



Morrison, L. E. and Joy, J. P. (2016) Secondary traumatic stress in the emergency department. *Journal of Advanced Nursing*, 72(11), pp. 2894-2906. (doi:[10.1111/jan.13030](https://doi.org/10.1111/jan.13030))

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ABSTRACT

Aim

To investigate the prevalence of Secondary Traumatic Stress among Emergency Nurses in the West of Scotland and explore their experiences of this.

Background

Unexpected death, trauma and violence are regular occurrences that contribute to the stressful environment nurses working in the Emergency Department experience. A potential consequence of repeated exposure to such stressors can be referred to as Secondary Traumatic Stress.

Design

Triangulation of methods of data collection, utilising two distinct phases:

- Phase 1 - quantitative
- Phase 2 - qualitative

Methods

Quantitative data was collated via postal questionnaire, from a convenience sample of Emergency Nurses. Qualitative data was subsequently collated from a focus group constituting of a random sample of these Emergency Nurses. Descriptive statistics were computed and thematic analysis conducted. All data was collated during February 2013.

Results/Findings

75% of the sampled Emergency Nurses reported at least one Secondary Traumatic Stress symptom in the last week. Participants expressed that acute occupational stressors such as resuscitation and death were influencing factors towards this. Strategies such as a formal debriefing and social support were cited as beneficial tools for the management of Secondary Traumatic Stress; however barriers such as time and experience were found to inhibit their common use.

Conclusion

Secondary Traumatic Stress is a prevalent phenomenon among Emergency Nurses in the West of Scotland and if not managed appropriately, could represent a significant barrier to the mental health of this group and their capacity to provide quality care.

Keywords

Secondary Traumatic Stress, Stress, Trauma, Emergency Nurse, Emergency Department

SUMMARY STATEMENT

Why is this research or review needed?

- Stress is one of the most commonly reported work-related illnesses among **healthcare professionals internationally**.
- **Secondary Traumatic Stress is a relatively new concept that encompasses many acute stressors experienced by Emergency Nurses.**
- No previous research has been conducted within the UK to specifically explore Secondary Traumatic Stress among Emergency Nurses.

What are the key findings?

- Symptoms of Secondary Traumatic Stress were found to be prevalent among this sample; reassuringly the severity of these could be classified on the lower threshold of moderate.
- Participating Emergency Nurses expressed that acute occupational stressors such as resuscitation and death were influencing factors towards experiences of Secondary Traumatic Stress; most notably among junior staff.
- Strategies such as formal debriefing and social support were cited as beneficial tools for managing Secondary Traumatic Stress; however barriers such as time were found to inhibit their common use.

How should the findings be used to influence policy/practice/research/education?

- Nurse Managers need to be aware of **Secondary Traumatic Stress** symptoms and as such recognise this form of occupational stress, in order to facilitate early access to occupational health services for staff.
- Teaching regarding **Secondary Traumatic Stress** with Emergency Nurses is needed to increase awareness of this form of occupational stress and thus promote psychological wellbeing.
- Local protocols need to be developed in line with policy to encourage protected time for formal debriefing to be utilised as a tool to manage the effects of **Secondary Traumatic Stress** among Emergency Nurses.

MAIN TEXT

Introduction

Work-related stress can be defined as a harmful reaction people have to undue pressure and demands placed on them at work (The Health and Safety Executive 2015). Pressure at the workplace can be seen as unavoidable, due to the demands of contemporary work environments (World Health Organisation 2015). Nowhere is this statement truer than in healthcare environments where the demands of an aging population, with more complex healthcare needs outstrip previous demands of this workforce. As such stress is one of the most commonly reported work-related illnesses among healthcare professionals (The Health and Safety Executive 2010). This is particularly true of nurses practicing within the Emergency Department who are frequently confronted by stress provoking incidents that can potentially lead to psychosocial and physical effects (Ross-Adjie et al 2007). Exposure to unexpected death (Healy and Tyrrell 2011, Scott 2013), trauma (Bostrom et al 2012, Hinderer et al 2014) violence (Wu et al 2011, AlBashtawy and Aljezawi 2015) and overcrowding (Mortimore and Cooper 2007, Hoye and Grant 2015) are regular occurrences in the Emergency Department that have been cited internationally as contributing to this stressful work environment.

Background

A potential consequence of such caring work is a negative and profound effect on Emergency Nurses' health that can be referred to as Secondary Traumatic Stress (STS) (Dominguez-Gomez and Rutledge 2009). Figley (1995) defines STS as *"the natural, consequent behaviours and emotions resulting from the knowledge about a traumatising event experienced by a significant other; it is the stress resulting from helping or wanting to help a traumatised or suffering person"* (pg 10). STS can subsequently be viewed as an occupational hazard for nurses who provide direct patient care to such traumatised patients (Beck 2011). Much research has been conducted internationally exploring STS among professional groups including psychiatric nurses (Mangoulia et al 2015), paediatric nurse (Maytum et al 2004), palliative care nurses (Abendroth and Flannery 2006) and social workers (Bride 2007, Badger et al 2008). However limited research has been conducted exploring this relatively new concept, specifically among Emergency Nurses, who are arguably exposed to similarly traumatic events in the workplace on a daily basis (Dominguez-Gomez and Rutledge 2009, Von Reuden et al 2010). As such the following study was conducted to add to this paucity of evidence specifically pertaining to Emergency Nurses.

The Study

Aim

This piece of research aims to investigate the prevalence of STS among Emergency Nurses in the West of Scotland and explore their experiences of this. **As such the following research objectives were identified:**

- To identify the prevalence of STS among Emergency Nurses in the West of Scotland.
- To identify the severity of STS among Emergency Nurses in the West of Scotland.
- To explore Emergency Nurses' experiences of STS.
- To explore how Emergency Nurses manage STS in the work-place.

Design

Triangulation of methods of data collection was favoured as the chosen design, in order to examine the complex concept of STS among Emergency Nurses and their experiences of this. Quantitative data was collated by means of a postal questionnaire to inform on the prevalence of STS; while qualitative findings generated from a focus group explored lived experiences. As such two distinct phases were utilised throughout the research process to facilitate this: Phase 1 – quantitative, Phase 2 – qualitative.

Sample

The population for this piece of research constituted of all Emergency Nurses practicing within four participating hospitals' Emergency Departments in the West of Scotland. The exclusion criteria for this population were those Nurses who had worked in the Emergency Department for less than a year and those Emergency Nurses who were less than 18 years of age. **This age limit was applied in response to feedback from the appropriate ethical boards.**

Phase 1

A convenience sample of this target population of **remaining** Emergency Nurses was invited to participate (n = 200). This method offered an economical approach to accessing a large sample across

a large geographical area. Inclusive to this sample were all members of the nursing team, ranging from **qualified to unqualified members of the nursing team.**

Phase 2

A stratified sample of **the responding, anonymous** Emergency Nurses were selected at random (n = 10). This size of sample was selected in order to provide a manageable group to facilitate discussion among, by the novice researcher. Participants were stratified by their grade on the Agenda for Change pay scale to achieve an un-bias representativeness of the population within this group and subsequently invited to attend in their own time. Each potential participant was therefore allotted a number and selected at random for inclusion; this was done for each sub-group. Thus the sample consisted of Band 7 (n = 2), Band 6 (n = 2), Band 5 (n = 4), Band 3 (n = 2) Emergency Nurses.

The strategy employed in order to recruit participants to these samples consisted of posters advertising the study being displayed in staff areas within each participating Emergency Department, therefore encouraging staff involvement without coercion.

Data Collection

All data was collected over one month in 2013 at the four hospital sites.

Phase 1

Quantitative data was collected by means of the previously validated instrument the Secondary Traumatic Stress Scale (STSS) (Bride et al 2004) (Figure 1). This 17-item self-administered questionnaire, using a five point Likert scale, was specifically designed to measure symptoms associated with STS (Bride et al 2004). Thus written permission was sought from the principle author of this tool to utilise it in this instance. The only adaptation made to the original questionnaire was replacing the word *client* with *patient*, throughout. A demographic questionnaire was also included to aid data analysis.

The questionnaire was then piloted with five Emergency Nurses, who did not practice within any of the participating hospitals. From this feedback it was concluded that all instructions were clear and that the questionnaire would take approximately five minutes to complete. Subsequently, a box consisting of 50 questionnaire packs was issued by the researcher to the Lead Nurse of each of the

participating Emergency Departments for distribution to **eligible** nursing staff. A drop box was left in each department for one month prior to collection of completed questionnaires and focus group invitations.

Phase 2

A topic guide was developed to aid in the facilitation of discussion on STS and thus ensured the generation of relevant and rich data to answer the research question posed. This tool was created following review of the pertaining literature and reflected the symptoms of STS as measured by the STSS and was tested by means of a pilot interview with a single Emergency Nurse. Feedback was then taken from this participant pertaining to discussion content; no issues were highlighted for change.

The focus group was subsequently conducted in one of the participating hospital's Emergency Department seminar room and lasted approximately one hour. This was one month following the completion of phase 1 of data collection, which allowed the research time to start quantitative analysis and as such become immersed in the data. The focus group was facilitated by the researcher. Discussion was recorded using electronic recording equipment, while a nursing colleague with research experience took field notes and regulated timekeeping.

Ethical Considerations

Ethical approval for this study was sought from the necessary NHS Research and Development Departments; thus an integrated research application was submitted and approval was subsequently granted from the two participating NHS Boards. In addition to this, approval was sought from the University Research Ethics Committee which was also granted.

Data Analysis

Phase 1

Data was manually coded and inputted into a Microsoft Excel spread-sheet that was then imported to SPSS (version 20) for analysis. The discrete variables of age, gender, grade, years of emergency nursing and **self-reported** sick days were then tallied and descriptive statistics computed in order to

synthesis mean values and standard deviations for each. Then the sum of each question on the STSS was tallied and descriptive statistics similarly computed for each, with a score of ≥ 38 being treated as diagnostic (Bride et al 2004). In addition to this diagnostic criteria were manually calculated for each participant using the formula described by Bride et al (2004). This process allowed descriptive statistics to subsequently be computed for the individual symptoms of intrusion, avoidance and arousal, thus allowing prevalence and severity of STS to be calculated.

Phase 2

Qualitative analysis was conducted utilising Burnard's 14 stage analysis model (Burnard 1991). Audio recorded data was transcribed verbatim by the principle researcher, during which all participants were allocated a numerical code thus ensuring anonymity. Then the transcript was repeatedly read and notes made allowing the researcher to become further immersed in the data. Following this, thematic analysis was conducted thus allowing a flow chart of thematic development to be constructed. This was subsequently sent to each focus group participant with a feedback sheet to provide an opportunity to comment on the meaning gleaned by the researcher from the focus group discussion. However, only one participant took this opportunity to comment and returned this, to which they expressed that this was a true reflection of events. In addition to this the nursing colleague who assisted in taking field notes and had previous qualitative research experience was contacted and also furnished with the opportunity to comment on thematic development.

Rigour

Phase 1

In order to enhance the rigour of the quantitative phase of this study, the pre-validated STSS was selected as the chosen data collection tool. As discussed previously, Bride et al (2004) found this to be a valid and reliable instrument specifically designed to measure STS. In addition to this a pilot study was conducted to test this instrument on the current population under examination, thus furnishing the researcher with the opportunity to gain feedback from a small group of Emergency Nurses regarding the suitability of this instrument. Furthermore, the fact that this tool had been cited in previous research pertaining to STS also enhances the rigour of this study (Maytum et al 2004, Aberdenroth and Flannerey 2006, Bride 2007, Badger et al 2008, Dominguez-Gomez and Rutledge 2009, Von Rueden et al 2010, Beck 2011, Mangoulia et al 2015).

Phase 2

In order to enhance the rigorous conduct of the qualitative phase of this study numerous techniques were employed. Firstly, the use of a topic guide designed as a result of reviewing the literature aided in improving dependability. As discussed this tool was piloted by conducting a pilot interview, whereby the participant was given the opportunity to comment on content. In addition to this during data collection a second researcher was utilised thus enhancing credibility. Member checking was also utilised to further enhance conformability of the qualitative findings presented here.

Results and Findings

Response Rates

Phase 1

Following two weeks of data collection one Emergency Department withdrew from the study, due to an on-going departmental education programme. Thus the initial sample of 200 Emergency Nurses was reduced to 150. Of the remaining 150 administered questionnaire packs, 80 questionnaires were fully completed and returned, thus representing an overall response rate of 53.3%.

Phase 2

Of the 150 distributed questionnaire packs, only 20 focus group invitations were returned, thus representing an overall response rate of 13.3% **from this eligible group**. However, it can be hypothesised that those participants who completed and returned a questionnaire were also those who responded to the focus group invitation, and as such demonstrates a 25% response rate among this group. **However, in order to safeguard confidentiality this could not be confirmed**. Subsequently, all Emergency Nurses (n = 10) who were stratified and randomly selected to participate in the focus group attended, thus demonstrating a 100% attendance rate.

Demographic Information

Phase 1

Demographic and professional data of questionnaire respondents has been summarised and presented in table 1. It can be seen that this sample constituted primarily of females (n = 62, 77.5%), with a mean age of 40 years; the majority of whom were at Band 5 on the Agenda for Change Grading scale

(n = 43, 53.8%), with a mean of 10 years Emergency Nursing experience and a mean of three self-reported sick days in the past year.

Phase 2

Focus group participants were stratified by their Agenda for Change Grade in order to provide a representative sample of this population of Emergency Nurses; a summary of which is outlined in Table 2. However, in order to safeguard confidentiality no further demographic information will be provided pertaining to this group thus further protecting anonymity.

Phase 1 Results

Prevalence of STS Symptoms among Emergency Nurses in the West of Scotland

Individual Symptoms

As described by Bride et al (2004) a STS symptom was considered to be endorsed when the participant indicated that the symptom was experienced “*occasionally*”, “*often*” or “*very often*” in the previous seven days. Table 4 provides an overview of the frequency of STS symptoms as reported by this sample of Emergency Nurses. It can thus be seen that the most frequently reported symptom was the arousal symptom of being easily annoyed, with over half of participants reporting this (n = 42, 52.6%) . This was followed closely by the avoidance symptom of feelings of discouragement about the future (n = 41, 51.3%) and the intrusion symptom of thoughts about working with patients (n = 41, 51.3%). However, in contrast to this the intrusion symptom of having disturbing dreams about work with patients was the least frequently reported (n = 18, 22.6%), with the three remaining intrusion symptoms being similarly less frequently reported. Endorsement of the outstanding arousal symptoms ranged from the frequently reported trouble with concentrating (n = 28, 36.3%) to the less prevalent feeling jumpy (n = 22, 27.6%). Among the seven avoidance symptoms avoiding people, places and things that were reminders of work with patients was reported least frequently in this instance (n = 20, 25.1%).

Diagnostic Criteria

In addition to individual symptoms, the number of participants who met the diagnostic criteria for STS was examined. Table 4 outlines the frequency of diagnostic criteria of STS among this sample of Emergency Nurses. It is encouraging to note that only 25% (n = 20) of participating Emergency

Nurses failed to meet any of the diagnostic criteria for STS despite regular exposure to traumatised patients. However, almost three quarters of participants (n = 57, 71%) reported experiencing at least one intrusion symptom and more than half (n = 43, 54%) reported experiencing at least two arousal symptoms. Most alarmingly, 39% (n = 31) of participating Emergency Nurses met the full diagnostic criteria for STS.

Severity of STS Symptoms among Emergency Nurses in the West of Scotland

Bride et al (2004) state that the potential range of scores possible for the full STSS ranges from 17, which indicates no symptoms to 85 which is the highest possible score. In this instance participating Emergency Nurses reported total scores on the STSS ranging from 17 to 80, with a mean score of 37.4. Bride et al (2004) recommend a diagnostic cut off score value of 38, which is the lower threshold of the moderate range and as such it can be seen that the severity of STS symptoms among this sample is significant. Table 5 further outlines the means, standard deviations and ranges for individual symptoms and the full STSS as reported by this sample of Emergency Nurses practicing within the West of Scotland.

Phase 2 Findings

Emergency Nurses Experiences of STS

Two clear themes were developed as a result of this process: acute stressors and nursing culture. In order to further protect confidentiality of participants, pseudonyms have been utilised to present the following findings.

Acute Stressors

Numerous acute stressors were identified by participants as aggravating factors that contribute towards Emergency Nurses experiences of STS.

P1 *“...when everyone thinks of trauma they think of the really horrible things that we see like road traffic accidents or the sudden death of a young person. They are very difficult to deal with for everybody and happen most days”*

P10 *“Stress and traumatic stress come from lots of different angles... and quite often it can just pick, pick, pick away at you until something major comes in like a trauma and that’s what pushes you over the edge.”*

This was confounded by:

P4 *“Quite often it is just a little thing that pushes you over the edge. There is no breath. It happens and it’s done, but you still have the 12 ambulances piling in and the person with the sore toe demanding to be seen and the aggressive relative kicking off. It’s not until later you start to feel the effects.”*

Thus it can be seen here that among this group of Emergency Nurses a poly-stressor effect was reported that contributes towards their experiences of STS.

Nursing Culture

From the data generated by this focus group it can also be seen that there is a cultural aspect to Emergency Nurses experiences of STS.

P8 *“When traumatic things happen, you do think about it but there is never time to stop and have a chat about it because there is another standby and then another. Emergency nurses just learn to cope with it.”*

This was reinforced by:

P5 *“The way we cope is by moving on to the next thing. You are just expected to move on because you are a nurse and that’s what we do.”*

However, it was also highlighted by a more junior member of staff that:

P9 *“I love being an Emergency Nurse but sometimes you are scared to speak to your seniors... you don’t want the stigma of them thinking that you are not coping at work. It feels like a weakness to sit down and say that you need help.”*

Thus it can be seen that a coping culture exists among Emergency Nurses that contributes towards their experiences of STS.

Management of STS by Emergency Nurses in the Work-place

Further analysis of focus group contented also provided rich data regarding how this sample of Emergency Nurses manages STS in the work-place. Two clear themes were developed as a result of this: formal v's informal management strategies and the impact of individual differences in managing STS among this group.

Formal v's Informal Management Strategies for STS

It was widely acknowledged by this sample of Emergency Nurses that numerous strategies are utilised in practice to manage the effects of STS. These can subsequently be categorised by their formal or informal nature.

P4 *“In my experience debriefing is definitely beneficial after caring for trauma patients especially when things don't go well.”*

Despite this there was consensus from the group that this is not routinely offered:

P1 *“I was involved in a debriefing maybe a month ago after we had a young motorcyclist die in the department. It was totally out of the ordinary to debrief, in fact it was the first session I have attended....it was helpful.”*

P7 *“I have never been involved in anything like that after a trauma but I can see the potential benefits.”*

However in contrast to this one participant stated that:

P4 *“I work with a military doctor and he leads debriefing after most things that are pretty traumatic. It's usual for him but some other medical staff just use this as an opportunity to moan about the nurses and this doesn't help the situation; in fact in my experience it can aggravate and distress staff further.”*

The majority of participants had experiences of more informal management strategies for STS:

P2 *“... we try to support each other as colleagues as much as we can. We have a duty of care not only to our patients but to each other after traumatic events.”*

P1 *“...we reflect on an informal basis all of the time without realising we are doing it. Sometimes just having a laugh about something totally different helps.”*

Thus it can be seen from this sample that Emergency Nurses commonly utilise informal mechanisms to manage STS in the workplace. However some did have limited experience of more formal debriefing sessions, the full benefits of which were disputed.

Individual Differences of STS Management Strategies

It was also acknowledged here that individual differences had a significant impact on Emergency Nurses abilities to manage STS.

P6 *“... traumatic experiences are different for everybody, it could be something that somebody else might not find particularly traumatic, but affects them due to what’s going on in their home life... it might be personal or family circumstances that trigger emotions.”*

This was confounded by:

P5 *“It is really dependant on how you are outside of your work how you cope with traumatic events. If you feel happy in your home life then when something happens in work you are able to deal with it more easily.”*

P10 *“I think your colleagues have a big role to play in how you manage and cope with your work.”*

It can again be gleamed from this that there are multiple contributing factors that influence Emergency Nurses abilities to manage STS in the work-place.

Discussion

Prevalence of STS among Emergency Nurses in the West of Scotland

Alarmingly, this study found that 75% of Emergency Nurses reported at least one STS symptom in the past week and that 39% of this convenience sample met full criteria for a diagnosis of STS. These statistics represent a significant proportion of the Emergency Nurses sampled and as such indicate that STS is a prevalent phenomenon among this professional group. Dominguez-Gomez and Rutledge (2009) and Von Rueden et al (2010) similarly reported this and subsequently cited STS as a prevailing experience that acts as a potential barrier to the delivery of quality patient care within this demanding work environment. **These results are also reflective of other professional groups’ experiences of STS such as psychiatric nurse (Mangoulia et al 2015), paediatric nurse (Maytum et al 2004), palliative care nurses (Abendroth and Flannery 2006) and social workers (Bride 2007, Badger et al 2008).**

However differing tools were utilised during data collection to measure STS and as such direct comparisons cannot be drawn here.

It was also established here that symptoms of arousal were the most frequently reported followed by avoidance and then intrusion. These results directly reflect those presented by Dominguez-Gomez and Rutledge (2009) in their similar study of STS among Emergency Nurses in America. It may be speculated that these results demonstrate a true reflection of the cultural similarities that exist between the UK and America. However on closer examination of individual symptoms; this may not be the case. For example, the least frequently reported individual symptom in this study was disturbing dreams about my work with patients, yet in direct contrast to this, Dominguez-Gomez and Rutledge (2009) reported this as one of the most frequently reported intrusion symptom among their sample.

However, common individual symptoms reported in both studies included feeling jumpy, expecting something bad to happen, thinking about work with patients and avoiding work with patients, thus confounding the impact of these results. These also reflect those reported by Von Rueden et al (2010), despite differing data collection tools. Clearly, Emergency Nurses in the West of Scotland are indirectly exposed to trauma as a result of their work with patients and, it can be seen from this study that they are at high risk of experiencing STS symptoms. Thus consideration for this must be made by nurse managers to prevent detrimental effects on patient care; indeed it can be argued that further research is required to measure the full impact of STS on the provision of quality patient care within the Emergency Department.

Severity of STS among Emergency Nurses in the West of Scotland

This study reported a range of STS scores from 17 to 80, with a mean score of 37.4. Again there are direct similarities here to the results presented by Dominguez-Gomez and Rutledge (2009). On closer examination of the severity of individual symptoms reported here, it can be seen that although avoidance symptoms are the most severe (mean = 15.3) it is reassuring to note that they are not the most prevalent of reported STS symptoms. Thus it can be deduced from this that only a proportion of the overall sample of Emergency Nurses are actually significantly affected by this symptom. In contrast to this intrusion symptoms were the least severe of the reported STS symptoms (mean = 10.6) which correlates directly to its lowest ranking on the prevalence scale, and as such it can be recommended in this instance that management strategies should focus more on the more prevalent, severe symptoms of arousal and intrusion.

It can therefore be gleaned from this piece of nursing research that in spite of the previously reported high prevalence of STS among this sample, the overall severity of these symptoms can be classified on the lower threshold of moderate. It can thus be speculated that if needs driven steps were taken by employers to combat this pervasive phenomenon in the work place, the severity of symptoms reported by Emergency Nurses could be reduced and subsequently contribute towards to an overall reduction in STS among this professional group. In addition to this further detailed research is required to analyse the severity of individual symptoms to aid in the facilitation of overcoming barriers to the mental health of Emergency Nurses in Scotland, through enhanced understanding.

Emergency Nurses Experiences of STS

Experiences of acute stressors linked to traumatic events such as resuscitation and death were reported by this sample, as prevailing factors that contribute towards experiences of STS. These reflect the broad themes identified by Ross-Adjie et al (2007), Healy and Tyrrell (2011), Wu et al (2012), Flowerdew et al (2012), [Scott \(2013\)](#) and [AlBashtawy and Aljezawi \(2015\)](#) in their studies pertaining to occupational stress in the Emergency Department. It is of particular interest that many of these feeling associated with acute stressors in the present study where expressed by the more junior Emergency Nurses, again echoing the literature presented, thus confounding these findings (Ross-Adjie et al 2007, Healy and Tyrrell 2011, Flowerdew et al 2012). It was also expressed here that many of these traumatic events are then aggravated by other prevalent stressors such as aggression and workload, reflecting the works of Mortimore and Cooper (2007), Medley et al (2011) and Kowalenko et al (2013), thus contributing towards a poly-stressor effect that heightens the experience of STS among this group.

The theme of nursing culture was also identified as a contributing factor towards experiences of STS. This theme has not been previously explored in the pertaining literature and as such this study offers new insight into Emergency Nurses lived experiences of STS. It can be hypothesised from the findings presented here that Emergency Nurses utilise the busy chaotic environment of the Emergency Department as a protective mechanism in addressing symptoms associated to STS, despite this in itself being named as a prevalent work-place stressor (Mortimore and Cooper 2007, [Hoye and Grant 2015](#)). It would therefore be of particular interest to investigate this further, with reference to avoidance symptoms of STS.

It can thus be seen that a poly-stressor effect exists that influences the experiences of STS as reported by this sample of Emergency Nurses. However, an avoidance culture exists that seems to be in direct conflict to this, thus creating a self-mitigating environment of stress. These findings when considered with those results previously discussed provide a rich insight into the actual lived experience of STS among Emergency Nurses in the West of Scotland. However, it can consequently be argued that this research only offers a brief insight into these experiences and that further qualitative research would be beneficial to build upon these findings.

Management of STS by Emergency Nurses in the Work-place

The use of formal management strategies for STS, such as debriefing was identified in this study as a beneficial process after caring for trauma patients, yet anecdotally not routinely practiced. This was similarly identified by Ross-Adjie et al (2007) and Healy and Tyrell (2007) who agreed that not only was debriefing not routinely offered, but when it was the staff leading sessions were not adequately equipped to do so, due to time constraints and a lack of training. Thus it can be seen that these barriers to the effective management of STS must be addressed by nurse managers in order to promote the well-being of Emergency Nurses following traumatic events.

The benefits of informal strategies for the management of STS were also discussed here, whereby the importance of support and understanding of colleagues and informal reflection were highlighted. A duty of care towards colleagues was also noted, especially after traumatic events such as a prolonged resuscitation. These findings reflect the results presented by Wu et al (2012) who similarly reported that social support plays a significant role in helping Emergency Nurses cope with occupational stress. Also the use of humour was highlighted in the current study as an informal tool utilised in the management of STS in the workplace, which represents a previously unidentified technique to aid in the management of STS among this professional group. **These findings are supported by Craun and Bourke (2014) in their work exploring the use of humour as a coping mechanism for STS among professionals working with victims of sexual abuse.**

Finally, the impact of individual differences on Emergency Nurses abilities to manage STS was discussed by this group. It was evident from the data collected from this sample of Scottish Emergency Nurses that personal and home lives have a significant impact on an individuals' ability to manage STS in the work-place. This supports the results presented by Von Rueden et al (2010) and

Wu et al (2012) and thus highlights that multiple factors contribute towards the effective management of this pervasive phenomenon.

Limitations

The limitations posed here have a significant impact on the generalisability and transferability of respective results and findings, to the wider population of Emergency Nurses both nationally and internationally. Predominantly, the relatively low response rate (53.3%) demonstrated in phase 1 of data collection of this study, not only has a significant impact on the overall generalisability of quantitative findings, but arguably also a subsequent impact on the response rate demonstrated in phase 2. **It could also be argued that the self-reporting nature of the questionnaire approach may limit reliability.** As discussed, convenience sampling was favoured in order to obtain a large sample and can be cited as a potential weakness in the methodological design of this piece of research. However, in an attempt to strengthen this approach in phase 2, a stratified random sample was subsequently favoured, thus safeguarding rigour. In addition to this it can be argued that the use of a focus group during phase 2 of data collection may not have been the most appropriate methodology for collating sensitive information such as Emergency Nurses experiences of STS. Participants may not disclose information in a focus group as openly as with one to one interviews for example, however this method would have been too time consuming and out with the scope of this study. **In addition to this, due the anonymous nature of the questionnaire, there was no way of ensuring that those invited to attend the focus group met the full diagnosis criteria of STS during phase 1 of data collection.** However, it can be argued that through the triangulation of the quantitative results from Phase 1 and qualitative findings of Phase 2 the cumulative effect is greater and arguably addresses such criticisms.

Conclusions

From the above discussion it is evident that this piece of nursing research has answered the research aim posed. However, due to the limitations presented the results are not generalisable nor the findings transferable to the wider population of Emergency Nurses. They do nevertheless compliment and extend upon the limited previous research in this field, namely the works of Dominguez-Gomez and Rutledge (2009) and Von Rueden et al (2010). Further research is required to corroborate these results and findings and develop the evidence base further, with particular regard to the effects of STS among Emergency Nurses of differing levels of experience and the impact of this on the provision of quality patient care.

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