate the world of education and work and work out what types of roles and subjects suit who you are because you are unique and not the same as the person next to you.

JB: *How is Lexxic developing as a company?*

NJ: We are continuing to help people, to innovate and to develop our elearning strategies for adults to help as many people as possible become empowered from neurodiverse strategies to support them.

JB: *What are the main insights that you have gained from your work?*

NJ: The difference you can make for someone with dyslexia in a relatively short period with our strategies! How they can impact the person's confidence and self-belief is amazing.

JB: *What opportunities and challenges lie ahead for Lexxic?*

NJ: As the world of neurodiversity grows, we are looking to educate and continue to help more and more people through more innovative ways and tell the stories and share the experience to help other neurodiverse individuals thrive.

Unsafe Thinking: How to be Creative and Bold When You Need It Most

Jonah Sachs
(Random House, 2019)

Review by ***Laoise Darragh***
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In his latest work, *Unsafe Thinking: How to be Creative and Bold When You Need it Most* (2019), Jonah Sachs offers an insight into the ways in which creative and risky thinking allows individuals and often their businesses to push boundaries and stay original. In his introduction, Sachs defines unsafe thinking as "the ability to meet challenges with a willingness to depart from standard operating procedures; to confront anxiety, tolerate criticism, take intelligent risks, and refute conventional wisdom - especially one's own views - in order to receive breakthroughs." He urges readers to revolt against existing traditional and confining business models which hinder creativity instead of making use of it through examples of people who have stepped out of this way of thinking, and highlighting their success.

Having completed a Bachelor's degree in American Studies at Wesleyan University, Sachs and his business partner formed 'Free Range Studios', with the aim of giving social issues the same platform and tools of success that large corporate brands use consistently in their media campaigns. His involvement with viral videos such as 'The Meatrix' and 'The Story of Stuff' led Sachs to become known for controversial videos on social issues. His first book *Winning the Story Wars: Why Those Who Tell - and Live - the Best Stories Will Rule the Future* (2012) describes the phenomenon of 'empowerment marketing', and was critically acclaimed in Forbes magazine.

While books in this area can often force the reader to wade through business jargon, 'Unsafe Thinking' stands out from the crowd in this respect. Sachs' experience as a TED Talk speaker is evident through his energetic yet clear voice and tone. He delivers his message with a fun and enjoyable insight into the world of unsafe thinking by avoiding the "safe" confinement of structure. Instead, he offers a 'road map' for the journey of unsafe thinking. This is divided into a number of sections:

Courage: Examines myths around anxiety and explains why it is not always a negative thing.
Motivation: Examines the division between intrinsic and extrinsic motivation and the importance of harnessing the power of both.

Learning: Addresses the fact that we often see a decline in creativity, learning and performance once someone becomes an expert.
Flexibility: Demonstrates the power and limits of intuition – the alternative power of counterintuitive/ridiculous ideas.
Morality: How doing the 'right' thing often causes people to stay stuck in their ways/safe which often leads to the 'wrong' thing. Instead Sachs posits an "intelligent disobedience".
Leadership: Leading teams to do the same.

Each section is packed with examples of safe and unsafe thinking from throughout history. From Gandhi, Thomas Edison and John Cleese to the creator who stood by the rise and fall of his company, Whole Foods, and the woman who was CEO at the time of the demise of Pets.com - Sachs's motley crew of unsafe thinkers keeps the reader interested and entertained throughout the book. At times Sachs' narrative is thrilling - such as when he describes a group of explorers who attempted to travel up the length of the river Nile. At a particularly tricky section of the river, the men were forced to employ the use of a flying boat, only to discover a group of sleeping hippos obstructing their landing. The onus is on the reader to take the array of anecdotes and apply them to his or her own life, but it is difficult to know how to do this. It seems that Sachs offers little practical advice, instead laying out the stepping stones for inspiration.

The book appears quite groundbreaking in the first few chapters, but once you become confident in your own knowledge of unsafe thinking, it starts to feel a little stale. There is an interesting section on 'flow' but not something that needs to be read if you're already familiar with the concept. Although written in an engaging manner, making the reader feel inspired while reading, it's unclear how/if this information will be used sometime after reading the book. The 'key takeaways' section at the end of each chapter feels a little too close to a textbook to elicit any revelations. In terms of what Sachs calls the "science side of things", much of the 'scientific' research posited by Sachs is over-simplified. The book is littered with 'scientific evidence' that does not seem to hold much substance: 'scientists have shown', 'researchers have found', 'psychologists say' - leave the reader feeling a little underwhelmed and certainly don't add anything to Sachs' argument, if he set out to argue anything at all. However, the anecdotes offered by Sachs are undeniably interesting and entertaining, and, despite being difficult to implement in one's own life, the overall message of unsafe thinking and of becoming somewhat comfortable with a degree of anxiety is a positive one.


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