THE UNIVERSITY OF HULL

Exploring Post-traumatic Growth and Thriving in Ambulance Personnel

Being a thesis submitted in partial fulfilment

of the requirements for the degree

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by

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A. Acknowledgements

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A big thank you to my research supervisors Dr Jo Beckett, Dr Tim Alexander, and Dr Annette Schlösser for their continued support. I appreciated the guidance and feedback Jo and Tim provided to refine the research question for my empirical study and with assisting me through the ethics process. You both provided me with the passion and vigour to commence this research journey. I also express huge gratitude to Annette for stepping in during my final year to support me with the recruitment and write-up of the thesis and for providing me with encouragement, optimism, and hope until the end – I could not have achieved this without all your support.

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B. Overview

The portfolio thesis is composed of three parts: a systematic literature review, an empirical paper, and appendices.

Part one is a systematic literature review, exploring the facilitators and prevalence rates of post-traumatic growth in ambulance personnel. A systematic search of five databases found eleven papers (ten quantitative and one qualitative) that met the inclusion criteria. The Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018) was used to evaluate the quality of the studies, whilst narrative synthesis was used to bring the studies together. Results were grouped into five categories: coping style/strategies, resilience, personality traits, gender, and incident characteristics**.** Implications and suggestions for future research are outlined.

Part two is an empirical paper, which explores the experiences of thriving at work in paramedics. A sample of seven participants engaged with semi-structured interviews. Interviews were analysed using interpretative phenomenological analysis. Three personal experiential themes were developed from the data “Making sense of thriving”, “Antecedents of thriving” and “Proactive support”. Clinical and research implications are discussed to further promote thriving at work in the ambulance service.

Part three contains appendices compiled from the systematic literature review and the empirical paper. This includes a reflective and epistemological statement to inform the context of the thesis portfolio.

Total word count (excluding references and appendices): 14,056; (including appendices): 32,060.

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Part One: Systematic Literature Review

This paper is written in the format ready for submission to the

British Paramedic Journal

Please see Appendix A. for submission guidelines.

A Systemic Review of Post-traumatic Growth in Ambulance Personnel: Facilitators and Prevalence Rates

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Abstract

Background: Ambulance personnel are exposed to traumatic and stressful situations, which can increase the risk of poor mental health, such as post-traumatic stress disorder (PTSD). High rates of PTSD have been found in samples of ambulance personnel (Petrie et al., 2018), but no review is available to examine post-traumatic growth (PTG) in this population. This literature review provides an overview of the prevalence rates and facilitators that may contribute to PTG in ambulance personnel.

Methods: A systematic search was conducted on EBSCOhost in December 2021 across the following five databases: Academic Search Premier, PsycINFO, PsycARTICLES, MEDLINE and Cumulative Index to Nursing and Allied Health Literature (CINAHL).

Results: Eleven papers were identified for this review. Pooled prevalence of PTG was 52% and facilitators for PTG were grouped into five categories: coping style/strategies, resilience, personality traits, gender, and incident characteristics.

Conclusions: Numerous facilitators contributed to the development of PTG, although these did not arise in all papers. The quality of research ranged from satisfactory to excellent. Evidence suggested that adaptive coping style, high levels of resilience, the absence of a personality trait (neuroticism) and being female may facilitate PTG. Further research is needed to support the reliability of findings.

Keywords: Ambulance personnel, paramedic, PTG, post-traumatic growth, post traumatic growth, posttraumatic growth.

Introduction

Frontline ambulance personnel are exposed to stressful and traumatic events. These include medical emergencies, road traffic collisions and suicide (Alexander & Klein, 2001). This increases the risk of poor mental health, such as depression, anxiety, and PTSD (Lawn et al., 2020). However, a concept known as *post-traumatic growth* (PTG) has also been explored in the literature since being coined in the mid-1990's (Tedeschi & Calhoun, 1995). Tedeschi and Calhoun defined PTG as "positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances" (Tedeschi et al., 2018, p. 3). These domains relate to longer-term changes over a period of days to years after the trauma and "where people develop new ways of thinking, feeling, and behaving" as a result of their assumptive world and core beliefs being challenged (Tedeschi et al., 2018, p. 5). These changes have been described as a *personality transformation* (Tedeschi et al., 2018, p.11) characterised by periods of growth due to positive and personal development in five domains of life: "Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life" (Tedeschi & Calhoun, 1996, p. 5). PTG is therefore perceived as both a process and an outcome, and is distinguished from the concept of resilience ('bouncing back' from trauma (American Psychological Association, 2022, para. 4)), as PTG is a measurable and marked change from an individual's previous baseline of functioning. Tedeschi et al. (2018) posited a model of PTG wherein the person's pre-trauma demographics such as age (working age to older adult), gender (female) and religiosity, and individual differences, such as personality traits including hope, extraversion, and openness, and well-adjusted mental health are associated with higher levels of PTG and are expected to impact how the person experiences the traumatic event(s). If one's core beliefs are challenged, PTG can be facilitated through intrusive rumination and coping, which can activate deliberate rumination through seeking social support and in turn reduces emotional distress by engaging

in cognitive processing. Therefore, PTG is influenced by proximal (immediate social systems, such as family and neighbourhood) and distal (communities, such as workplace and worship places) cultural systems (Bronfenbrenner, 1979). The majority of ambulance personnel in the United Kingdom (UK) work for the publicly funded National Health Service (NHS) within ambulance service trusts providing pre-hospital treatment and/or advice to patients in the community and social care provision (NHS Providers, 2019). They face significant challenges in the workplace such as physical and verbal abuse (Murray et al., 2020), witnessing life-threatening injuries, death, and suicide (Alexander & Klein 2001) and working long-shifts (Kirby et al., 2016). These challenges could be experienced as traumatic and is the likely cause for ambulance personnel in the UK having the highest stress-related sickness absence compared to other healthcare professions (NHS Digital, 2021). This has implications for clinical psychologists working in the NHS who could shift their attention from a problem-focused approach and mental ill-health, to becoming an *expert companion*, by acknowledging and understanding the trauma reaction, whilst guiding ambulance workers' transformation to PTG using a strength-based approach (Tedeschi et al., 2018). Furthermore, PTG was recently reported in a large-scale systematic review by Henson et al., (2021) who investigated PTG in diverse populations within different contexts. Coping style, resilience, personality traits, and gender contributed to PTG in samples including firefighters, HIV-positive individuals, cancer survivors, natural disaster survivors, sexual assault victims, veterans, refugees, students, bereaved adults, medical staff, homeless women, police officers, and parents of children with severe illness. However, no systematic review has explored PTG in ambulance personnel. The purpose of this paper is to report the overall prevalence of PTG between samples of ambulance personnel and review the facilitators of PTG, which may have implications for ambulance services and clinical psychology.

Aim and Research Questions

The aim of this literature review is to provide a comprehensive review and synthesis of literature exploring PTG in ambulance personnel.

The following questions guided this systematic review:

1. What is the reported prevalence of PTG in ambulance personnel?
2. Which facilitators contribute to PTG in ambulance personnel?

Method

The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) (Moher et al., 2009) and PICO tool (Schardt et al., 2007) was used throughout this review. The population (P) was ambulance personnel, the intervention (I) was the facilitators of PTG, there was no comparator (C) used to achieve the outcome (O), which was a review of the combined prevalence and facilitators of PTG in ambulance personnel.

Search Strategy

Papers from January 2000 – December 2021 were reviewed. This was to capture papers published at the beginning of the 21st century which coincided with the positive psychology movement (Csikszentmihalyi & Seligman, 2000) and followed the introduction of PTG in the literature base (Tedeschi & Calhoun, 1995). However, the temporal range of published papers included in the final pool varied from 2003-2021. The search strategy included the following keywords and terms divided into two categories, concept and role, respectively: (("post traumatic growth" or "post-traumatic growth" or PTG or "posttraumatic growth" or "stress-related growth" or "stress related growth" or "adversarial growth" or "positive psychological chang*") or ((“improv*” or “positiv*”) N3 (“trauma*”))) AND

(“paramedic*” or “emergency medical service*” or “EMS” or “prehospital*” or “pre-hospital*” or “ambulance*” or “emergency medical technician*” or “EMT”).

This search strategy yielded 1,305 articles from five databases: Academic Search Premier, CINAHL, MEDLINE, APA PsycARTICLES and APA PsycINFO. The limiters ‘journal article’ and ‘English language’ were applied, and duplicates removed, which resulted in 942 journals for screening. after title screening and re-reading the abstract, 28 studies were retained. Further screening revealed nine duplicates, three papers with a combined sample (ambulance personnel AND nurses OR firefighters and police), two with a student sample, two review/opinion pieces and one dissertation abstract. These papers did not meet the inclusion criteria. The reference lists of the final pool were screened, and no new relevant publications were discovered. This left 11 papers which met full eligibility criteria. The reviewer contacted the authors of the three papers which were excluded due to a combined sample to request whether the data could be extrapolated for ambulance personnel alone. However, no further correspondence was received. See Figure 1 for the PRISMA diagram and Table 1 for a list of inclusion and exclusion criteria.

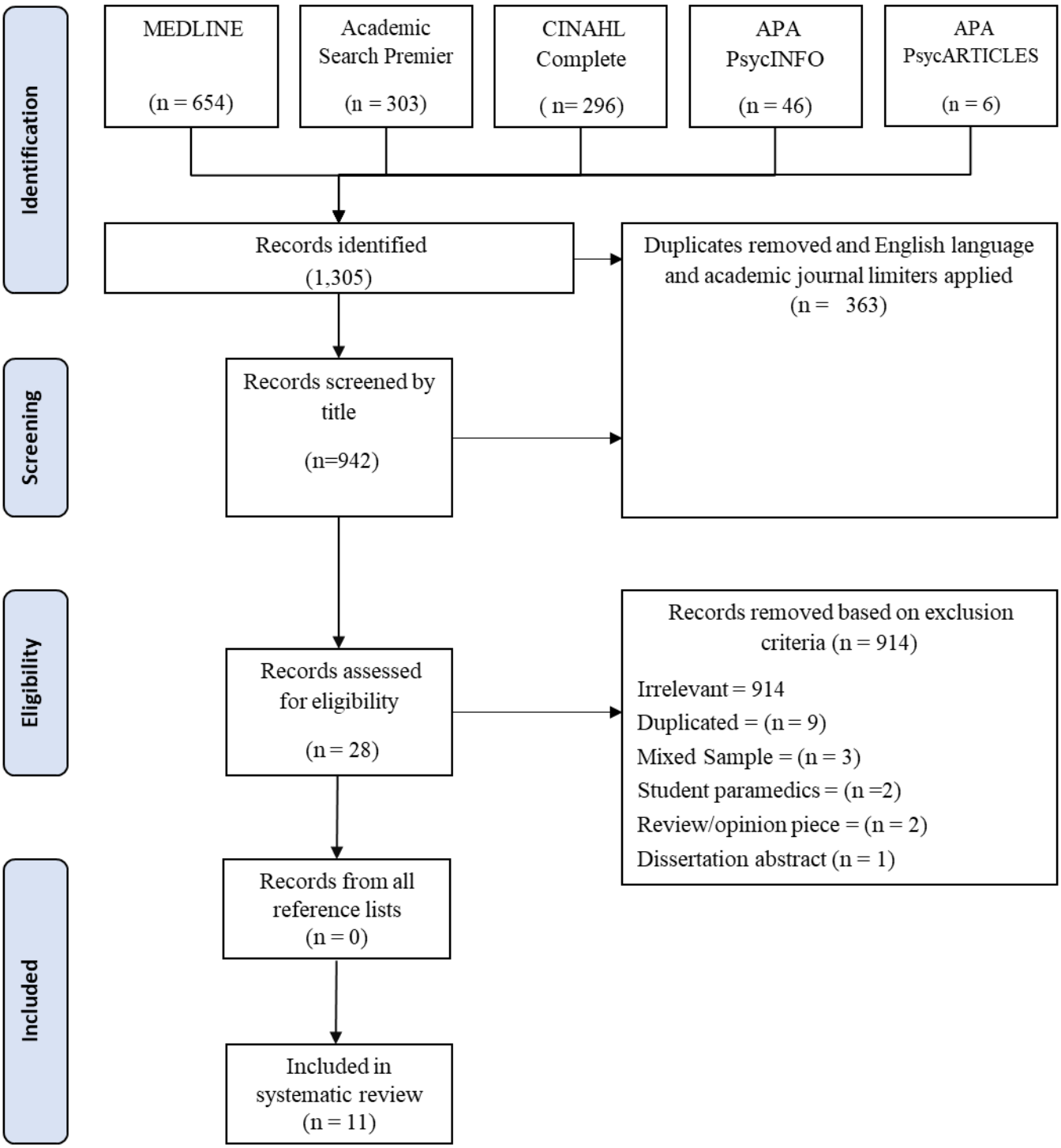

Figure 1. Adapted from "PRISMA 2009 Flow Diagram" (Moher et al., 2009)

Table 1. Inclusion/exclusion criteria

Inclusion	Exclusion
Sample specific to paramedic/Emergency Medical Service (EMS) populations	Sample not specific to paramedic/EMS-based populations (e.g., fire or police)
Mixed sample that includes EMS workers who have physical contact with the patient pre-hospital	Mixed sample that includes emergency service (e.g., ambulance AND fire AND/OR police) workers who have contact with the patient pre-hospital or in a hospital setting.
Studies including employed and/or volunteer paramedics/EMS role	Studies including an undergraduate student population
Outcomes related to the prevalence and/or facilitators of PTG	Outcomes related to intervention or only PTSD or other mental health outcome
Published in the English language	Published in language other than English
Published January 1st 2000 - December 2021	Published prior to 2000
Studies with quantitative or qualitative data	Opinion pieces or dissertation previews

Quality Review

The methodological quality of each paper was assessed using the Mixed Methods Appraisal Tool (MMAT; (Hong et al., 2018). Please see Appendix B. The MMAT was chosen due to its applicability across different methodologies, making it suitable for the current review as the 11 selected papers consist of quantitative (descriptive) and qualitative designs (10 and 1, respectively). The MMAT contains two screening questions, which a paper must pass, followed by five further questions. Each paper is graded out of 5, with the maximum score indicating high quality. Methodological quality in the selected sample ranged from 3-5 (satisfactory to excellent) with a mode of 5. See Appendix C for quality appraisal at item level using the MMAT criteria. To assess the scoring inter-rater reliability, all 11 papers was first marked independently by the author (doctorate student in clinical psychology), and

then marked blindly by a peer (psychology research master student) to check for consistency of scoring. There was 87% inter-rater reliability and difference in scoring was resolved following discussion.

Results

Characteristics of Included Studies

Ten of the papers utilised a quantitative methodology and one study employed semi-structured interviews to collect qualitative data. The cumulative sample population included 2,324 ambulance workers from 11 studies, which represented eight countries across four continents (USA, Australia, Europe, and Asia). The age of participants ranged from 18-75 and duration of service ranged from six weeks to 52 years. The range was reported rather than the mean due to some studies not reporting age or duration. Please see Table 2 for included study characteristics and overall quality scores.

Table 2. Characteristics of the included studies

No.	Author(s) and date	Study location	Sample size (N)	Target population	Gender	Age	Duration of service	Inclusion criteria	Methodology	Measures	Prevalence of PTG	Overview of findings	Bias	Quality rating (MMAT)
1	Austin et al. (2018)	USA	54	Paramedics (61%) and EMT's (39%)	NR - 'majority male'	NR	5 ≥ 10 years (M =10.61; SD = 9.15)	NR	Quantitative	Post-traumatic growth inventroy (PTGI); Brief Resilience Scale (BRS); Changes in Outlook Questionnaire-Short (COIQ-S)	M = 47.87; SD = 24.12 [0, 100]	EMT's had higher PTG than paramedics. Positive change in outlook was correlated (+) with PTG. Participants interested in coping training had higher resiliency and growth scores.	✓	3
2	Avşarolu (2019)	Kyrgyzstan	400	Emergency Health Employees	Male and female	NR	NR	NR	Quantitative	PTGI; The Hopelessness Scale; Locus of Control Scale, Problem Solving Inventory; Multidimensional Scale of Perceived Social Support; Peritraumatic Dissociative Experiences Questionnaire-R	Average = 37.57/105, SD = 25.45, [0,105]	Incident effect significantly predicted PTG positively for both genders.	×	4
3	Jurisova (2016)	Slovakia	62	Paramedics	Male and female (30 and 32)	21-53 (M = 35.91; SD = 8.97)	1-34 years (M = 7.54; SD = 5.79)	NR	Quantitative	PTGI; COPE (Slovak version); General Self-efficacy scale (GSE); Positive and Negative Affect Scale (PANAS)	Average = 55.87, SD = 18.72, [21, 94]	Average levels of PTG were correlated with most coping strategies. Self-efficacy and (+) affectivity moderated the relation between coping and PTG.	×	5
4	Kang et al. (2018)	China	227	Nurses (103); physicians (71) and other ambulance workers (53; drivers and stretcher bearers)	Male and female (48.5% male)	22-55 years (M = 31.76; SD = 6.52)	≤5 years 128 (56.4%) >5 years 99 (43.6%)	Minimum 3 months working on an ambulance	Quantitative	PTGI; Social Support Rating Scale (SSRS; Chinese version) 10-Item Connor-Davidson Resilience Scale (CD-RISC-10)	M = 68.96; SD = 15.51	Subjective support, objective support, and support-seeking behaviors were (+) related to vicarious PTG (VPTG). Resilience was (+) associated with VPTG ($r=0.670$, $p<0.01$), which mediated the relationship between social support and VPTG.	×	5
5	Kirby et al. (2011)	Australia	118	Paramedics	Male and female (78 and 40)	18-61 (M = 37; SD = 10.49)	6 weeks - 39 years (M = 10 years; SD = 9.32 years)	Experience of a traumatic event; Minimum of 4 years 'on road' experience	Quantitative	PTGI; R-COPE	Range = 40.56 - 58.57	Adaptive coping strategies were predictive of higher scores on the PTGI subscales of Spiritual Change and Relating to Others with a positive trend to Personal Strength subscale. PTG was the highest when the victim was known to the paramedic.	×	5

No.	Author(s) and date	Study location	Sample size (N)	Target population	Gender	Age	Duration of service	Inclusion criteria	Methodology	Measures	Prevalence of PTG	Overview of findings	Bias	Quality rating (MMAT)
6	Oginska-Bulik and Kobylarczyk (2015)	Poland	80	Paramedics	Male	21-67 (M = 35.47; SD = 10.21)	NR	Experience of a traumatic event in the past 5 years	Quantitative	PTGI (Polish version); Inventory mini-cope; Assessment Resiliency Scale	M = 68.52; SD = 17.99	Common strategies were active coping and planning. Significant changes relate to Self Perception and Appreciation of Life subscales. Planning is a mediator between PTG and resiliency. Denial and venting reduce resiliency and suppress PTG.	×	3
7	Ragger et al., (2019)	Austria	266 (216 voluntary and 50 full-time)	Critical care paramedics (68) and EMT's (198)	Male and female (179 and 87)	18-73 (M =29.94; SD = 11.07)	1-52 years (M = 9.91; SD = 9.04)	NR	Quantitative	PTGI; Sense of Coherence Scale (SOC-29)	M = 43.38; SD = 15.03	Sense of coherence was signifiantly correlated to PTG. The SOC subscale Meaningfulness correlated (+) with overall PTG and subscales New Possibilities, Relating to Others, and Appreciation of Life.	×	5
8	Shakespeare-Finch et al. (2003)	Australia	526	ambulance officers	Male and female (423 and 103)	21-63 years (M =39.84; SD = 9.41)	1-43 years (M = 11.58; SD = 8.17)	New officers had no previous exposure to work-related trauma	Quantitative	PTGI	M = 49.08 (SD = 21.53, range = 0-100; seasoned officer); M = 42.45 (SD = 26.05, range = 0-84; new recruits)	Ambulance offices with a trauma in their personal lives and at work had higher levels of PTG. Seasoned officers had higher PTG than new officers.	×	5
9	Shakespeare-Finch et al. (2005)	Australia	526	operational ambulance officers	Male and female (423 and 103)	21-63 (M = 39.84; SD = 9.41)	1-43 years (M = 11.58; SD = 8.17)	NR	Quantitative	Neuroticism Extraversion Openness-Five Factor Inventory (NEO-FFI); Coping Responses in Rescue Workers Inventory (CRRWI); PTGI	Mc = 51.19; SDc = 21.36 [0, 100]	Extraversion, openness, agreeableness, conscientiousness, and coping levels significantly relate to PTG. The relationship between personality and PTG is mediated by levels of coping.	×	5
10	Surgenor et al. (2020)	New Zealand	579	Paramedics (37.90%); intensive care paramedics (29.20%); EMT's (13.80%); clinical hub/ambulance nurses (10.40%) and other <10%. Professional (70.46%) and volunteer (29.54%)	Male and female (51.80% male)	18-75 (M = 42.28; SD = 12.50)	M = 10.90; SD = 8.90	Active first responders	Quantitative	PTGI-SF; Core Beliefs Inventory (CBI)	The majority (66.40%) of partipants had some degree of PTG total score >10	Being female and experiencing greater core belief disruption independently contributed to higher levels of PTG.	✓	3
11	Wines (2019)	USA	12	Paramedics (7) and EMT's (5)	Male and female (8 and 4)	24-57	7-37 years (M = 18)	Certified EMT or paramedic; employed or volunteered for at least one year; at least 18 years old; responded to at least one suicide call with a loved one present	Qualitative - Hermeneutic Phenomenology	Semi-structured interview	NA	(1) Risk factors, (2) Protective factors, (3) Lived existential, and (4) Meaning. The theme of detachment was common amongst 1&2.	×	5

Prevalence of PTG

Mean comparisons are provided for all quantitative studies using the Post-traumatic Growth Inventory (PTGI). Two studies did not use the PTGI, and one study did not provide sufficient data for a mean comparison. The cumulative mean of PTG scores from 8 studies was 52% (*SD* = 10.7, 95% *CI* = 44.6, 59.4). The mean and standard deviation (SD) was calculated using the AVERAGE and STDEV.P formula in Excel spreadsheet, respectively. The lower (44.6) and upper bound (59.4) was calculated by inputting the mean (52) +/- the z-score of the 95% confidence level (1.96) multiplied by the SD (10.7) and divided by the square root of the sample size (8) in a scientific calculator. The SD demonstrates a large variance in relation to the mean which could be due to difference in study characteristics. The prevalence of PTG ranged from low to moderate (38%-69%) in ambulance personnel. Please see Figure 2.

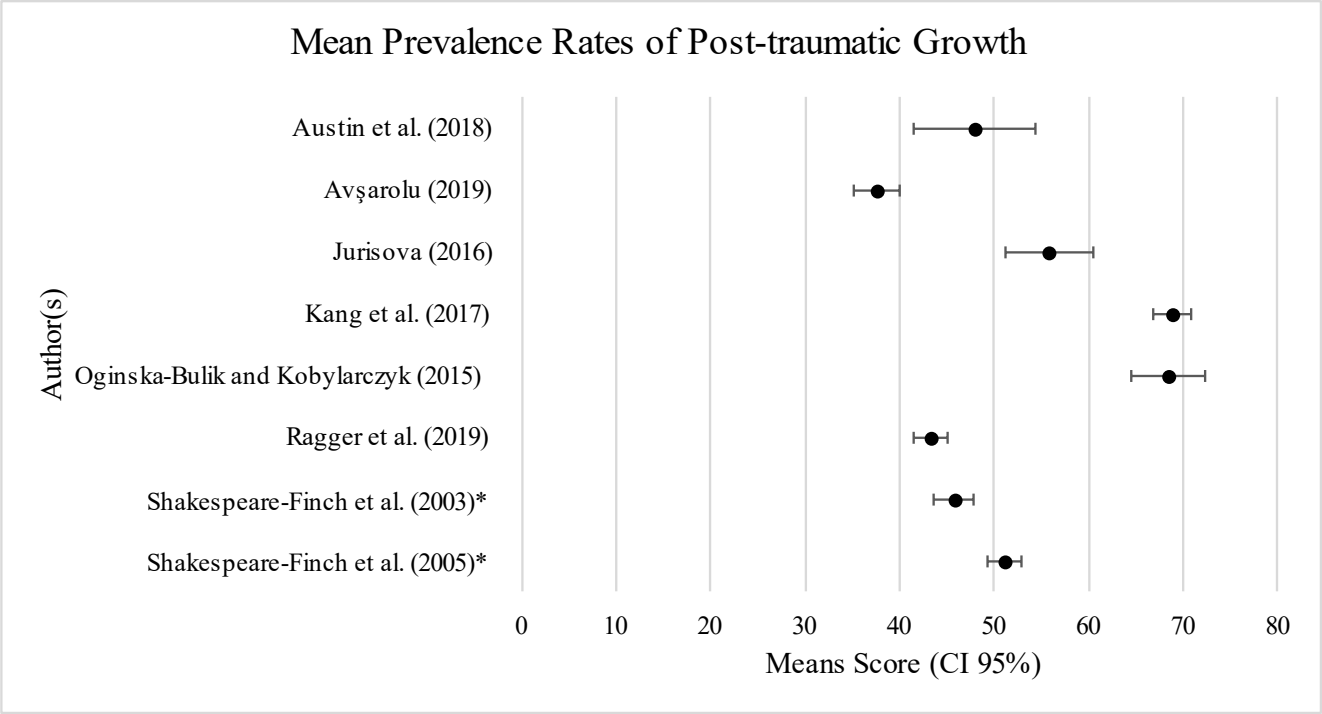

*Figure 2. Interval plot showing mean prevalence rates of post-traumatic growth in ambulance personnel. CI = Confidence interval (95%); *combined mean.*

Synthesis of Findings

The results will be presented as a narrative synthesis, with facilitators of coping style/strategies, resilience, personality traits, gender, and incident characteristics.

Coping Style/Strategies

Seven of the studies investigated the relationship between coping style or strategies and PTG in ambulance personnel. Kirby et al. (2011) investigated whether coping styles (adaptive or maladaptive) predicted negative or positive post-trauma outcomes (PTSD or PTG) in a group of Australian paramedics. Adaptive coping styles were divided into three subtypes: self-help, approach, and accommodation, whereas maladaptive coping styles were divided into two subtypes: avoidance and self-punishment. Results identified that higher scores of adaptive coping styles were significantly predictive of lower scores on the impact of event scale-revised (IES-R; a measure of subjective distress caused by traumatic events) and higher scores on the PTGI subscales of Spiritual Change ($p < .001$, $R^2 = .12$) and Relating to Others ($p < .006$, $R^2 = .08$), with a positive trend on the subscale of Personal Strength ($p = .03$, $R^2 = .05$). Conversely, higher scores of maladaptive coping styles predicted higher rates of avoidance, hyper-arousal, and intrusion on the IES-R scale ($p < .001$), which are DSM-IV criteria for the diagnosis of PTSD (American Psychiatric Association, 2013).

Correspondingly, Shakespeare-Finch et al. (2005) investigated the relationship between PTG, coping, and the Five Factor Model (FFM) of personality (Costa & McCrae, 1999) in Australian ambulance personnel. They found that adaptive coping had a moderate positive relationship with PTG on all subscales and coping was a mediator of the relationship between personality and PTG. The PTGI subscales of Relating to Others showed the strongest change in PTG ($p < .001$, $r = 0.43$), followed by Spiritual Change ($p < .001$, $r = 0.37$) and New Possibilities ($p < .001$, $r = 0.36$). The two highest correlations correspond with

the Kirby et al. (2011) study, although unlike the latter study, they did not find significant correlations with all the PTGI subscales.

Contrastingly, Jurišová (2016) researched whether coping strategies predicted PTG and whether this relationship was moderated by variables of self-efficacy and affectivity in a sample of Slovakian ambulance personnel. They found the highest scores on the PTGI subscales of Personal Strength and Appreciation of Life and several coping strategies were implicated in PTG with correlations ranging from 0.26 (low) to 0.46 (low-moderate). There were significant positive relations between active coping, planning, suppression of competing activities, restraint coping, seeking social support, use of social support, religious coping, focus on and venting of emotions, behavioural disengagement, smoking and PTG, whereas significant negative relations were found between mental disengagement and PTG. The coping strategies with the highest means were acceptance (10.8), followed closely by positive reinterpretation and growth (9.19), and active coping (9.0). Interestingly, the maladaptive coping strategy of behavioural disengagement (avoidance) had a positive correlation with PTG, which is in contradiction with the findings from the Kirby et al. (2011) study that found a negative correlation between avoidance and PTG. This may be due to differences in interpretation as within the context of emergency medical response, "strategies traditionally referred to as maladaptive may be viewed as a positive way of dealing with a highly stressful scene at the time of the event" (Kirby et al., 2011, p.31).

Contradictory to Jurišová's (2016) findings, Ogińska-Bulik and Kobylarczyk's (2015) Polish study found that venting of emotions was a suppressor of PTG, rather than an adaptive coping strategy, which was implicated in the former study. Denial was also a suppressor of PTG, a maladaptive coping strategy suggested by Jurišová (2016); although consistent, this was a non-significant finding in Ogińska-Bulik and Kobylarczyk's (2015) paper.

A Chinese study by Kang et al. (2018) focused on a specific coping strategy: social support (subjective, objective, and seeking behaviour), which was implicated as a coping strategy that facilitates PTG (r = 0.31–0.43, p<0.01). This is consistent with Jurišová's 2016 finding of a significant (p<.05) but low correlation with PTG (r = 0.29 (seeking social support) to 0.30 (use of emotional social support)). However, a study in Kyrgyzstan by Avsarolu (2019) did not find a significant correlation between social support and PTG amongst emergency health employees.

Lastly, a qualitative study by Wines (2019) explored the experiences of EMS personnel responding to suicides where loved ones of the deceased were present. Two coping mechanisms were categorised as protective factors: detachment "after so long you get used to it" (p.100), and dehumanisation "you really distance yourself from the person" (p.101). Task focus was also reported, which could be interpreted as task-oriented coping to divert from emotional stressors when considering the findings of the quantitative papers. A risk factor, intrusive rumination, was also reported: "I can always picture what they looked like or where we found them…" (p.99). This may be interpreted as maladaptive or adaptive coping following trauma. To support the latter hypothesis, Taku et al. (2009) found that deliberate or intrusive rumination following a recent trauma was positively associated with PTG as this may trigger cognitive processing.

Most studies investigating coping style scored a 5 (excellent) on the MMAT with the exception of Avsarolu's (2019) study (4; good) and Ogińska-Bulik and Kobylarczyk's (2015) study (3; satisfactory). Overall, studies used validated questionnaires and appropriate samples to measure coping style or strategies.

Resilience

Three of the studies investigated the facilitators and relationship between resilience and PTG in ambulance personnel. Kang et al. (2018) found that resilience was positively associated with vicarious post-traumatic growth (VPTG) ($r = 0.67$, $p<0.01$) and was a significant mediator ($r = 0.58$, $p<0.001$) of the relationship between social support and VPTG ($r = 0.51$, $p<0.001$) with a small effect size of 0.30. Conversely, Ogińska-Bulik and Kobylarczyk (2015) reported that high levels of resiliency facilitated the use of planning as a coping strategy, which promoted PTG on the Appreciation of Life subscale ($p< 0.001$).

In contrast, Austin et al. (2018) found a small and negative relationship between resilience and PTG ($r = -0.11$). However, high levels of resilience ($p = 0.001$) were present in ambulance personnel who expressed an interest in receiving coping training (support groups or counselling) and this could facilitate or mediate PTG as reported in the wider literature.

Studies that investigated resilience varied in methodological quality with Kang et al. (2018) scoring a 5 and the two latter studies scoring a 3. This was due to an unrepresentative or unequal sample size, reducing power.

Gender

Three studies statistically analysed gender. Surgenor et al. (2020) found that female paramedic first-responders showed increased levels of PTG ($t=4.70$, $p<0.01$). Correspondingly, Shakespeare-Finch et al. (2005) found that female emergency ambulance personnel scored higher on the PTGI ($M = 54.64$; $SD = 21.28$, range = 0-100) than male officers ($M = 47.74$; $SD = 21.45$; range = 0-100; t (502) = -2.86, $p< .01$).

In Avsarolu's (2019) study, incident effect on life was the only positive correlation with PTG for both male and female emergency health workers. Although this finding was

reported irrespective of gender, the correlation was only highly statistically significant for males ($t = 4.266$, $p<.001$ and $t = 2.655$, $p<.01$, respectively).

Studies varied in methodological quality from 3-5 (Avsarolu (2019), Surgenor et al. (2020), and Shakespeare-Finch et al. (2005), respectively). Two of the three papers utilised an equal sample of both genders. Lower ratings were due to vague or unreported participant demographics apart from gender and mixed samples of volunteers and employees. No other Studies found significant correlations between gender and PTG, although most studies included male samples or had a disproportionate sample of males compared to females limiting the transferability of findings.

Personality Traits

Two studies examined personality. Shakespeare-Finch et al. (2005) highlighted that dimensions of extraversion, openness and conscientiousness were significantly related to all of the PTGI factors and the dimension of neuroticism did not correlate in either direction with total PTGI score, but did elicit a very weak significant and negative relationship with changes in personal strength. This is consistent with wider literature (Tedeschi & Calhoun, 1996). Similarly, a Sense of Coherence (SOC) has been defined in the literature as a personality trait. Ragger et al. (2019) revealed higher levels of PTG were associated with higher levels of SOC ($r = .27$, $p < .01$). In particular, the SOC-subscale of Meaningfulness was positively associated with the PTG Total Score ($r = .27$, $p<.01$) and the PTG subscales of New Possibilities ($r = .27$, $p < .01$), Relating to Others ($r = .31$, $p < .01$), and Appreciation of Life ($r = .14$, $p < .05$). Both studies scored a 5 on methodological quality and utilised questionnaires (SOC-29 and FFM) with excellent reliability (0.82-0.95 and 0.77-0.94, respectively) to measure personality (Antonovsky, 1993; Costa & McCrae, 1992).

Incident Characteristics

Of eleven studies, none revealed significant correlations between length of service and PTG. However, Ragger et al. (2019) highlighted an increase in PTG when duration of emergency incidents decreased ($r = -.16$, $p < .01$). As previously mentioned, Avsarolu (2019) reported a significant correlation between incident effect and PTG for both genders. Moreover, Kirby et al. (2011) reported that incident type influenced the rate of PTG and use of maladaptive coping, whereas the study by Shakespeare-Finch et al., (2003) demonstrated higher PTG in ambulance officers who had experienced a personal trauma in addition to a work-related trauma. Paramedics with the most significant PTG score were those known to the victim prior to the incident (M =58.57; SD =24.38,) compared to other types of incidents (F (4, 113) = 3.77, $p < .01$). This contrasts with the "extensive injury" category which had the lowest levels of PTG (M = 40.56, SD = 18.41) and the highest means of adaptive coping strategies (M = 44.06, SD = 11.29). However, other papers in the review did not comment on or capture the demographic variables of employment, incident duration, effect, or type. All studies except for Avsarolu (2019) scored a 5 on methodological quality, demonstrating excellent reliability and validity of findings. However, findings are disparate in the literature.

Discussion

Overview of Research Findings

The aim of this systematic literature review was to investigate what facilitates PTG in ambulance personnel and determine a prevalence rate. The synthesis of papers revealed moderate PTG (52%). Facilitators of PTG were split into five categories: coping style/strategies, resilience, personality traits, gender, and incident characteristics, whereby all but the latter are implicated in a systematic review by Henson et al. (2021).

Coping Style/Strategies

Overall, adaptive coping styles were associated with higher levels of PTG than maladaptive coping styles. However, different coping strategies were indicated across papers and there was some overlap in the classification of strategies. For instance, venting of emotions was seen as both a facilitator and suppressor of PTG. The health theory of coping (Stallman, 2020) suggests that western society has conceptualised coping as mutually exclusive and adaptive. However, smoking may be seen as a maladaptive strategy which could facilitate venting of emotions with other smokers, which has an adaptive function and suggests that coping can be perceived as non-mutually exclusive. This demonstrates that coping is not clear-cut and questions the reliability of findings produced from quantitative measures.

Resilience

Resilience was either positively or negatively associated with PTG. PTG was a significant mediator of the relationship between social support and VPTG. High levels of resilience were found in ambulance personnel who expressed an interest in receiving coping training (support groups or counselling). Resilience theory (Fergus & Zimmerman, 2005) posits that the ability to bounce back or grow from stressors is dependent on availability of resources and assets in multiple contexts and throughout the lifespan. Social support is an important resource which allows an individual to learn ways of coping with stress from resilient role models (Bandura, 1977).

Personality Traits

Three factors of the FFM (extraversion, consciousness, and openness to experience) were implicated in one paper, which aligns with Tedechi and Calhoun's (1996) findings from

a sample of the general population. Secondly, a sense of coherence was a reported facilitator in another paper. However, it should be mentioned that personality is a fluid construct and may represent ambulance personnel's personality in a snapshot of time influenced by personal circumstances and clinical intervention (Roberts et al., 2017).

Gender

Only one study found females with higher PTG than males, which alluded to women more readily sharing their adverse experiences with others (Surgenor et al., 2020), implicating social support as a coping strategy. This is consistent with Wu et al.'s (2016) study, showing that women scored higher than men on the relating to others subscale of PTG. Social role theory (Eagly, 1997) suggests that men are less likely to seek social support due to cultural expectations and stigma around venting of emotions (Chatmon, 2020). Some studies had predominant or only male samples, which was a limitation of this review. Future research should aim to include a representative sample of males and females to determine if the relationship between PTG and other variables of interest is reliably mediated by gender.

Incident Characteristics

There was limited evidence from three studies suggesting that incident effect, type, or duration were associated with varying levels of PTG (high or low) and coping style (adaptive or maladaptive). Other studies did not collect this demographic information or include this in analysis and trauma may impact on the quality of memories involving incident effect or duration due to fragmentation (Bedard-Gilligan & Zoellner, 2012), which may limit reliability of findings. Further research in this area would be useful for theory development.

Methodological Limitations and Future Research

Most studies had excellent methodological quality and utilised the same questionnaire (PTGI) to measure PTG, which enabled the synthesis of findings. All but one study was quantitative, and the sole use of questionnaires is a reductionist approach because complex relationships are reduced to numbers. Studies could utilise data triangulation to provide a more comprehensive understanding of PTG (Noble & Heale, 2019). For example, interviews with ambulance personnel could be used in conjunction with scores on the PTGI to enhance the reliability and validity of findings. Some studies were subject to participation bias due to recruitment strategy, such as letter advertisements or were based on mixed sample or small groups of ambulance personnel, reducing the homogeneity and power of samples, potentially impacting findings. Differences in findings could be explained by variance in sample demographics and outcome measures, as studies used various questionnaires to measure coping and resilience (six and three, respectively). Questionnaires were translated, which enabled comparison of data from a range of study populations. However, it is not clear if this was from an authenticated source. Furthermore, cultural differences highlighted that the 'paramedic' was either defined by the individual or a role depending on the study location. For instance, China does not have a 'paramedic' occupation, rather this is a collective role made up of nurses, stretcher-bearers, and physicians, which may make samples less homogeneous. Future research is needed on PTG using a semi-structured interview or questionnaire with open-ended questions because it is important to explore ambulance personnel's subjective lived experiences of PTG rather than generalise findings across diverse study populations. For instance, there is no research exploring incident type and post-traumatic growth in the UK. It may be important to investigate characteristics of incidents which may promote or prevent PTG as this is lacking in extant literature.

Conclusion

This literature review has implicated several facilitators of PTG: adaptive coping, high levels of resilience, personality traits such as extraversion, openness, conscientiousness, sense of coherence and shorter emergency incidents or type are associated with higher levels of PTG in ambulance personnel. These facilitators could be considered by ambulance services and clinical psychologists to promote PTG when supporting ambulance personnel following a trauma. However, the findings are mixed and should be interpreted with caution. Further research using a qualitative design or mixed methodology is needed to draw firmer conclusions.

Conflict of Interest

None declared.

Ethics

Not required.

Funding

None.

Author Contributions

MA was the lead author and led on the planning of the project, literature search, and analysis and synthesis of the findings. AS was the project supervisor and provided feedback on the paper.

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Part Two: Empirical Paper

This paper is written in the format ready for submission to the

Journal of Positive Psychology and Wellbeing

Please see Appendix D for submission guidelines.

'Like a Plant in a Pot': The Experiences of Thriving at Work in Paramedics

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Abstract

Thriving is a concept within positive psychology which is lacking in extant literature. Thus far, research has focused on thriving in the business sector and nursing population with no known research on thriving at work in paramedics. Paramedics are exposed to stressful medical events daily. If paramedics are not supported at work or do not manage stress effectively, they may experience mental health concerns such as anxiety, depression, and/or post-traumatic stress disorder (PTSD), which can impact on job performance, satisfaction and ultimately lead to staff turnover. Through opportunity and snowball sampling, the study recruited seven paramedics across several NHS ambulance sites in the North, South, and West of Yorkshire, England. The study utilised a semi-structured interview to gather qualitative data on the experiences of thriving at work. The data were analysed using Interpretative Phenomenological Analysis (IPA) (Smith et al., 2021) and three personal experiential themes "Making sense of thriving", "Antecedents of thriving" and "Proactive support" with subthemes (10) were developed from the data. Findings suggest that thriving is a subjective and largely positive experience. Paramedics felt that autonomy, recognition, social support, being listened to and valued, and opportunities for continued professional development are important to thrive at work. Senior paramedics expressed a greater need for proactive support in terms of mental wellbeing and reflection. This research could inform policies and practices which promote thriving at work and have implications for clinical psychologists providing mental health support or training to paramedics.

Keywords

Interpretative Phenomenological Analysis, Thriving, Paramedics' Experiences.

Introduction

Paramedics are exposed to daily medical emergencies. The most stressful and traumatic incidents cited by paramedics include attending to patients where one's own safety is threatened, acts of aggression or murder, mutilation, domestic violence, hearing life narratives, psychiatric patients, resuscitation, sick or dead children, and suicide (Loef et al., 2021). If stress is not managed effectively, paramedics may experience poor mental health outcomes such as post-traumatic stress disorder (PTSD), anxiety, and depression (Petrie et al., 2018). All ambulance trusts in the United Kingdom (UK) report high rates of stress-related sickness absence due to stress, anxiety, depression, or other psychiatric condition. Alarmingly, a survey by Mind (2015) on mental health in the ambulance service revealed that 91% of 1,352 staff (1,230) experienced stress, low mood, or poor mental health during their career, with over half experiencing mental health conditions. Furthermore, 80% of staff felt their organisation did not encourage them to talk about mental health and staff also reported excessive workload as the most stressful trigger, followed by pressure from management, long hours, changing shift patterns and exposure to trauma. Ambulance personnel relied on adaptive or maladaptive coping strategies such as talking to friends and family, isolation, and substance misuse to cope with stress. Public data indicates that stress leave is on the incline, with a mean of 15% in 2014, which increased to 21% across ten ambulance trusts in 2018-2019 (NHS Digital, 2019). The Yorkshire Ambulance Service (YAS) reported a yearly stress figure of 27.13%; the second-highest national figure for paramedics in the largest county in the UK. Moreover, ambulance personnel have the highest rate of stress-related sickness absence compared to other clinical professions (NHS Digital, 2021). Cumulatively, NHS England trusts have lost an estimated £1.1 billion due to stress-related sickness absence (NHS Digital, 2017). Staff with poor mental health are at risk of providing poor quality care to patients and the annual cost of harm arising from clinical activity covered by the Clinical

Negligence Scheme for Trusts was £8.8 billion in 2018/19, reducing to 8.3 billion for 2019/20 (NHS Resolution, 2020). Ultimately, poor mental health is associated with low job satisfaction and a strong predictor of intent to leave the profession (Chapman et al., 2009), which will incur further costs to the UK economy due to absenteeism and staff turnover.

Research thus far has reported on poor mental health outcomes and negative impacts on employee mental health and long-term employment in the public healthcare system. However, at the beginning of the 21st century a paradigm shift occurred, moving away from researching psychopathology to addressing positive human functioning (Csikszentmihalyi & Seligman, 2000). Thriving is a concept with roots in positive psychology, which has been defined as a "positive psychological experience of increased learning and vitality and Spreitzer et al. (2005, p. 538; see Figure 1).

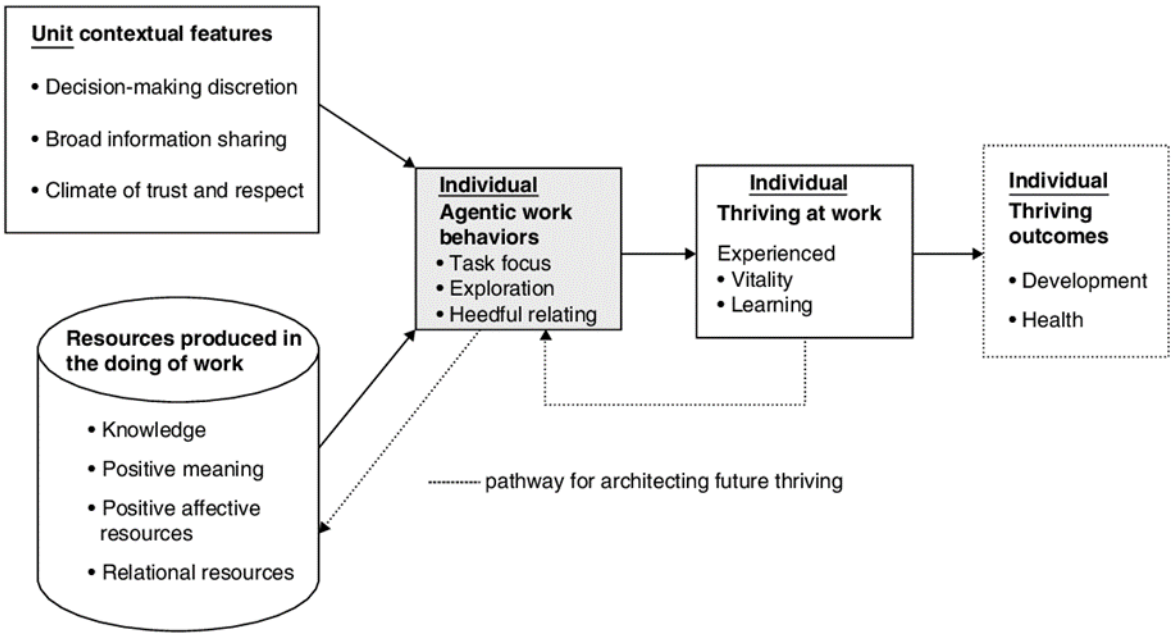

Figure 1. "The Socially Embedded Model of Thriving at Work" (Spreitzer et al., 2005)

Spreitzer et al. (2005) compares thriving to resilience, although these concepts are related but distinct depending on context. Resilience has been described as the ability to 'bounce back' "in the face of adversity, trauma, tragedy, threats, or even significant sources of stress" (American Psychological Association, 2022, para. 4). Contrastingly, thriving has been implicated in both stressful and non-adverse contexts. For instance, O'Leary (1998) defined thriving as a person's ability to go "beyond their baseline of psychosocial functioning, to grow vigorously, to flourish… in response to a challenge" (p. 128), whereas Carver (1998) suggested that thriving may result in desensitisation to the negative effects of subsequent stressors, or a decrease in recovery time between stressors. Contrastingly, Sarkar and Fletcher (2014) posit that thriving is characterised by a sustained level of performance not necessarily preceded by a traumatic event. As previously mentioned, Sprietzer et al's (2005) model converges with both conceptualisations of thriving and suggests that thriving can occur "with or without adversity" (Spreitzer et al., 2005, p. 538). For instance, if an employee has a cognitive appraisal of feeling 'helpless' during a traumatic or novel task this may prompt them to learn new knowledge and skills to utilise in the future, which enables thriving. Similarly, thriving may also happen due to experiencing positive affect from 'unit contextual factors', which may include autonomy over decision-making, information sharing, and working within a 'climate of trust and respect' (Spreitzer et al., 2005). The two-dimensional conceptualisation of thriving at work (vitality and learning) is supported as a strong determinant of thriving in a second order confirmatory factor analysis (Porath et. al. (2012), which demonstrated a correlation of (r =.71-.87) across two datasets derived from employees working in a plant facility or multicompany context. This construct validity was further supported by a meta-analysis including employees from the banking, education, and technology sectors (Kleine et al. (2019). Results demonstrated that both individual characteristics (proactive personality, positive affect, and work engagement) and relational

characteristics (perceived support and positive relationships with co-workers, leaders, and the organisation) are associated with an outcome of thriving, which is correlated with development and health outcomes; positively with subjective wellbeing and negatively with burnout. Additionally, the strongest correlates of thriving were work engagement (r= .64) and organisational support (r= .63). However, a limitation of this meta-analysis is that qualitative research that was excluded. Moreover, of the 65 articles representing 21,739 employees, only two studies were from the healthcare sector (nursing), and none of the included samples were UK based. Of the two healthcare studies, Zhao et al. (2018) demonstrated that workplace violence was a barrier to thriving, negatively influencing job satisfaction and significantly positively impacting turnover intention in nurses. Mortier et al. (2016) evidenced a significant positive relationship between perceived authentic leadership and vitality, mediated by perceived empathy; this mediation was not confirmed in relation to learning. There is some research on thriving in the healthcare sector using qualitative methodologies, although this is limited in the extant nursing literature. To illustrate, Jackson et al's framework analysis (2022) reported that nurses' lived experiences fitted with the model of thriving at work. This consisted of vitality, ongoing learning, and external and internal factors. Nurses also highlighted barriers to thriving, such as emotional burden, workload, and ethical issues, which were not represented in the current model. It is therefore important to consider individuals' experiences of thriving at work in the UK healthcare sector by employing a qualitative method. The meta-analysis by Kleine et al. (2019) and Spreitzer's (2005) model may be reductionist and have low external validity (generalisability) for employees in the healthcare sector, such as paramedics, as the meta-analysis mainly included data from employees in the business sector. Also, the conceptualisation of the model was non-specific to a type of people, occupation, or workplace. Additionally, the model neglects the influence

of mental health on thriving at work, although recent research by Kleine et al. (2022) suggests that thriving is positively related to employee mental health.

Several work policies have been implemented across the UK, including in ambulance trusts, to support and promote thriving at work, which can improve staff retention. The overarching publication 'Thriving at Work: A Review of Mental Health and Employers' (Stevenson & Farmer, 2017) was drafted to enable employers to better support their workforce, including those with mental health conditions, in an attempt to retain staff and allow workers to thrive. The report outlined six core standards that employers should implement in the workplace: a mental health at work plan, mental health awareness, open dialogue and support, good working conditions, effective people management and routine monitoring of employee mental health and wellbeing. The report also recommends that NHS England should continue to work towards full implementation of the **'**Five Year Forward View for Mental Health' (Independent Mental Health Taskforce, 2016).

Several recommendations were outlined in the Five Year Forward View for Mental Health to be implemented by 2020/21. Trusts were advised to enable staff to engage in workplace practices that promote mental wellbeing, and to ensure they have adequate access to mental health training and support from occupational health. Furthermore, the Yorkshire Ambulance Service published an 'Employee Wellbeing Strategy' (2015), which abides by the pledges outlined in the NHS Constitution for England, (2015, p. 12): to 'provide a positive working environment for staff', 'promote supportive and open cultures' and 'provide opportunities for staff to maintain their health, wellbeing and safety.' This should be achieved by encouraging annual monitoring of physical and mental health (free health checks, post-incident care and stress-management workshops) and organisational support (occupational health and signposting to informational resources).

Rationale

The current study aims to explore the meaning and experiences of thriving at work for paramedics in the UK. Thus far, the effectiveness of work policies is informed from statistics using staff surveys, such as self-reported mental health, occupational health referrals, job satisfaction, and sickness absence and turnover rates. However, there is limited qualitative data to contextualise these findings. Thriving has been researched by Jackson et al. using framework analysis (Spreitzer et al.'s (2005) socially embedded model of thriving at work)) although research has not branched out into other clinical professions. For instance, there is no research exploring thriving at work in paramedics, who are exposed to stressful events daily and arguably are 'forgotten professionals' within the healthcare system (Lawn et al., 2020). A qualitative study could contribute towards an awareness of individual and relational factors to improve paramedics' health and wellbeing within ambulance services and promote a 'thriving culture', from which could follow patient care improvement. Additionally, this research could influence future workplace changes that promote thriving policies and practices. Implications for patient care and other healthcare professions are clear: in thriving paramedic teams, staff experience physical and mental wellness, and so do patients.

Research Questions

1. What does thriving at work mean to paramedics?
2. What influences the experience of thriving in the workplace for paramedics?

Method

Design

The study used a semi-structured interview to obtain qualitative data on the subjective lived experiences of thriving at work in paramedics (See Appendix E). The data were analysed using Interpretative Phenomenological Analysis (IPA) (Smith et al., 2021) and demographic information was collected prior to the interview using an online survey to contextualise the data (See Appendix F).

Participants

Whilst there is no 'correct' sample size for IPA studies (Smith et al., 2021), a suggested sample for an IPA study on a professional doctorate should range between 4-10 participants (Smith et al., 2021). Seven paramedics were recruited in the present study through a combination of opportunity and snowball sampling (6 male; aged between 21-61+ years; years of service ranged from 2.5-31 years with a mean of 14, *SD* = 11.02), which allowed for data richness and enabled in-depth analysis. The inclusion criteria were as follows: band 6+ paramedics with a minimum of two years' experience. Therefore, student or newly qualified paramedics (band 5) were excluded from the study as it could not be guaranteed that they would have sufficient experience to draw from and would lessen the homogeneity of the sample. Paramedics had to be operational (patient-facing) and working at an ambulance station within the Yorkshire region at the time of the research. Paramedics were chosen as the sample population due to an identified gap in the literature and because they had high rates of stress-related sickness absence in this area of the UK. Paramedics worked at several ambulance sites in the Yorkshire region of England. Please see Table 1 for participant characteristics.

Table 1. Participant characteristics

Pseudonym	**Graham**	**Alf**	**Martin**	**Miles**	**Derek**	**Adrian**	**Janet**
Participant ID	1	2	3	4	5	6	7
Self-identified gender	Male	Male	Male	Male	Male	Male	Female
Age	41-50	21-30	51-60	61+	21-30	31-40	51-60
Marital status	Married	Single	Married	Married	Single	Married	Married
Employment contract	Full-time	Full-time	Full-time	Part-time	Full-time	Full-time	Part-time
Locality	South	West	North	South	South	North	North
Years as a qualified paramedic	15	5	13	31	2.5	3	29
Band	7	7	7	6	6	6	6
Average (contracted) hours per week	37.5	37.5	37.5	18.5	37.5	37.5	28.5
Average (overtime) hours per week	3	20	5	2	5	3	2

Ethics

Ethical approval was granted by the Faculty of Health Sciences Research Ethics Committee at the University of Hull (REF: FHS355; (Appendix E) in October 2021 and the Health Research Authority (HRA) in November 2021. The study's information sheet (Appendix F), consent form (Appendix G), demographic information questionnaire (Appendix H), interview schedule and debrief checklist (Appendix I), poster (Appendix J), and sources of support sheet (Appendix K) were also reviewed and approved during this process. Further amendments were sought from the HRA to permit the researcher to advertise the poster online (March 2022) and at ambulance sites (May 2022) to increase visibility of the research project.

Procedure

The researcher contacted the Yorkshire Ambulance Service (YAS) via email in December 2020 and the organisation agreed to be a participatory site for the research. Two local collaborators (research paramedic and Research and Development Manager) granted capacity and capability checks in December 2021 following ethical approval by the university and HRA committees. Thus, participation from 62 ambulance sites across Yorkshire was secured. The research study was advertised via an electronic poster (See Appendix J) internally circulated by the R&D manager's email and was appended to a weekly e-bulletin accessed through the ambulance services' intranet. The study was also advertised on professional social media accounts affiliated with the ambulance service or researcher (Facebook, Twitter, and LinkedIn). Posters were printed and placed in eight stations located in South Yorkshire during May 2022 (five posters per station) and team leaders were encouraged to share the study by word-of-mouth. Paramedics were instructed to contact the researcher by email if they met the inclusion criteria and were interested in taking part in the study or had any questions in relation to participation. No incentives were offered for participation. Potential participants were then contacted via email and the information sheet and consent form were sent to be read and signed. Upon receipt of the participant documents, the researcher assigned a number to each participant, and participants were instructed to input their number into a demographic questionnaire on Microsoft Forms. Following completion of the questionnaire, the researcher arranged a date and time with participants for the one-to-one interview. Face-to-face interviews were not possible due to the covid-19 pandemic. Seven paramedics were interviewed virtually for 65-90 minutes (M = 78 minutes) using predominantly MS Teams (six participants) Zoom, or by telephone call (one participant) between March-July 2022. This was either on a rest day, or before or after a paramedic's shift. The interview schedule was semi-structured and guided by principles of IPA and

contained broad open-ended questions to facilitate a discussion which was led by the participant. A few key questions were asked in the same order at the beginning of each interview, such as: 'What does thriving at work mean to you?' and 'What influences the experiences of thriving in the workplace for you?' This was in addition to prompt questions, which served as an optional aid to encourage detailed responses. Some participants were asked to reflect on thriving in the context of covid-19, although this was dependent on whether the paramedic had experience of working prior to the pandemic. Please see Appendix I for the full interview schedule. Written and verbal consent was gained to audio and video record the interview on an NHS encrypted laptop, audio was only possible via telephone call. A separate audio recorder (Dictaphone) was utilised as a back-up in the circumstance of internet loss or recording corruption. The audio and/or video file was either immediately transferred to the laptop or deleted if the virtual recording was accessible locally. At the end of the interview, the interviewee was provided with a pamphlet containing contact information for mental health services in the Yorkshire area if they became distressed or would like to request mental health support. Interviewees were also advised to contact their GP or occupational health if needed and were given the researcher's contact details to direct follow-up questions relating to the study. Interviews were transcribed on the NHS laptop and stored securely on the University of Hull's digital repository (OneDrive). Recordings were deleted thereafter. Confidentiality, anonymity, and the right to withdraw were explained prior to and following the interview. Confidentiality was upheld by anonymising personally identifiable data and using pseudonyms in place of participants' real names. Random pseudonyms were chosen.

Methodological Analysis

Transcripts were analysed using Interpretative Phenomenological Analysis (IPA), informed by Smith et al. (2021). Non-verbal body language was transcribed where possible to contextualise the content of each interview. IPA was considered more appropriate due to the ability to gather rich data on participants' lived experiences and the researcher's interpretivist epistemological position. Please see section on researcher's characteristics and assumptions for more information. Moreover, IPA is suited to the novel nature of the research topic (Reid et al., 2005). IPA is underpinned by a double-hermeneutic process wherein the researcher makes sense of the participants' sense making (Smith et al., 2021). Firstly, participants interpreted the researcher's questions and considered their experiences of thriving, whether this be personal, observed, or imagined. Secondly, the researcher attempted to understand and interpret each participant's subjective lived experience. It was therefore important for the researcher to consider the influence of their own pre-conceptions and biases upon data interpretation.

Analysis followed a linear approach and ended with a cyclical technique in line with Smith et al.'s (2021) step-by-step guidelines for IPA: (1) Reading and re-reading transcripts: The process of analysis was initiated with an idiographic focus on one transcript. Please see Appendix L for an annotated excerpt. Whilst reading the transcript, the recording was listened to, or the participant's voice was imagined to hear the experiences which were shared by the participant; (2) Exploratory noting: This stage involved the researcher highlighting salient quotations, buzzwords or repeated words or ideas from the researcher's perspective. Exploratory comments were made in the right-hand margin of each transcript following a line-by-line analysis. These annotations were colour-coded to represent three levels of analysis from a surface-level to an in-depth analysis: (2.1) descriptive, applying the golden circle model (what, how, and why; Sinek (2009)); (2.2) linguistic features, such as verbal and

non-verbal language and (2.3) conceptual, understanding the data through metaphors, theories and questioning; (3) Constructing experiential statements (emergent themes): Discrete chunks of text were examined and developed into concise statements to denote understanding and meaning; (4) Searching for connections across statements. This applied structure to a transcript using the left-hand margin and Word. Statements were clustered together through (4.1) abstraction: whereby similar statements or codes were combined, (4.2) subsumption: statements become personal experiential themes, (4.3) numeration: the frequency signifies importance of a theme and function, (4.4) denoting the function of a theme for the participant; (5) Naming the personal experiential themes (PETs) and consolidating and organizing them into a table; (see Table 3 in results) (6) Repetition of steps 1-4 with other transcripts searching for instances of convergence and divergence within the data and (7) Looking for patterns across cases: Working with PETs (superordinate) to develop group experiential themes (subordinate). The naming and positioning of themes are refined to fit into a collective narrative of the data. Steps 1-6 were completed in an iterative process, revisiting each transcript in a back and forth 'hermeneutic circle' in order to consider part-whole relationships within the transcripts and between participants (Smith et al., 2021).

Quality Assurance

The researcher assured data quality throughout the study by noting their past experiences and future beliefs in a reflective diary (Ortlipp, 2008). This is an essential part of qualitative research which involved reflecting on the content and process of each interview immediately following the participant debrief and then refraining from judgement and setting aside preconceptions (Moustakas, 1994), a method known as 'bracketing' (Smith et al., 2009). During data analysis, the researcher followed guidelines outlined by Nizza et al. (2021) on the four markers of quality in IPA research. Please see Table 2 for an overview.

Table 2. The four markers of high quality in IPA research outlined by Nizza et al. (2021)

Quality indicators	Brief description
1. Constructing a compelling, unfolding narrative	Subthemes alternated between description, quotation(s), and interpretation to form a persuasive and coherent story. The themes unfold from how participant's make sense of thriving, to considering what supports thriving at work.
2. Developing a vigorous experiential account	Participants were prompted by the researcher to reflect on personal, observed, and/or imagined accounts of thriving at work.
3. Close analytic reading of participants' words	The researcher shared exploratory notes with their supervisor in a 'mini audit' (Smith et al., 2021, p.153) by going through a portion of the first transcript (please see Appendix L) with a focus on understanding and interpreting the meaning of words and phrases with particular attention to repetition, imagery, and analogy, which validated the analytic process and allowed for alternative interpretation.
4. Attending to convergence and divergence	Themes were illustrated with idiographic quotations and considered in a wider group narrative. Quotations were chosen based on representation, prevalence, and variability in the data. Naming of themes were refined with a supervisor and example quotes were shared with an independent researcher to check for credibility and mutual understanding.

Researcher Characteristics and Assumptions

The researcher is a Mixed (White and Asian) British middle class young (21-30) female external to the participatory site. This may have aided or been a barrier to data collection and interpretation. For instance, they intended to represent an outsider position to facilitate openness, trust, and honesty without fear of judgement or repercussion. However, not holding an insider perspective may have implications for the participant on their willingness to share personal experiences and opinions, which may impact data richness due to fear of not being understood (Dwyer & Buckle, 2009). The researcher encountered barriers, such as a difference in language use and conceptualisation of thriving. The researcher utilised open questions and used non-jargon speak. They also asked for clarification of abbreviations or specific terminology to construct a shared understanding. The researcher does not have personal relations or family members involved with the ambulance service. The researcher had support from the ambulance service only on one occasion in their personal life. The researcher was a trainee clinical psychologist employed by the NHS with prior experience volunteering for an ambulance charity as a first aider. A reflective diary was kept throughout the process to enable the researcher to reflect on their position and assumptions (Ortlipp, 2008) through being a consumer of media (‘Ambulance’ documentary on BBC One and newspaper excerpts) and research literature on paramedics. Please see the reflective statement (Appendix M) and epistemological statement (Appendix N) for further context on the researcher position and process on the conceptualisation of the research topic and interpretation of the data.

Results

Participants were asked to talk about their experiences of thriving at work (personal, observed, or imagined). Participants' accounts were clustered around three personal experiential themes, each with subthemes (10) (see Table 3). Themes were phrased to directly answer the research question: What are the experiences of thriving at work in paramedics?

Table 3. Personal experiential themes and subthemes

Personal experiential themes	Subthemes
Making sense of thriving	1.1 Thriving as an unfamiliar concept
	1.2 Enjoyment, satisfaction, and achievement
	1.3 Sensing thriving
Antecedents of thriving	2.1 Being an autonomous and capable clinician
	2.2 Recognition from patients and colleagues
	2.3 Receiving and giving practical and emotional support
	2.4 Being listened to and valued
	2.5 Continuing professional development
Proactive support	3.1 Mental wellbeing
	3.2 Reflection on-action

All themes were supported with verbatim quotations (italicised) from participant interviews. Ellipses represent short pauses or removed text when contained within brackets to succinctly summarise each quote.

1. Making sense of thriving

This theme, comprised three subthemes, details participants' understanding and meaning of thriving throughout their time working for the ambulance service. This theme illustrated that *"A subject like thriving, […] is very personal and subjective"* (Derek).

1.1 Thriving as an unfamiliar concept

Five participants appeared to have difficulty describing the concept of thriving. This was illustrated by two participants asking the interviewer for clarification and long pauses:

> *So, kind of what, what, what's the definition of that then?* (Derek).

> *Erm… [10 second pause; smacks lips] […] What does thriving at work mean to me? Erm… I think- do I, does it…* (Adrian).

Three of the participants showed uncertainty and confusion regarding thriving at work. For instance, Graham used the idiom *'good question'* before providing a detailed response. This could indicate that thriving was a topic that did not come easily to mind. Although, participants appeared to have considered thriving within other contexts. Both Graham and Janet did not initially use the word 'thrive' to describe their experiences, but they then chose to incorporate this word into their terminology, possibly due to researcher bias, as implied by Graham's response, or instead a realisation that they were and had been thriving at work, as indicated by Janet (respectively):

> *Good question […] [10 second pause] until you messaged me about two months ago, I'd never considered thriving at work. […] You know we've got [children] and we talk about them thriving at school, which is good…but it's not something I'd sort of considered in my own… it's not a word I would've used for myself… Erm, I think I've simply been doing it and you've given me a label to use.* (Graham).

I suppose this is where I've been a bit confused really, […] like I don't really know what to say because […] it's not a way I describe myself and my job […] Erm… but I suppose it is in the end. (Janet).

However, Miles did not relate to the word thrive and suggested this was a novel word that he had *'deliberately not looked up'*, and that job satisfaction was the *'old phrase*' to describe his experience:

I would never use that word. Thrive. It's a word that uh, you know, it's a new word to me to use in that context […] So, it's some… sort of job satisfaction, is that the old phrase for thriving? (Miles).

1.2 Enjoyment, satisfaction, and achievement

Paramedics spoke about a joint sense of enjoyment, satisfaction, and achievement from helping patients and staff:

It's nice to be able to help people, and yeah, I feel that I've achieved something, and I feel some satisfaction that I've done the job correctly […] appropriately, and that you're enjoying doing the job. (Miles).

One of the simplest things is just to erm, you know, help people through all this and that is very satisfying" (Derek).

*Sometimes, it's not just with patients. Erm, helping new staff, sorting the problems […] which is great, gives you a good feeling. (*Martin).

A sense of growth was perceived as something that enabled a paramedic to continue to enjoy their role:

> *Thriving is going to work and not just doing your role […] it's a growth of you know what I'm better at it, I'm enjoying it more, I'm more effective, I'm more efficient. Like… like a plant in a pot, just growing and growing and growing and growing.* (Graham).

Both Alf and Janet expressed that they enjoyed their skills being put to the test as a paramedic*: "I really enjoy being tested"* (Alf) and *"it's a little bit of a sense of achievement there, you know, like oh, I haven't done that for a long time […] it's pushing my skills, I suppose, really [laughs]. Testing my skills."* (Janet).

Both Alf and Derek mentioned that they enjoyed being a paramedic due to the variation in work environments and job responsibilities:

> *I really enjoy being outside, erm, I feel like I would really suffer if I was locked in four walls […] doing the same thing for me is, is quite unfulfilling* (Alf).

> *It doesn't feel mundane or like say friends in kind of finance and things just kind of plod along […] I'm not happy, kinda sat down doing the exact same thing day in, day out* (Derek).

However, all paramedics shared a sense of *"frustration*" and were not able to gain a sense of fulfilment due to increased hospital waiting times and queuing associated with the covid-19 pandemic. This was summarised aptly by Adrian:

You're kind of stifled almost because you are, you are stuck in one place, you can't… you know, go to the next patient (Adrian).

1.3 Sensing thriving

Participants described thriving (and non-thriving) using a wide range of feelings and emotions, which demonstrated that thriving is variable within and between individuals and can be experienced in an adverse or non-adverse situation. Janet described this as: *"I had all sorts of emotions going through me, I had a sort of cry actually afterwards".*

Both Graham and Janet interpreted the adrenaline as either worry *"I was quite apprehensive of that job…"* (Graham) or fear: *"I felt scared. I felt really scared. Erm, because it's been a long time since I've erm… dealt with that"* (Janet).

For some paramedics, this transpired into relief and pride following the resolution of the incident:

It was a sense of relief […] it was like a little pat on the back really to myself. (Janet).

It's a bit of relief […], but it's also then probably on reflection it's, it's pride there that I've been faced with a massive amount of pressure, and I have thrived under that pressure, I have dealt with it, I have moved forward and progressed, and got done what I needed to do. (Adrian).

Martin described a sense of calmness: *"I was able during the job to be completely calm and focused."* He also described a feeling of excitement: *"There's a sort of… excitement.* Lastly, Derek mentioned a state of happiness: *"I suppose when you come home and you, you're quite happy and you wake up and you're happy about going back in."*

Four participants' showed an awareness of and detachment from their feelings. They did not want their emotions to negatively impede on their thought process or jeopardise the task at hand.

> *When one steps in the room, and kinda gets into character, you kinda have to put that stuff [gestures with hands like he is throwing a ball] over there.* (Graham).

> *Afterwards, […] it was the mother that affected me. As I arrived, she ran out and screaming that he's dead. He's dead and collapsed in front of me, and I almost had to step over her to get to the child […] But it's, it's jobs like that where I can actually keep back from and focus and put the puzzle together.* (Martin).

> *When you're in that environment you feel quite overwhelmed […] I was sort of, […] maybe just dealing with the, the issue that was in front of me and problem solving […] and quite a hands-on aspect rather than a too much of a thought process.* (Alf).

> *I knew what I needed to do as a paramedic […] Even if you were […] swan like on the outside, even if you were a squirrel on the [motorway] on the inside.* (Adrian).

One participant demonstrated a lack of awareness or uncertainty about what thriving feels like: *"I don't know. I've probably been emotionally dead […] from my job."* (Miles).

Two participants did not realise they were thriving until after the event. This was either a self-realisation or following a discussion with a colleague. For Graham, this was the former whereas this was the latter for Adrian:

> *I think at the time, I don't know if I felt as though I was thriving in my role […] So, I think if you'd asked me a year ago, were you thriving at work? I'd probably say no, I'm struggling at work. Looking back on it, I can see that I did grow. You know, I grew in my knowledge, I grew in my skills, I grew in my confidence.* (Graham).

> *I think it's definitely on reflection and on discussion with your colleagues at the time […] all those uncertain jobs, erm, I have felt that actually no, I wasn't stressed here. I felt that I thrived under pressure there and you then had confirmation from your colleagues that, oh, you seemed really calm there, and you're like, oh actually, I felt really calm.* (Adrian).

2. Antecedents of thriving

This theme comprised five subthemes detailing individual and relational factors, which contribute to thriving at work.

2.1 Being an autonomous and capable clinician

All paramedics spoke about being an *'autonomous clinician'* and the responsibility of having control over their decision making:

> *There's a level of autonomy for a paramedic. You know, I can, within guidelines […] do what you see fit, in a way. […] For example, somebody being extricated out of a property or whatever, and we're doing it this way because this is the way that I want to do it […]. Erm, you can take on board*

other people's opinions and ideas and what have you, but at the end of the day, the decision is mine. (Adrian).

You're not micromanaged or supervised, right. Uhm, so it's very […] responsible, uhh, very autonomous and they trust you with that kind of aspect of it. (Derek).

One participant felt reduced levels of autonomy over decision making, possibly due to the policies imposed at work in response to covid-19:

In the last few years, […] we've been closed down and restricted in lots of things […], there's more paperwork, there's more policies, procedures, erm… more of an oversight. (Martin).

Another felt that some paramedics are reluctant to work autonomously:

A lot of people tend to… shy away from it a little bit, they, they want somebody to make a decision for them, or they're maybe not as confident in their own thought- decision making abilities. (Alf).

Similarly, Janet felt that confidence was an important aspect of making decisions regarding patient care*:*

My confidence is coming back and when you feel like that, you know, when you feel as though you're making the right decisions, it just makes life at work so much easier, and er, a more pleasant experience.

Delegating tasks was seen as an important aspect of autonomous working and being seen as a capable clinician:

> *Being autonomous you- I took control of the situation. Er, I was very clear and concise in my instruction. I knew what I needed to do as a paramedic. Erm, knew what I needed other people to do […] I suppose then, especially in multiagency jobs, you kind of thrive collectively then.* (Adrian).

2.2 Recognition from patients and colleagues

Four participants often spoke about the importance of receiving or giving external praise and recognition from a patient, peer, or manager. This reinforced the idea of doing their job well, which allowed a paramedic to feel a sense of purpose and gain satisfaction from their achievement. Janet described her experience of being recognised from a patient:

> *It does make you feel needed. You know, when you […] go to somebody and especially when they've said afterwards oh, God, thank you so much for your help. You know, you often wish, I wish you'd just write a letter.*

Janet also shared her experience with a peer and in turn received further reassurance and praise for doing her job well:

> *I had a chat with a colleague afterwards. I said oh my God, I had an adrenal crisis, and I did this, and he said well done, well done, you know, and it was good to know that I was doing the right thing.*

Graham also mentioned the importance of colleagues telling him that he was doing a good job:

It's very hard to perceive you're doing any good, and […] it's not until I left, and I had sort of some very kind thank you messages from some of the staff that you realise well, yeah you were doing well […] it would be nice if someone externally was able to turn round and go yay, you did well today [X], you know, some kind of external affirmation.

Alf mentioned that recognition from a manager was important to thrive at work:

…having a conversation with […] my boss and […] he said you did a good job today […] and that was good.

However, praise and recognition were not always provided when the patient outcome was unsuccessful:

It wasn't till [a] couple of years later in a training room [laughs], did one of the other paramedics who'd actually ended up going to the Coroner's Court […] erm, he was told that it was a gold standard resuscitation. Everything […] had been done absolutely perfectly and it had been me who'd led it, but […] no one ever passed that on to me, which is a shame, but it proved I was able to do it. (Martin).

Or if the patient outcome is unknown:

Once you've sort of dropped your patient off, you don't… you don't always know what happens to them. And you know, sometimes it's nice to have that little follow-up […] I was quite relieved that I'd done the right thing. (Janet).

It appeared in unknown circumstances that uncertainty prevented thriving at work as paramedics did not receive feedback on their performance and could not learn from or reflect on challenging jobs:

> *It prevents you feeling better about yourself, that you've done a good job. It also prevents you moving on as a, a clinician cause when you find out sometimes it's oh, it was that was it? All right, so next time I'll check that, or I'll consider that.* (Martin).

2.3 Receiving and giving practical and emotional support

Team leaders and senior management often supported paramedics with physiological needs:

> *To be able to go up and give them drinks, food, relieve them a bit. That makes a huge difference. A lot of what helps people at the moment is quite simple stuff.* (Martin).

Paramedics also felt supported by superiors to progress in their career*:*

> *I think support from people higher up promotes thriving. You know, if people are encouraged to go for certain roles, encouraged to apply for certain things […]. I've been supported by one of the supervisors, who is now a team leader, to go for every opportunity that has come my way.* (Adrian).

> *He [manager] was supportive about the whole thing er, which was really nice. Er, you know, just simple things like wishing me luck, hoping that […] I got the job in the end.* (Derek).

Paramedics mentioned that accessing support from a wider team was helpful:

We have [a] clinical support er, desk. So, other kind of paramedics that you can ring for advice, er when you're unsure. (Derek).

I also had input from, erm a midwife over the telephone, which was really, really helpful […] it just helped to facilitate that senior management a little bit easier, erm having somebody who's an expert in that area. (Alf).

Support was also accessed from their crewmate: *"I was lucky enough to have two colleagues appear fairly soon after"* (Graham).

Paramedics also valued opportunities for emotional support and often used the same phrase of things being *"bottled up"* and *"getting thing's off people's chest"* by seeking social support from their crewmate or team leader following a traumatic incident:

It's all about having somebody nice to work with as well, having a good crewmate you know, that you can chat with throughout the day […] and I think that they're finding it as like, oh, thank God, I've got somebody to talk to. You know, they've bottled some of this up, because it is a very stressful job. (Janet).

It gives them an opportunity to get something off their chest or something that they may have bottled up for quite a period of time. (Alf).

The crew with me is almost like a psychologist's office, because we've all been there, to this job, to that job, to similar, to worse, and they can empathise more then. (Adrian).

However, the opportunity to engage in social support was reduced in frequency due to the covid-19 pandemic:

Being able to socialise, have a bit of down time between people, which is what we used to be able to do, and that was vastly underestimated how good that was for people. (Martin).

You didn't want to kind of sit with people in the crew room or you couldn't because you had to socially distance. (Adrian).

Social support was less likely to be sought if paramedics were on a shift with a paramedic they have not previously worked with before or if there was negativity, which was mentioned by a few participants and aptly summarised by Alf and Martin:

People don't really know one another very well, and it's like they're working alongside a bit of a stranger. (Alf).

You can either have [that] one person that brings the whole team down and makes it toxic, or you can have somebody who actually brings a real good vibe and energy. (Martin).

Emotional support was not followed-up in some instances due to not formally reporting a traumatic incident:

Supervisors were meant to put in what they call 'pic' [post-incident care] so that the manager would check on the staff later on. Er, [it] doesn't get done very often, It's not a very good system. (Martin).

2.4 Listening to and valuing staff

Participants felt valued when they were listened to by management*:*

I think there is erm… avenues to facilitate ideas. There's the 'simply do' or the 'bright ideas' facility within the service. And normally if people suggest something, that is taken on board […] erm… suggestions for things to do on station, CPD, maybe… (Adrian).

I think staff members have historically stated that they would like more training and so the service has listened. (Alf).

On a couple of occasions staff did not feel valued when junior colleagues did not take heed of their instruction or advice:

The individual that I worked with at the time […] didn't follow what I asked, and I felt like, like do you not value like, what I'm saying? (Alf).

I used to listen to the ones that had been in the [service] the long[est] time. The old dinosaurs [laughs] […] but the people coming out of university aren't encouraged to listen to the dinosaurs, and it's a real shame […] if you're still a dinosaur walking around, you've obviously learnt to live in that environment, so it's worth talking to them […] it's like in the Chinese culture

you used to value wise people […] because they've had lots of experiences…

(Martin).

2.5 Continuing Professional Development

Paramedics mentioned that continuing professional development (CPD) was a requirement for registration with the Health and Care Professions Council (HCPC) and was integral to their role as a paramedic: *"It's a career that definitely needs constant learning and improvement and reflection."* (Derek).

Some stations had transitioned to team-based working, which introduced training known as 'investment days' into the workplace, whereas other stations were in the process of restructuring or did not have training as a team. For instance, two paramedics valued CPD activities (such as training, reading, podcasts and reflection) and felt that this enabled them to thrive to some extent, although this was limited due to the expectation to complete CPD outside of working hours: *"…it'd be nice to do those more in work time than necessarily at home."* (Miles).

… it's all put on us in our own personal time, as well. Erm, which can be a bit exhausting if you've uh, just finished a run of shifts and then on your rest days you have to go away and do work, […] if you want to go away and learn new skills, […] generally that's in your own time, or out of your own budget.

(Derek).

Some paramedics talked about the importance of mentoring junior colleagues, which was seen as important to thrive because it encouraged paramedics to keep up to date with training and practice guidelines by engaging in CPD activities, such as learning and reflection:

The education side for me, and also mentoring students means that I do have to er, make some attempt at keeping up with what is going on… (Miles).

If you can sort of contribute to their learning or I had this experience and this is how it went, erm, you know, I would maybe do this again […] and sort of maybe think well next time it'll be a little bit more positive, or next time, erm, hopefully it goes as well as it did previously (Alf).

Participants valued both theoretical and practical CPD, although two participants especially valued the social interaction from classroom teaching:

The classroom learning, I think can be, and has been very useful because you can stop and talk about something that you don't understand, or you're not sure of […] practical learning is just as important as the kind of theory learning, or online learning. (Miles).

When you're actually in uni face-to-face, you could ask then, oh, could I just borrow you at the end of the lecture, and the same with CPD, I suppose. (Adrian).

Paramedics also valued gaining knowledge and learning from other colleagues:

Learning a little bit of knowledge from other people and not necessarily from like from books (Alf).

Chatting about jobs and things and hearing [about] different way[s], different people's approach, or how they deal with them has been helpful and sometimes made me think, ohh, I need to look into that… (Miles).

One participant mentioned learning from a non-fatal mistake:

I thought I've really beeped here. And er, but [...] it was kind of like a positive learning experience. And I've actually passed this onto quite a few people. (Janet).

Face-to-face learning was restricted due to the covid-19 pandemic, which limited thriving through practical learning and clinical discussion:

We've had lots of the kind of practical courses cancelled, simply because we can't-couldn't mix with people. (Miles).

Paramedics relied on online learning and were signposted to resources by team leaders:

What the ambulance service is really good at is that they will erm… send you resources of where there is learning material… (Derek).

I've engaged with my staff members quite a bit in regards to CPD, whenever it's come out on operational demands, I've always sent an email out. (Alf).

However, CPD did not always support thriving if new skills or knowledge could not be applied within their role:

If you do, erm… learn kind of additional skills in a certain area, er you're not able to take these with you into… into work […]. To use those skills, you'd have to obviously go off and work for a different trust in primary healthcare." (Derek).

Erm, you could like learn other skills, like […] a surgical airway or putting a chest drain but […] it's not applicable to your role (Adrian).

3. Proactive Support

This theme comprised two subthemes outlining what organisational resources or opportunities paramedics felt were needed in the ambulance service to promote thriving in the future, which may help with staff retention.

3.1 Mental wellbeing

Two senior paramedics expressed a need for mental health training to better prepare paramedics for responding to and managing trauma:

Part of the induction should be about trauma and how to cope yourself, and resilience. If people knew beforehand what the effect will be, because if they don't, it comes as a big shock [laughs]. (Martin).

The support that's out there for staff is all reactive […] we offer counselling, we offer financial legal aid […] and what I really wish we could do and I- I've suggested this to the wellbeing team a number of times, but of course covid [and] significant levels of sickness has got in the way of that. But, why don't we have courses to engender confidence? Why don't we have courses to engender a bit of… mental resilience? You know, confidence and resilience

are like muscles, if you don't stretch them, they don't get any stronger. (Graham).

3.2 Reflection on-action

Some paramedics mentioned that they had access to formal mental health support, such as counselling. However, paramedics expressed a need for more opportunities to reflect on incidents in a frequent and informal manner after the event (reflection on-action; (Schön, 1983)). Some paramedics spoke of feeling able to reflect on jobs that went well or did not go to plan, but this seemed to be dependent on an individual willingness to engage in balanced reflection or organisational resources to facilitate reflective sessions:

There's a poster that came out of one of the NHS trusts somewhere down south and it kinda said […] make sure that you haven't got the on-call phone, think about two things that went badly and think about three things that went well today. And, and I think it's engendering that kind of, you know accept that things go badly, […] if everything went to plan, as a paramedic, I wouldn't exist, they wouldn't need us. But also at the same time, things go well, and one has to have the moral courage to look yourself in the eye and go […] I did that well today. Some people struggle with that. (Graham).

They seem to think that counselling and things like that, that's not- it's not really what helps you. It's sitting down and going you know, did I do everything that I could for that patient? Did I make a boo-boo? And is the patient Ok? And er, how do I feel in the end? That to me is what I think is missing in the ambulance service. (Janet).

Discussion

Overview of Findings

This research aimed to understand the meaning and experiences of thriving at work in paramedics. Participants spoke mainly about their personal experiences of thriving (personal, observed, or imagined) and results were clustered into three key areas: 'making sense of thriving', 'antecedents of thriving' and 'proactive support'. The findings share commonalties with the *'Socially Embedded Model of Thriving at Work'* (Spreitzer et al., 2005). However, it is important to highlight that paramedics did not describe their experiences using the word 'thrive' and likened their experience to *'job satisfaction'* or a long-lasting sense of *'enjoyment'* and feeling *'happy'* at work. This questions whether the word *'thrive'* should be used to describe their lived experiences, or instead 'give voice' to a shared interpretation of thriving using familiar language (Larkin et al., 2006). Moreover, the definition of thriving by Spreitzer et al. (2005) was partly implicated in the present study. Learning through social interaction and CPD was important to thrive at work. However, a sense of vitality was not explicitly communicated and did not arise in any personal accounts as an antecedent or outcome of thriving, although it was assumed that vitality, or feeling energised is important to work long-shift patterns and function well in stressful situations. These findings introduced a conceptualisation element to thriving, which is not discussed in the literature base. Unit-contextual factors, such as 'decision-making discretion', 'broad information sharing' and a 'climate of trust and respect' were perceived as important aspects of being an *'autonomous clinician'*, receiving and giving practical and emotional support, and being listened to and valued. Jackson et al. (2022) also contributed qualitative findings to the Spreitzer et al. (2005) model using framework-analysis and discussed 'barriers to thriving' from the data in a sample of nurses. Similarly, paramedics mentioned contextual demands as a barrier to thriving, such as the impact of covid-19 on reduced opportunities for experiential learning

and obtaining social support, which led to a shared feeling of *'frustration'.* Furthermore, the model solely accounts for 'positive affective resources' in a static work environment. Although paramedics mentioned feelings of *'joy'* and *'excitement'*, they often acknowledged how an absence of positive effect or even *'fear'* or *'apprehension'* can facilitate a thriving outcome. Put simply, paramedics demonstrated an ability to effectively manage stressful and traumatic jobs and were able to recover from a negative emotional state and often turn this into a positive mindset for future practice. Paramedics were able to shift their mindset by engaging in coping strategies, such as task focus (an agentic work behaviour described in Spreitzer et al's (2005) model) to emotionally detach from challenging incidents (Kariv & Heiman, 2005), and by seeking social support from colleagues or managers (Mildenhall, 2012). This would suggest that thriving is a psychological state and product of successful coping, which enables paramedics to deliver high quality patient care or prompts them to learn new information or skills if they felt ill-equipped for the task at hand. Moreover, Johnston et al.(2022) developed a four-point mental health continuum consisting of thriving, surviving, struggling, and 'in crisis', which enables paramedics to self-identify and disclose their mental wellbeing status at work. Connecting with others and learning new skills were outlined as behaviours that would maintain thriving, whereas actively engaging in coping techniques was important to 'survive' and was a precursor to thriving. In the current study, resources at work, such as relationships and knowledge were crucial for paramedics to be seen as capable and continue to improve in their role. It is also important to highlight that Spreitzer et al's (2005) model focuses on a broad outcome of health and does not consider mental health related outcomes as a product of thriving. Mental wellbeing is important to thrive and findings also relate to the PERMA (Positive emotion, Engagement, Relationships, Meaning, and Achievement) model of subjective wellbeing (Seligman, 2011), as aspects were represented across the three personal experiential themes and subthemes, such as positive

emotion and a sense of achievement from helping patients, receiving and giving practical and emotional support, and engaging in CPD, and making sense of thriving at work and having a greater purpose as a paramedic.

The findings also have similarities with Maslow's Hierarchy of needs (Maslow, 1943)**.** Paramedics mentioned the *'simple things'* that were appreciated by staff, such as refreshments and relief when on shift, which maps onto 'physiological needs.' Psychological needs were also met by feeling confident, and seeking social support, which mapped onto the 'belongingness needs'. A sense of achievement and recognition fulfilled the 'esteem needs.' Paramedics felt that external recognition was important to thrive, although self-praise was sought less often and perceived as a *'struggle'* for some. Intrinsic motivation, such as a source of enjoyment and fulfilment from their role was present, although extrinsic motivation from intangible rewards, such as praise, and encouragement were valued by paramedics (Legault, 2016). Developing self-compassion may help paramedics to be kind to themselves through self-praise and alleviate suffering in times of failure (Gilbert, 2009), such as unsuccessful cardiopulmonary resuscitation.

Strengths and Limitations

The topic of thriving seemed an unfamiliar and novel concept to paramedics. Therefore, participants may have been primed by the ideas or language used to inform them about the study in the participant information sheet (Molden, 2014) . Despite this, paramedics answered freely, and the participant sample was an appropriate size for IPA analysis and relatively homogenous (Smith et al., 2021). However, it became apparent that paramedics had a different route to the role of paramedic. Some paramedics joined the service following completion of a paramedic science course at university, whereas others had various work experiences or progressed from roles such as *'ambulance-man'*, emergency medical

technician (EMT), or emergency care assistant (ECA), amongst other roles, which may have shaped their experience of thriving in the current study. Paramedics only volunteered to participate in the study if they could offer spare time outside of working hours. Those who engaged with the interview may represent a proportion of paramedics who are particularly interested in understanding thriving (intrinsic motivation) or wanted to bolster their CPD portfolio by participating in research (extrinsic motivation) (Legault, 2016). In addition, the majority of paramedics undertook the interview on a rest day (n = 5). It was observed that paramedics completing an interview after a 12 hour shift showed signs of tiredness, such as yawning and slower response time, and the quality of data may have been impacted due to the time and day of the interview (Li et al., 2020). As thriving was a relatively novel concept, some paramedics repeated information, whereas others succinctly summarised their experience. The latter may be because paramedics are accustomed to providing brief patient handovers rather than engaging in a detailed conversation (Bost et al., 2012). Moreover, a paramedic coming forward to participate in the research may be extroverted and more likely to ask for support when needed at work (Mason et al., 2020). Therefore, it may be that paramedics who are more introverted may need colleagues and managers to enquire about proactive support or their wellbeing at work (Singh & Singh, 2013).

Implications for Research and Clinical Practice

It is important for the ambulance service to understand what thriving means to paramedics and to be aware of what supports their employees to thrive at work. The antecedents of thriving should continue to be embedded in ambulance services to promote a thriving individual within a supportive organisation. Band 7 paramedics expressed a need for training on trauma, confidence building, and resilience. The ‘Thriving at Work’ policy also recommends resilience training for managers and staff as this has proven to be ‘invaluable’ for employees with pre-existing mental health conditions (Stevenson & Farmer, 2017). The

policy also suggests additional debriefing sessions following a challenging job, which could facilitate reflection, satisfaction, and provide opportunity for learning and closure for paramedics post-incident. The 'Schwartz Round', a one-monthly multidisciplinary meeting to "discuss, listen, process and understand any emotional distress" (Allen et al., 2020, p.945) may be a helpful forum for reflection, although it is important to consider both informal and formal opportunities to reflect as a team on a regular basis. This is a clear implication for the role of a clinical psychologist in pre-hospital staff mental health. Reflection could be facilitated by a team leader or clinical psychologist (Fisher et al., 2015). These additional measures could reduce staff succumbing to stress-related sickness absence and decrease training costs in the long-term by incorporating training and signposting to mental health resources into an induction process for new staff. Participants often alluded to students and newly qualified paramedics having differing expectations, fears, or pressures when at work. Female paramedics were also underrepresented in the present study and experiences of thriving may differ to the current findings due to gender. Therefore, future research should explore the relationship between compassion (fears, blocks, and resistances to receiving compassion from self or others) and thriving (or non-thriving) at work in these populations utilising a quantitative or qualitative methodology. For example, comparison of scores on the comprehensive inventory of thriving questionnaire (Su et al., 2014) and compassion scale (Gilbert et al., 2017) or inquiry through interview. This is important as practising self-compassion can lead to increased satisfaction, social connectedness, and positive affect (Neff et al., 2009) and act as a buffer against anxiety following a stressor (Neff et al., 2007), which may contribute to thriving (Spreitzer et al., 2005).

Conclusion

This study is the first to explore how paramedics understand and experience thriving at work in a UK sample. Findings suggest that thriving can occur in stressful and non-adverse contexts. It is a subjective construct and can be supported by individual, relational, and contextual resources at work, such as autonomy, recognition, social support, being listened to and valued, and opportunities for continued professional development. However, senior paramedics expressed a greater need for proactive support in terms of mental wellbeing and reflection. This research should inform policies and practices in ambulance services to promote thriving at work, such as self-care and self-compassion. For instance, paramedics should refrain from work-related activities (such as CPD) on rest days and have improved access to patient outcomes. This research also has implications for clinical psychologists, who could provide mental health support, such as psychoeducation on trauma, developing self-compassion, reflective practice, or training to paramedics. Future research should explore the relationship between compassion and thriving in paramedics as this is a gap in the literature.

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Part Three: Appendices

Appendix A. Submission Guidelines to the British Paramedic Journal

Information for Authors

This page highlights the types of articles that the journal will consider publishing. Please also review the stylistic and bibliographic requirements outlined in on the submission's page. Authors need to register with the journal prior to submitting or, if already registered, can simply log in and begin the five-step process.

Please check your junk/spam folders for emails from the British Paramedic Journal as emails sent by the journal may get allocated to these folders.

Pre-publication

The British Paramedic Journal requires authors to declare that their submission has not been previously published nor is it before another journal for consideration. Pre-prints (preliminary reports of work that has not been peer-reviewed) submitted to services such as medRxiv are permitted, as long as a link to any final published submission in the British Paramedic Journal is added to the pre-print. Trial pre-registrations and conference presentations including subsequent abstract publication in either the British Paramedic Journal or other journals, are also allowed.

Types of articles suitable for submission

Original Research

Original research must meet an EQUATOR Network approved reporting guideline. This includes:

- CONSORT - RCT
- STARD - Diagnostic research
- STROBE - Observational studies

Abstract: 300 words
Word count: up to 3000 words
Illustrations and tables: up to 6
References: up to 40

Literature Review

Both literature reviews and systematic reviews are suitable for submission. In either case the methods section should specify how the literature review was conducted in sufficient detail to enable a reader to replicate your strategy.

You must follow the PRISMA reporting guidelines even for non-systematic reviews

Abstract: 300 words
Word count: up to 3000 words
Illustrations and tables: up to 6
References: up to 40

Submissions

Login or Register to make a submission.

Author Guidelines

1. General Principles

This journal follows the principles set out by the International Committee of Medical Journal Editors Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. A summary of those guidelines relevant to authors is provided below. In addition, there is additional specific guidance relating to the types of submissions that the journal current accepts, namely:

- Original research
- Literature reviews
- Case reports
- Best evidence topic reports
- Audit
- Service evaluation
- Research methodology
- Letters
- Quality improvement

2. Reporting Guidelines

Reporting guidelines have been developed for different study designs and the **most appropriate guideline checklist must be completed and uploaded as a supplementary file with your article submission**. Specific examples include:

- CONSORT for randomized trials
- STROBE for observational studies
- PRISMA for systematic reviews and meta-analyses
- STARD for studies of diagnostic accuracy
- SQUIRE for quality improvement

You can obtain these and a wide range of other guidelines from the Enhancing the QUAlity and Transparency Of health Research (EQUATOR) website.

3. Pre-registration

The journal strongly encourages pre-registration of original research and systematic reviews with online databases, such as ClinicalTrials.gov, ISRCTN and PROSPERO, in-line with ICJME guidelines on clinical trial registration, all clinical trials MUST be pre-registered.

4. Authorship

Authorship confers credit and has important academic, social, and financial implications. Authorship also implies responsibility and accountability for published work. Because authorship does not communicate what contributions qualified an individual to be an author, you must provide information regardint the contributions of the authors (unless there is only one).

i. Who Is an Author?

An author is somone who meets ALL of the following 4 criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND Drafting the work or revising it critically for important intellectual content; AND
2. Final approval of the version to be published; AND
3. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
4. In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.

ii. Non-Author Contributors

Contributors who meet fewer than all 4 of the above criteria for authorship should not be listed as authors, but they should be acknowledged. Examples of activities that alone (without other contributions) do not qualify a contributor for authorship are acquisition of funding; general supervision of a research group or general administrative support; and writing assistance, technical editing, language editing, and proofreading. Those whose contributions do not justify authorship may be acknowledged individually or together as a group under a single heading (e.g. "Clinical Investigators" or "Participating Investigators"), and their contributions should be specified (e.g., "served as scientific advisors," "critically reviewed the study proposal," "collected data," "provided and cared for study patients", "participated in writing or technical editing of the manuscript").

4. Manuscript Sections

The following are general requirements for reporting within sections of all study designs and manuscript formats.

a. Title page

The title page should contain the following:

- Title
- Author information
- Word count
- Keywords.

i. Title

The title provides a distilled description of the complete article and should include information that, along with the Abstract, will make electronic retrieval of the article sensitive and specific. Ensure you include the study design in the title (particularly for randomised trials and systematic reviews and meta-analyses)

ii. Author information

The first named author should be the corresponding author responsible for the journal submission. For all authors, a full name, postal and email address is required. In addition, a contact number for the corresponding author should be supplied. If you have an Open Researcher and Contributor Identification (ORCID), please include this also.

iii Word count

Include the word count, excluding the abstract, acknowledgments, tables, figure legends, and references.

iv. Keywords

Suggest up to 3 Medical Subject Heading (MeSH) keywords to aid in searching for your article. The MeSH on demand service can help with this.

b. Abstract

Original research, literature and systematic reviews, and meta-analyses require structured abstracts that should generally conform to the IMRAD style. The abstract should provide the context or background for the study and should state the study's purpose, basic procedures (selection of study participants, settings, measurements, analytical methods), main findings (giving specific effect sizes and their statistical and clinical significance, if possible), and principal conclusions. It should emphasise new and important aspects of the study or observations, note important limitations, and not overinterpret findings. Clinical trial abstracts should include items that the CONSORT group has identified as essential. Funding sources should be listed separately after the Abstract.

c. Introduction

Provide a context or background for the study (that is, the nature of the problem and its significance). State the specific purpose or research objective of, or hypothesis tested by, the study or observation. Cite only directly pertinent references, and do not include data or conclusions from the work being reported.

d. Methods

The guiding principle of the Methods section should be clarity about how and why a study was done in a particular way. Methods section should aim to be sufficiently detailed such that others with access to the data would be able to reproduce the results. In general, the section should include only information that was available at the time the plan or protocol for the study was being written; all information obtained during the study belongs in the Results section. If an organisation was paid or otherwise contracted to help conduct the research (examples include data collection and management), then this should be detailed in the methods.

i. Selection and description of participants

Clearly describe the selection of observational or experimental participants (healthy individuals or patients, including controls), including eligibility and exclusion criteria and a description of the source population. Because the relevance of such variables as age, sex, or ethnicity is not always known at the time of study design, researchers should aim for inclusion of representative populations into all study types and at a minimum provide descriptive data for these and other relevant demographic variables. If the study was done involving an exclusive population, for example in only one sex, authors should justify why, except in obvious cases (e.g. obstetric emergencies).

ii. Technical information

Specify the study's main and secondary objectives usually identified as primary and secondary outcomes. Identify methods, equipment (give the manufacturer's name and address in parentheses), and procedures in sufficient detail to allow others to reproduce the results.

iii. Statistics

Describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to judge its appropriateness for the study and to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals). Avoid relying solely on statistical hypothesis testing, such as p-values, which fail to convey important information about effect size and precision of estimates. References for the design of the study and statistical methods should be to standard works when possible (with pages stated). Define statistical terms, abbreviations, and most symbols. Specify the statistical software package(s) and versions used. Distinguish prespecified from exploratory analyses, including subgroup analyses.

e. Results

Present your results in logical sequence in the text, tables, and figures, giving the main or most important findings first. Do not repeat all the data in the tables or figures in the text; emphasise or summarise only the most important observations. Provide data on all primary and secondary outcomes identified in the Methods Section. Extra or supplementary materials and technical details can be placed in supplementary files where they will be accessible but will not interrupt the flow of the text, or they can be published solely in the electronic version of the journal. Refer to the supplementary files in the text using the reference 'Supplementary 1', 'Supplementary 2' etc.

Give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical significance attached to them, if any. Restrict tables and figures to those needed to explain the argument of the paper and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables. Avoid nontechnical uses of technical terms in statistics, such as â€œrandomâ€ (which implies a randomising device), â€œnormal,â€ â€œsignificant,â€ â€œcorrelations,â€ and â€œsample.â€

Separate reporting of data by demographic variables, such as age and sex, facilitate pooling of data for subgroups across studies and should be routine, unless there are compelling reasons not to stratify reporting, which should be explained.

The BPJ embraces the principle that research should be reproduceable. Consider adding details about how interested readers could replicate your methods by adding further information as a supplemental file, including details about whether the raw data is available for the purposed of reproduction of the results.

f. Discussion

It is useful to begin the discussion by briefly summarising the main findings, and explore possible mechanisms or explanations for these findings. Emphasise the new and important aspects of your study and put your finings in the context of the totality of the relevant evidence. State the limitations of your study, and explore the implications of your findings for future research and for clinical practice or policy. Do not repeat in detail data or other information given in other parts of the manuscript, such as in the Introduction or the Results section.

Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not adequately supported by the data. In particular, distinguish between clinical and statistical significance, and avoid making statements on economic benefits and costs unless the manuscript includes the appropriate economic data and analyses. Avoid claiming priority or alluding to work that has not been completed. State new hypotheses when warranted, but label them clearly.

g. References

i. General considerations related to references

Authors should provide direct references to original research sources whenever possible. Although references to review articles can be an efficient way to guide readers to a body of literature, review articles do not always reflect original work accurately. On the other hand, extensive lists of references to original work on a topic can use excessive space. Fewer references to key original papers often serve as well as more exhaustive lists, particularly since references can now be added to the electronic version of published papers, and since electronic literature searching allows readers to retrieve published literature efficiently.

Do not use conference abstracts as references: they can be cited in the text, in parentheses, but not as page footnotes. References to papers accepted but not yet published should be designated as â€œin pressâ€ or â€œforthcoming.â€ Information from manuscripts submitted but not accepted should be cited in the text as â€œunpublished observationsâ€ with written permission from the source.

Avoid citing a â€œpersonal communicationâ€ unless it provides essential information not available from a public source, in which case the name of the person and date of communication should be cited in parentheses in the text. For scientific articles, obtain written permission and confirmation of accuracy from the source of a personal communication.

The BPJ will endeavour to check the accuracy of all reference citations, but in order to minimise errors, references should be verified using either an electronic bibliographic source, such as PubMed, or print copies from original sources. Authors are responsible for checking that none of the references cite retracted articles except in the context of referring to the retraction. Authors can identify retracted articles in MEDLINE by searching PubMed for "Retracted publication [pt]", where the term "pt" in square brackets stands for publication type, or by going directly to the PubMed's list of retracted publications.

ii. Reference style

The BPJ uses the American Psychological Association (APA) 7th edition reference style. This is similar to Harvard, but has the advantage that there are no variations of this reference style, unlike Harvard. In addition, most citation managers already support it (e.g. Mendeley, Endnote, Zotero).

h. Tables

Tables capture information concisely and display it efficiently; they also provide information at any desired level of detail and precision. Including data in tables rather than text frequently makes it possible to reduce the length of the text.

Prepare tables according to the specific journal's requirements; to avoid errors it is best if tables can be directly imported into the journal's publication software. Number tables consecutively in the order of their first citation in the text and supply a title for each. Titles in tables should be short but self-explanatory, containing information that allows readers to understand the table's content without having to go back to the text. Be sure that each table is cited in the text.

Tables should be included in the main body of text where they are referred to. Place the table title above the table and label it sequentially (Table 1, Table 2 etc.). Give each column a short

or an abbreviated heading. Authors should place explanatory matter in a table footnote, not in the heading. Explain all nonstandard abbreviations in the table footnote, and use symbols to explain information if needed.

If you use data from another published or unpublished source, obtain permission and acknowledge that source fully.

Additional tables containing additional data that is too extensive to publish may be added as a supplemental file(s). An appropriate statement should be added to the text to inform readers that this additional information is available and use the appropriate citation (e.g. Supplementary 1). Submit the tables for consideration with the paper so that they will be available to the peer reviewers.

i. Illustrations (Figures)

Digital images of manuscript illustrations should be submitted separately as a PNG or JPG file. Vector illustrations should be submitted separately as an SVG. Although this is an electronic journal, aim to submit PNG or JPG images that are minimally compressed and at a resolution of at least 2000px on the longest dimension.

For X-ray films, scans, and other diagnostic images, as well as pictures of pathology specimens or photomicrographs, send high-resolution photographic image files.

Figures will not be redrawn, so letters, numbers, and symbols on figures should be clear and consistent throughout, and large enough to remain legible when the figure is reduced for publication. Titles and detailed explanations belong in the legendsâ€”not on the illustrations themselves.

Figures should be numbered consecutively according to the order in which they have been cited in the text. If a figure has been published previously, acknowledge the original source and submit written permission from the copyright holder to reproduce it. Permission is required irrespective of authorship or publisher except for documents in the public domain.

In the manuscript, legends for illustrations should be on a separate page, with Arabic numerals (i.e. 1,2,3...) corresponding to the illustrations. When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend.

j. Units of Measurement

Measurements of length, height, weight, pressure and volume should be reported in metric units (metre, kilogram, kiloPascal or litre) or their decimal multiples.

Temperatures should be in degrees Celsius. Blood pressures should be in millimeters of mercury.

k. Abbreviations and symbols

Use only standard abbreviations; use of nonstandard abbreviations can be confusing to readers. Avoid abbreviations in the title of the manuscript. The spelled-out abbreviation

followed by the abbreviation in parenthesis should be used on first mention unless the abbreviation is a standard unit of measurement.

l. Conflicts of interest

The credibility of published articles depends in part on how transparently an authorâ€™s relationships and activities, directly or topically related to a work, are handled during the planning, implementation, writing, peer review, editing, and publication of scientific work.

The journal follows the ICJME guidance for conflict of interests, which states: "The potential for conflict of interest and bias exists when professional judgment concerning a primary interest (such as patients' welfare or the validity of research) may be influenced by a secondary interest (such as financial gain). Perceptions of conflict of interest are as important as actual conflicts of interest."

If you have a potential or acutal conflict of interest, or are unsure, please complete the ICJME conflict of interest form and include it with your submission to the journal.

m. Ethics

At the end of the manuscript you should include a statement indicating that the research was approved or exempted from the need for review by the responsible review committee (institutional or national). If no formal ethics committee is available, a statement indicating that the research was conducted according to the principles of the Declaration of Helsinki should be included.

Confirmation of consent from patients is required for case reports and studies that involve patients (including vulnerable populations) and animals.

n. Funding

Any source of funding should be stated at the end of the manuscript, or a statement confirming that no funding was provided.

o. Author contributions

Please include a statement at the end of the manuscript outlining the contribution of each author to the study and manuscript.

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MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018

User guide

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What is the MMAT?

The MMAT is a critical appraisal tool that is designed for the appraisal stage of systematic mixed studies reviews, i.e., reviews that include qualitative, quantitative and mixed methods studies. It permits to appraise the methodological quality of five categories to studies: qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive studies, and mixed methods studies.

How was the MMAT developed?

The MMAT was developed in 2006 (Pluye et al., 2009a) and was revised in 2011 (Pace et al., 2012). The present version 2018 was developed on the basis of findings from a literature review of critical appraisal tools, interviews with MMAT users, and an e- Delphi study with international experts (Hong, 2018). The MMAT developers are continuously seeking for improvement and testing of this tool. Users' feedback is always appreciated.

What the MMAT can be used for?

The MMAT can be used to appraise the quality of empirical studies, i.e., primary research based on experiment, observation or simulation (Abbott, 1998; Porta et al., 2014). It cannot be used for non-empirical papers such as review and theoretical papers. Also, the MMAT allows the appraisal of most common types of study methodologies and designs. However, some specific designs such as economic and diagnostic accuracy studies cannot be assessed with the MMAT. Other critical appraisal tools might be relevant for these designs.

What are the requirements?

Because critical appraisal is about judgment making, it is advised to have at least two reviewers independently involved in the appraisal process. Also, using the MMAT requires experience or training in these domains. For instance, MMAT users may be helped by a colleague with specific expertise when needed.

How to use the MMAT?

This document comprises two parts: checklist (Part I) and explanation of the criteria (Part II).

1. Respond to the two screening questions. Responding 'No' or 'Can't tell' to one or both questions might indicate that the paper is not an empirical study, and thus cannot be appraised using the MMAT. MMAT users might decide not to use these questions, especially if the selection criteria of their review are limited to empirical studies.
2. For each included study, choose the appropriate category of studies to appraise. Look at the description of the methods used in the included studies. If needed, use the algorithm at the end of this document.
3. Rate the criteria of the chosen category. For example, if the paper is a qualitative study, only rate the five criteria in the qualitative category. The 'Can't tell' response category means that the paper do not report appropriate information to answer 'Yes' or 'No', or that report unclear information related to the criterion. Rating 'Can't tell' could lead to look for companion papers, or contact authors to ask more information or clarification when needed. In Part II of this document, indicators are added for some criteria. The list is not exhaustive and not all indicators are necessary. You should agree among your team which ones are important to consider for your field and apply them uniformly across all included studies from the same category.

How to score?

It is discouraged to calculate an overall score from the ratings of each criterion. Instead, it is advised to provide a more detailed presentation of the ratings of each criterion to better inform the quality of the included studies. This may lead to perform a sensitivity analysis (i.e., to consider the quality of studies by contrasting their results). Excluding studies with low methodological quality is usually discouraged.

How to cite this document?

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Part I: Mixed Methods Appraisal Tool (MMAT), version 2018

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?				
	S2. Do the collected data allow to address the research questions?				
	Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?				
	1.2. Are the qualitative data collection methods adequate to address the research question?				
	1.3. Are the findings adequately derived from the data?				
	1.4. Is the interpretation of results sufficiently substantiated by data?				
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5 Did the participants adhere to the assigned intervention?				
3. Quantitative non-randomized	3.1. Are the participants representative of the target population?				
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?				
	3.3. Are there complete outcome data?				
	3.4. Are the confounders accounted for in the design and analysis?				
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?				
	5.2. Are the different components of the study effectively integrated to answer the research question?				
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?				
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?				
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?				

Part II: Explanations

1. Qualitative studies	Methodological quality criteria
"Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2013b, p. 3). Common qualitative research approaches include (this list if not exhaustive): **Ethnography** The aim of the study is to describe and interpret the shared cultural behaviour of a group of individuals. **Phenomenology** The study focuses on the subjective experiences and interpretations of a phenomenon encountered by individuals. **Narrative research** The study analyzes life experiences of an individual or a group. **Grounded theory** Generation of theory from data in the process of conducting research (data collection occurs first). **Case study** In-depth exploration and/or explanation of issues intrinsic to a particular case. A case can be anything from a decision-making process, to a person, an organization, or a country. **Qualitative description** There is no specific methodology, but a qualitative data collection and analysis, e.g., in-depth interviews or focus groups, and hybrid thematic analysis (inductive and deductive).	1.1. Is the qualitative approach appropriate to answer the research question? Explanations The qualitative approach used in a study (see non-exhaustive list on the left side of this table) should be appropriate for the research question and problem. For example, the use of a grounded theory approach should address the development of a theory and ethnography should study human cultures and societies. This criterion was considered important to add in the MMAT since there is only one category of criteria for qualitative studies (compared to three for quantitative studies). 1.2. Are the qualitative data collection methods adequate to address the research question? Explanations This criterion is related to data collection method, including data sources (e.g., archives, documents), used to address the research question. To judge this criterion, consider whether the method of data collection (e.g., in depth interviews and/or group interviews, and/or observations) and the form of the data (e.g., tape recording, video material, diary, photo, and/or field notes) are adequate. Also, clear justifications are needed when data collection methods are modified during the study. 1.3. Are the findings adequately derived from the data? Explanations This criterion is related to the data analysis used. Several data analysis methods have been developed and their use depends on the research question and qualitative approach. For example, open, axial and selective coding is often associated with grounded theory, and within- and cross-case analysis is often seen in case study. 1.4. Is the interpretation of results sufficiently substantiated by data? Explanations The interpretation of results should be supported by the data collected. For example, the quotes provided to justify the themes should be adequate. 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? Explanations There should be clear links between data sources, collection, analysis and interpretation.

Key references: Creswell (2013a); Sandelowski (2010); Schwandt (2015)	

2. Quantitative randomized controlled trials	**Methodological quality criteria**
Randomized controlled clinical trial: A clinical study in which individual participants are allocated to intervention or control groups by randomization (intervention assigned by researchers). Key references: Higgins and Green (2008); Higgins et al. (2016); Oxford Centre for Evidence-based Medicine (2016); Porta et al. (2014)	2.1. Is randomization appropriately performed? Explanations In a randomized controlled trial, the allocation of a participant (or a data collection unit, e.g., a school) into the intervention or control group is based solely on chance. Researchers should describe how the randomization schedule was generated. A simple statement such as 'we randomly allocated' or 'using a randomized design' is insufficient to judge if randomization was appropriately performed. Also, assignment that is predictable such as using odd and even record numbers or dates is not appropriate. At minimum, a simple allocation (or unrestricted allocation) should be performed by following a predetermined plan/sequence. It is usually achieved by referring to a published list of random numbers, or to a list of random assignments generated by a computer. Also, restricted allocation can be performed such as blocked randomization (to ensure particular allocation ratios to the intervention groups), stratified randomization (randomization performed separately within strata), or minimization (to make small groups closely similar with respect to several characteristics). Another important characteristic to judge if randomization was appropriately performed is allocation concealment that protects assignment sequence until allocation. Researchers and participants should be unaware of the assignment sequence up to the point of allocation. Several strategies can be used to ensure allocation concealment such relying on a central randomization by a third party, or the use of sequentially numbered, opaque, sealed envelopes (Higgins et al., 2016).
	2.2. Are the groups comparable at baseline? Explanations Baseline imbalance between groups suggests that there are problems with the randomization. Indicators from baseline imbalance include: "(1) unusually large differences between intervention group sizes; (2) a substantial excess in statistically significant differences in baseline characteristics than would be expected by chance alone; (3) imbalance in key prognostic factors (or baseline measures of outcome variables) that are unlikely to be due to chance; (4) excessive similarity in baseline characteristics that is not compatible with chance; (5) surprising absence of one or more key characteristics that would be expected to be reported" (Higgins et al., 2016, p. 10).
	2.3. Are there complete outcome data? Explanations Almost all the participants contributed to almost all measures. There is no absolute and standard cut-off value for acceptable complete outcome data. Agree among your team what is considered complete outcome data in your field and apply this uniformly across all the included studies. For instance, in the literature, acceptable complete data value ranged from 80% (Thomas et al., 2004; Zaza et al., 2000) to 95% (Higgins et al., 2016). Similarly, different acceptable withdrawal/dropouts rates have been suggested: 5% (de Vet et al., 1997; MacLehose et al., 2000), 20% (Sindhu et al., 1997; Van Tulder et al., 2003) and 30% for a follow-up of more than one year (Viswanathan and Berkman, 2012).

	2.4. Are outcome assessors blinded to the intervention provided? Explanations Outcome assessors should be unaware of who is receiving which interventions. The assessors can be the participants if using participant reported outcome (e.g., pain), the intervention provider (e.g., clinical exam), or other persons not involved in the intervention (Higgins et al., 2016).
	2.5 Did the participants adhere to the assigned intervention? Explanations To judge this criterion, consider the proportion of participants who continued with their assigned intervention throughout follow-up. "Lack of adherence includes imperfect compliance, cessation of intervention, crossovers to the comparator intervention and switches to another active intervention." (Higgins et al., 2016, p. 25).

3. Quantitative non-randomized studies	**Methodological quality criteria**
Non-randomized studies are defined as any quantitative studies estimating the effectiveness of an intervention or studying other exposures that do not use randomization to allocate units to comparison groups (Higgins and Green, 2008). Common designs include (this list if not exhaustive): **Non-randomized controlled trials** The intervention is assigned by researchers, but there is no randomization, e.g., a pseudo-randomization. A non- random method of allocation is not reliable in producing alone similar groups. **Cohort study** Subsets of a defined population are assessed as exposed, not exposed, or exposed at different degrees to factors of interest. Participants are followed over time to determine if an outcome occurs (prospective longitudinal). **Case-control study**	3.1. Are the participants representative of the target population? Explanations Indicators of representativeness include: clear description of the target population and of the sample (inclusion and exclusion criteria), reasons why certain eligible individuals chose not to participate, and any attempts to achieve a sample of participants that represents the target population.
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? Explanations Indicators of appropriate measurements include: the variables are clearly defined and accurately measured; the measurements are justified and appropriate for answering the research question; the measurements reflect what they are supposed to measure; validated and reliability tested measures of the intervention/exposure and outcome of interest are used, or variables are measured using 'gold standard'.
	3.3. Are there complete outcome data? Explanations Almost all the participants contributed to almost all measures. There is no absolute and standard cut-off value for acceptable complete outcome data. Agree among your team what is considered complete outcome data in your field (and based on the targeted journal) and apply this uniformly across all the included studies. For example, in the literature, acceptable complete data value ranged from 80% (Thomas et al., 2004; Zaza et al., 2000) to 95% (Higgins et al., 2016). Similarly, different acceptable withdrawal/dropouts rates have been suggested: 5% (de Vet et al., 1997; MacLehose et al., 2000), 20% (Sindhu et al., 1997; Van Tulder et al., 2003) and 30% for follow-up of more than one year (Viswanathan and Berkman, 2012).

Cases, e.g., patients, associated with a certain outcome are selected, alongside a corresponding group of controls. Data is collected on whether cases and controls were exposed to the factor under study (retrospective). **Cross-sectional analytic study** At one particular time, the relationship between health-related characteristics (outcome) and other factors (intervention/exposure) is examined. E.g., the frequency of outcomes is compared in different population subgroups according to the presence/absence (or level) of the intervention/exposure. Key references for non-randomized studies: Higgins and Green (2008); Porta et al. (2014); Sterne et al. (2016); Wells et al. (2000)	3.4. Are the confounders accounted for in the design and analysis? Explanations Confounders are factors that predict both the outcome of interest and the intervention received/exposure at baseline. They can distort the interpretation of findings and need to be considered in the design and analysis of a non-randomized study. Confounding bias is low if there is no confounding expected, or appropriate methods to control for confounders are used (such as stratification, regression, matching, standardization, and inverse probability weighting). 3.5 During the study period, is the intervention administered (or exposure occurred) as intended? Explanations For intervention studies, consider whether the participants were treated in a way that is consistent with the planned intervention. Since the intervention is assigned by researchers, consider whether there was a presence of contamination (e.g., the control group may be indirectly exposed to the intervention) or whether unplanned co-interventions were present in one group (Sterne et al., 2016). For observational studies, consider whether changes occurred in the exposure status among the participants. If yes, check if these changes are likely to influence the outcome of interest, were adjusted for, or whether unplanned co-exposures were present in one group (Morgan et al., 2017).

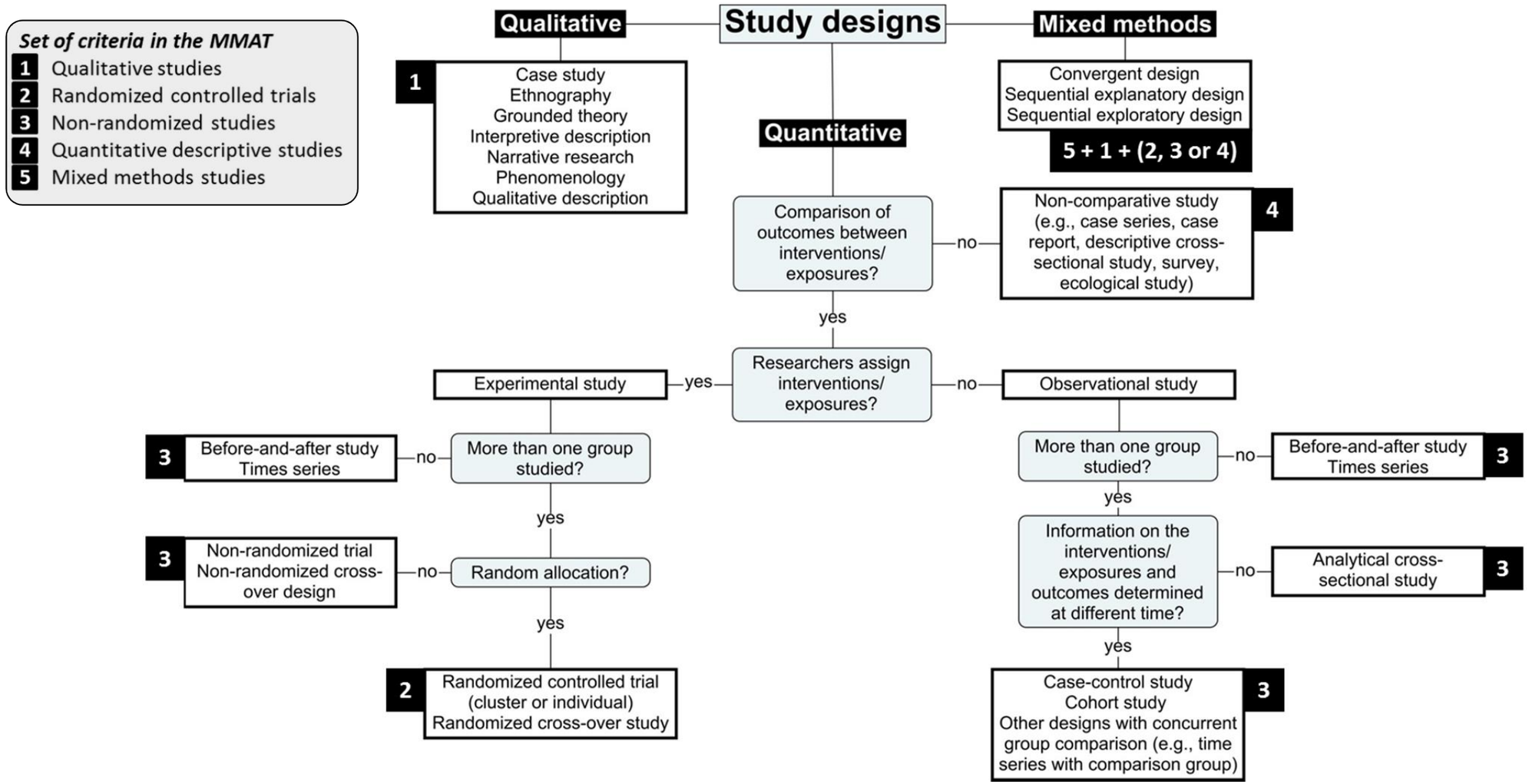
4. Quantitative descriptive studies	**Methodological quality criteria**
Quantitative descriptive studies are “concerned with and designed only to describe the existing distribution of variables without much regard to causal relationships or other hypotheses” (Porta et al., 2014, p. 72). They are used to monitoring the population, planning, and generating hypothesis (Grimes and Schulz, 2002). Common designs include the following single-group studies (this list if not exhaustive): **Incidence or prevalence study without comparison group**	4.1. Is the sampling strategy relevant to address the research question? Explanations Sampling strategy refers to the way the sample was selected. There are two main categories of sampling strategies: probability sampling (involve random selection) and non-probability sampling. Depending on the research question, probability sampling might be preferable. Non- probability sampling does not provide equal chance of being selected. To judge this criterion, consider whether the source of sample is relevant to the target population; a clear justification of the sample frame used is provided; or the sampling procedure is adequate. 4.2. Is the sample representative of the target population? Explanations There should be a match between respondents and the target population. Indicators of representativeness include: clear description of the target population and of the sample (such as respective sizes and inclusion and exclusion criteria), reasons why certain eligible individuals chose not to participate, and any attempts to achieve a sample of participants that represents the target population.

In a defined population at one particular time, what is happening in a population, e.g., frequencies of factors (importance of problems), is described (portrayed). **Survey** "Research method by which information is gathered by asking people questions on a specific topic and the data collection procedure is standardized and well defined." (Bennett et al., 2011, p. 3). **Case series** A collection of individuals with similar characteristics are used to describe an outcome. **Case report** An individual or a group with a unique/unusual outcome is described in detail. Key references: Critical Appraisal Skills Programme (2017); Draugalis et al. (2008)	4.3. Are the measurements appropriate? Explanations Indicators of appropriate measurements include: the variables are clearly defined and accurately measured, the measurements are justified and appropriate for answering the research question; the measurements reflect what they are supposed to measure; validated and reliability tested measures of the outcome of interest are used, variables are measured using 'gold standard', or questionnaires are pre-tested prior to data collection.
	4.4. Is the risk of nonresponse bias low? Explanations Nonresponse bias consists of "an error of nonobservation reflecting an unsuccessful attempt to obtain the desired information from an eligible unit." (Federal Committee on Statistical Methodology, 2001, p. 6). To judge this criterion, consider whether the respondents and non- respondents are different on the variable of interest. This information might not always be reported in a paper. Some indicators of low nonresponse bias can be considered such as a low nonresponse rate, reasons for nonresponse (e.g., noncontacts vs. refusals), and statistical compensation for nonresponse (e.g., imputation). The nonresponse bias is might not be pertinent for case series and case report. This criterion could be adapted. For instance, complete data on the cases might be important to consider in these designs.
	4.5. Is the statistical analysis appropriate to answer the research question? Explanations The statistical analyses used should be clearly stated and justified in order to judge if they are appropriate for the design and research question, and if any problems with data analysis limited the interpretation of the results.

5. Mixed methods studies	**Methodological quality criteria**
Mixed methods (MM) research involves combining qualitative (QUAL) and quantitative (QUAN) methods. In this tool, to be considered MM, studies have to meet the following criteria (Creswell and Plano Clark, 2017): (a) at least one QUAL method and one QUAN method are combined; (b) each method is used	5.1. Is there an adequate rationale for using a mixed methods design to address the research question? Explanations The reasons for conducting a mixed methods study should be clearly explained. Several reasons can be invoked such as to enhance or build upon qualitative findings with quantitative results and vice versa; to provide a comprehensive and complete understanding of a phenomenon or to develop and test instruments (Bryman, 2006).

rigorously in accordance to the generally accepted criteria in the area (or tradition) of research invoked; and (c) the combination of the methods is carried out at the minimum through a MM design (defined *a priori*, or emerging) and the integration of the QUAL and QUAN phases, results, and data. Common designs include (this list if not exhaustive): **Convergent design** The QUAL and QUAN components are usually (but not necessarily) concomitant. The purpose is to examine the same phenomenon by interpreting QUAL and QUAN results (bringing data analysis together at the interpretation stage), or by integrating QUAL and QUAN datasets (e.g., data on same cases), or by transforming data (e.g., quantization of qualitative data). **Sequential explanatory design** Results of the phase 1 - QUAN component inform the phase 2 - QUAL component. The purpose is to explain QUAN results using QUAL findings. E.g., the QUAN results guide the selection of QUAL data sources and data collection, and the QUAL findings contribute to the interpretation of QUAN results. **Sequential exploratory design** Results of the phase 1 - QUAL component inform the phase 2 - QUAN component. The purpose is to explore, develop and test an instrument (or taxonomy), or a conceptual framework (or theoretical model). E.g., the QUAL findings inform the QUAN data collection, and the QUAN results allow a statistical generalization of the QUAL findings. Key references: Creswell et al. (2011); Creswell and Plano Clark, (2017); O'Cathain (2010)	5.2. Are the different components of the study effectively integrated to answer the research question? Explanations Integration is a core component of mixed methods research and is defined as the "explicit interrelating of the quantitative and qualitative component in a mixed methods study" (Plano Clark and Ivankova, 2015, p. 40). Look for information on how qualitative and quantitative phases, results, and data were integrated (Pluye et al., 2018). For instance, how data gathered by both research methods was brought together to form a complete picture (e.g., joint displays) and when integration occurred (e.g., during the data collection-analysis or/and during the interpretation of qualitative and quantitative results). 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? Explanations This criterion is related to meta-inference, which is defined as the overall interpretations derived from integrating qualitative and quantitative findings (Teddlie and Tashakkori, 2009). Meta-inference occurs during the interpretation of the findings from the integration of the qualitative and quantitative components, and shows the added value of conducting a mixed methods study rather than having two separate studies. 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? Explanations When integrating the findings from the qualitative and quantitative components, divergences and inconsistencies (also called conflicts, contradictions, discordances, discrepancies, and dissonances) can be found. It is not sufficient to only report the divergences; they need to be explained. Different strategies to address the divergences have been suggested such as reconciliation, initiation, bracketing and exclusion (Pluye et al., 2009b). Rate this criterion 'Yes' if there is no divergence. 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? Explanations The quality of the qualitative and quantitative components should be individually appraised to ensure that no important threats to trustworthiness are present. To appraise 5.5, use criteria for the qualitative component (1.1 to 1.5), and the appropriate criteria for the quantitative component (2.1 to 2.5, or 3.1 to 3.5, or 4.1 to 4.5). The quality of both components should be high for the mixed methods study to be considered of good quality. The premise is that the overall quality of a mixed methods study cannot exceed the quality of its weakest component. For example, if the quantitative component is rated high quality and the qualitative component is rated low quality, the overall rating for this criterion will be of low quality.

Algorithm for selecting the study categories to rate in the MMAT*



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*Adapted from National Institute for Health Care Excellence. (2012). *Methods for the development of nice public health guidance*. London: National Institute for Health and Care Excellence; and Scottish Intercollegiate Guidelines Network. (2017). *Algorithm for classifying study design for questions of effectiveness*. Retrieved December 1, 2017, from http://www.sign.ac.uk/assets/study_design.pdf.

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Appendix C. Quality Appraisal Scores (MMAT) of included journals in the Systematic Literature Review (Part One)

	Quantitative -descriptive					Qualitative					Overall quality rating
Author	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	
Austin et al. (2018)	No	Yes	Yes	No	Yes						3
Avşarolu (2019)	Yes	No	Yes	Yes	Yes						4
Jurisova (2016)	Yes	Yes	Yes	Yes	Yes						5
Kang et al. (2017)	Yes	Yes	Yes	Yes	Yes						5
Kirby et al. (2011)	Yes	Yes	Yes	Yes	Yes						5
Oginska-Bulik and Kobylarczyk (2015)	No	No	Yes	Yes	Yes						3
Ragger et al. (2019)	Yes	Yes	Yes	Yes	Yes						5
Shakespeare-Finch et al. (2003)	Yes	Yes	Yes	Yes	Yes						5
Shakespeare-Finch et al. (2005)	Yes	Yes	Yes	Yes	Yes						5
Surgenor et al. (2020)	No	Yes	Yes	No	Yes						3
Wines (2019)						Yes	Yes	Yes	Yes	Yes	5

Appendix D. Submission Guidelines to the Journal of Positive Psychology and Wellbeing

Journal of Positive Psychology and Wellbeing

Instruction to Authors

Thank you for choosing to submit your paper to us. Please take the time to read and follow them as closely as possible, as doing so will ensure your paper matches the journal's requirements. Manuscripts are accepted in English, and author(s) should prepare the manuscript according to the American Psychological Association Publication Manual (7th ed.). The APA website includes a **range of resources for authors learning to write in APA style,** including an overview of the **Publication Manual of the American Psychological Association, Seventh Edition; free tutorials on APA Style basics,** and an **APA Style Blog**. Please check the **Guide for Authors** for more details.

Before Submission

Length of Manuscript
The average length of an article is approximately 7,500 words. Articles should be no shorter than 5,000 words and no longer than 10,000 words.
Originality and Plagiarism
The authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others that this has been appropriately cited or quoted. Submitted manuscripts should not have been previously published nor be currently under consideration for publication elsewhere.

By its publishing policies, the JPPW oblige each study that has undergone the "Blind Review Process" to be detected for plagiarism to protect the integrity of the study. Therefore, the manuscript was detected for plagiarism by a company chosen by the author(s).

Based on the review done by the reviewers, the editor reports the reviewers' comments to the author(s). In this process, the research that is not accepted for publication is returned without the request for plagiarism detection. The final decision about the accepted research is made based on the results of the plagiarism detection report.

Disclosure and Conflicts of Interest
All submissions must include disclosure of all relationships that could be viewed as presenting a potential conflict of interest.

Hazards and Human or Animal Subjects
Statements of compliance are required if the work involves chemicals, procedures, or

equipment that have any unusual hazards inherent in their use, or if it involves the use of animal or human subjects.

Role of the Funding Source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

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Authors accept all scientific and legal responsibilities of the manuscript, and they should acknowledge that they have to transfer the copyright of their studies to theJournal of Positive Psychology & Wellbeing.
All the articles published in Journal Positive Psychology & Wellbeing are licensed with "Creative Commons Attribution 4.0 International License". This license entitles all parties to copy, share and redistribute all the articles, data sets, figures, and supplementary files published in this journal in data mining, search engines, web sites, blogs, and other digital platforms under the condition of providing references. Open access is an approach that eases the interdisciplinary communication and encourages cooperation among different disciplines.

Preparing Your Manuscript

Submitted manuscripts should not have been previously published nor be currently under consideration for publication elsewhere. Manuscripts are accepted in English, and author(s) should prepare the manuscript according to the American Psychological Association Publication Manual (6th ed.), as instructed below. Authors for whom English is a second language may choose to have their article professionally edited before submission.
The manuscripts should be compiled in the following order: Title page; abstract; keywords; main text (Introduction, Method, Results, Discussion); references; table(s); figure(s); Appendices (if any)

Title Page
The title page should include; The name(s) of the author(s), the affiliation(s) and address (s) of the author(s), the e-mail address, and telephone number(s) of the corresponding author. Please note that no changes to affiliation can be made after the manuscript is accepted. Any acknowledgments, disclosures, or funding information should also be included on this page.

Abstract
Abstracts of 200-250 words are required for all manuscripts submitted, and should not contain any undefined abbreviations or unspecified references. It should include the aim of the study, its scope, method, results, important features, and original value briefly and clearly. Please avoid using references.

Keywords
Each manuscript should have 4 to 6 keywords that can be used for indexing purposes.

Text Formatting
• Manuscripts should be submitted in Microsoft Word.
• Use a double-spaced and 12-point font (e.g. Times New Roman) for text.
• Use italics for emphasis.
• Use the automatic page numbering function to number the pages.
• Use additional headings (If any) for appendices, acknowledgments, conflicting interests, or notes.

Tables and Figures
Tables and Figures should be prepared according to the American Psychological Association Publication Manual (7th ed.)

Citation and References List
Cite references in the text by name and year in parentheses. For examples:

Journal Article References

Grady, J. S., Her, M., Moreno, G., Perez, C., & Yelinek, J. (2019). Emotions in storybooks: A comparison of storybooks that represent ethnic and racial groups in the United States. *Psychology of Popular Media Culture, 8*(3), 207–217. https://doi.org/10.1037/ppm0000185

- ***Parenthetical citation***: (Grady et al., 2019)
- ***Narrative citation***: Grady et al. (2019)

Book References

Jackson, L. M. (2019). *The psychology of prejudice: From attitudes to social action* (2nd ed.). American Psychological Association. https://doi.org/10.1037/0000168-000

Sapolsky, R. M. (2017). *Behave: The biology of humans at our best and worst*. Penguin Books.

- ***Parenthetical citations***: (Jackson, 2019; Sapolsky, 2017)
- ***Narrative citations***: Jackson (2019) and Sapolsky (2017)

Kesharwani, P. (Ed.). (2020). *Nanotechnology based approaches for tuberculosis treatment*. Academic Press.

Torino, G. C., Rivera, D. P., Capodilupo, C. M., Nadal, K. L., & Sue, D. W. (Eds.). (2019). *Microaggression theory: Influence and implications*. John Wiley & Sons. https://doi.org/10.1002/9781119466642

- ***Parenthetical citations***: (Kesharwani, 2020; Torino et al., 2019)
- ***Narrative citations***: Kesharwani (2020) and Torino et al. (2019)

Edited Book Chapter References

Dillard, J. P. (2020). Currents in the study of persuasion. In M. B. Oliver, A. A. Raney, & J. Bryant (Eds.), *Media effects: Advances in theory and research* (4th ed., pp. 115–129). Routledge.

- ***Parenthetical citations***: (Dillard, 2020)
- ***Narrative citations***: Dillard (2020)

After Acceptance

At theJournal of Positive Psychology & Wellbeing, the accepted articles undergo the processes of plagiarism detection, preparation of bibliography, reference check, and being put into online first articles.

Publication and Submission Fees

There are no submission fees, publication fees, or page charges for this journal. At the JPPW, the accepted manuscripts undergo the processes of plagiarism detection, preparation of bibliography, cross-reference and reference check, layout and galley, assigning a DOI number, and being put into a first view article. The manuscripts in the first few articles are published in the volume and issue determined by the editorial board.

Plagiarism Detection
By its publishing policies, the JPPW oblige each study that has undergone the "Blind Review Process" to be detected for plagiarism to protect the integrity of the study. Therefore, the papers are detected for plagiarism by a company chosen by the editorial board. Incurring fees are paid by the author(s).

The plagiarism detection is done by Turnitin and iThenticate software. The matches found in each study after plagiarism detection are analyzed in detail and those matches with correct reference and cross-reference are sorted. In the next step, the mistakes in the remaining matches are determined and reported to the editorial board. The board, then, makes a final decision in the light of the plagiarism detection report. The author(s) may be asked to correct the mistakes listed in the report or the study may be returned to the author(s).

References and Citation Control
Scientific research builds upon previous studies. In new studies, references and attributions to the previous studies are provided within the framework of certain rules. Intentional or unintentional mistakes in scientific studies harm the reliability of the study and publication.

Journal of Positive Psychology & Wellbeing, in accordance with its publication ethics, considers it to be an obligation for the accepted studies to have correct and complete references and attributions. Therefore, each study, after acceptance, is checked in terms of bibliography, referencing, and attribution by a company chosen by the editorial board. Incurring costs lie with the author(s).

Layout and Galley
The journal requires that the articles be printed in a common type of and complete page layout for formal integrity, readability, and standards. Therefore, the studies whose plagiarism detection and bibliography preparation are finished, are sent to a company chosen

by the editorial board for layout and galley. Incurring costs for page layout and preparation of the copy for print lie with the author(s).

Assigning a DOI Number

Digital Object Identifier (DOI) is a unique access number that enables the identification and accessibility of each article published electronically. Each article published in Education and Science or early release must be assigned a DOI number. After acceptance, the manuscripts which are checked for plagiarism and bibliography and ready for publication are given a DOI number by the Editorial Board.

FirstView Articles

FirstView articles are a feature offered through the electronic content platform, Journal of Positive School Psychology. It allows final revision articles (completed articles in queue for assignment to an upcoming issue) to be hosted online before their inclusion in a final print and online journal issue. FirstView articles are copyedited, typeset, and approved by their authors before publication, and we aim to post each article within four weeks of acceptance. When articles are published in an issue, they are removed from the OnlineFirst page and will appear in the appropriate issue.

Normally, the article will not change from this version. However, if errors are identified in this version then they may be corrected when the article is published in an issue, or exceptional circumstances by uploading a new version of the article. Issue publication is our Version of Record, after which articles will only be corrected by use of an erratum.

Journal of Positive Psychology and Wellbeing (ISSN 2587-0130) is a peer-reviewed journal covering positive psychology and provides an international forum for the science of positive psychology in education and school settings. The JPPW, which is published two times a year, is an open-access that publishes research outcomes with significant contributions to the understanding and improvement of the positive psychology of education and services in school settings. The journal encompasses a full range of methodologies and orientations that include educational, cognitive, social, behavioral, preventive, cross-cultural, and developmental perspectives. The JPPW publishes research regarding the education of populations across the life span.

Appendix E. Confirmation of Ethical Approval

Pages from Appendix E removed for digital archiving

Appendix F: Participant Information Sheet

INFORMATION SHEET FOR PARTICIPANTS

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

Title of study

The Experiences of Thriving at Work in Paramedics

I would like to invite you to participate in a research project which forms part of my research thesis for the Doctorate in Clinical Psychology at the University of Hull. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

Thriving is a relatively new concept with limited research in the healthcare sector. The researcher is currently unaware of any research on thriving in ambulance services. There has also been a recent shift in focus from researching what influences absence from work or staff turnover, to what keeps people at work and/or thriving in the workplace. This research study aims to understand the meaning of thriving at work for paramedics, how they make sense of it, and what influences thriving. The findings from this study may further promote workplace practices and policies that enable thriving and staff retention within ambulance services.

What is meant by the term thriving?

Thriving has multiple definitions in research literature and this research study is particularly interested in the following two definitions of thriving. Firstly, thriving has been described as a person's ability to go beyond their baseline of psychosocial functioning and to grow in response to a (repeated) risk or threat (O'Leary, 1998). Secondly, another definition has suggested that thriving can occur in a non-adverse context and is measured by learning (continually acquiring and applying knowledge and skills) and vitality (feeling energised and alive) (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). However, the researcher is also interested in your meaning of thriving at work.

Why have I been invited to take part?

You are being invited to participate in this study because you are an operational paramedic (band 6+) at the Yorkshire Ambulance Service.

What will happen if I take part?

- If you would still like to take part in the study following an expression of interest, please read through this information sheet then sign the attached consent form and return to the researcher's email (m.e.abdo-2016@hull.ac.uk). If you have any questions or concerns before signing the consent form, please email the researcher.
- I will aim to contact you within 48-hours to confirm receipt of the consent form. I will then send you a participant number and a questionnaire by email to gather some personal information (age, gender, marital status, type of employment contract, years as an operational paramedic, band, and hours worked per week (including overtime)). This information will be used to supplement what is discussed during the interview.
  Please ensure you enter your participant number correctly in the questionnaire.

- After completion of the questionnaire, I will contact you by telephone if you have provided a number, or by email address if there is no answer. Please provide a telephone number so I can contact you in the future during the interview if the internet or video call has poor connectivity. This contact will be to arrange a mutually convenient time, date, and location for the interview to take place.

- The interview will last approximately 60-90 minutes and you will be asked some questions about your experiences of thriving at work as a paramedic. You will only be asked to take part in one interview. Due to coronavirus restrictions, the interview is likely to take place by video call using Microsoft Teams, Skype, or Zoom. If you prefer to use Zoom or Skype, a personal laptop will be used, and the recording will be immediately transferred to the encrypted NHS laptop and then deleted. However, if you prefer to use Microsoft Teams, the NHS laptop will be used to record the interview. Alternatively, a face-to-face interview may be arranged if you have a preference for this and if it safe to do so, which will be recorded using the voice recorder app on the encrypted NHS laptop. This would take place on the University of Hull campus or at your work base. The interview will also be recorded on a Dictaphone in case of technological difficulties or poor internet connectivity. This recording will be transferred to the encrypted NHS laptop and then deleted from the device. Participation can only take place before or after a shift or on a personal day as stipulated by the Yorkshire Ambulance Service.

- Within the interview, **please remember to not disclose any names or identifiable information of anyone you work with.** There are no right or wrong answers and I am only interested in your experiences (personal, observed or imagined). If you accidentally mention identifiable information this will be anonymised in the transcript. I will video and/or audio record the discussion with your consent. If you would prefer to only be audio recorded, I will use a Dictaphone supplied by the university, but it is important you try to keep your video on throughout as part of the data analysis includes non-verbal communication.

Do I have to take part?

Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in any way. Once you have read the information sheet, please contact us if you have any questions that will help you make a decision about taking part. If you decide to take part, we will ask you to sign a consent form and you will be given a copy of this consent form to keep.

What are the possible risks of taking part?

Participating in the study will require up to 60-90 minutes of your time and this may be inconvenient for you. I will ask you to talk about your experiences of thriving and/or non-thriving at work and this may cause emotional distress. If this happens to you, the researcher will recommend you contact your local occupational health team or your GP for support. Further contact details for organisations that may be able to help will also be provided.

What are the possible benefits of taking part?

We cannot guarantee that you will experience any benefits from taking part in the study. However, thriving has often been reported as enjoyable or useful in other fields and it is hoped that having the time and space to reflect on experiences of thriving would be beneficial to you and your colleagues. The findings from this study could help us understand what influences thriving in the workplace for paramedics, which could improve staff retention and further promote workplace practices and policies that enable thriving within ambulance services. This research may have further implications for clinical psychologists who may be able to offer mental health support to paramedics, if necessary.

Data handling, protection and confidentiality

Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR).

The data controller for this project will be the University of Hull. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under GDPR is a 'task in the public interest' You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you. Information about how the University of Hull processes your data can be found at https://www.hull.ac.uk/choose-hull/university-and-region/key-documents/data-protection.aspx

You have the right to access information held about you. Your right of access can be exercised in accordance with the General Data Protection Regulation. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments, and requests about your personal data can also be sent to the University of Hull Data Protection Officer (dataprotection@hull.ac.uk). If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

We will need to use information from you for this research project. This information will include your name, contact details and personal information collected in the questionnaire. People will use this information to do the research or to check your records to make sure that the research is being done properly. People who do not need to know who you are will not be able to see your name, contact details or personal information. Your data will have a participant number instead. Your name and contact details will be stored in a password-protected spreadsheet alongside your participant number to keep your information anonymised and confidential. We will keep all information about you safe and secure on an encrypted NHS laptop. Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study. Direct quotes from the discussion may be used in research publications and presentations but you will not be identified in these. The research data may be used to support future research and will be shared anonymously with other researchers with your consent.

To protect the security of the video and/or audio recordings, a password-protected and encrypted NHS laptop will be used and stored in a locked bag. A Dictaphone supplied by the university will also be stored in a locked bag if only audio is recorded. Recordings will be transferred from the Dictaphone to the laptop using an encrypted memory stick immediately after the interview has ended. The recordings will be permanently deleted from all devices after transcription. After the research is complete, personal information will be destroyed. Anonymised transcripts of the recordings will be stored securely in an on-line storage repository (hard drive or OneDrive) at the University of Hull for a period of ten years. Myself and my supervisors (Dr Jo Beckett and Dr Tim Alexander) will only have access to this data. The only time that information cannot be kept confidential is if you disclose something that suggests that you or someone else is at risk of serious harm or if there is potential malpractice. If this happens during the interview the researcher will need to break confidentiality and contact the appropriate authorities to ensure that you and other people are safe.

What if I change my mind about taking part?

You are free to withdraw at any point of the study, without having to give a reason. Withdrawing from the study will not affect you in any way. You are able to withdraw your data from the study up until data analysis has commenced (two weeks after your interview), after which withdrawal of your data will no longer be possible as the data will have been anonymised and committed to the final report. If you choose to withdraw from the study before this point the data collected will be destroyed.

What will happen to the results of the study?

The results of the study will be summarised in a written thesis as part of a Doctorate in Clinical Psychology. The thesis will be available on the University of Hull's on-line repository https://hydra.hull.ac.uk. The research may also be published in academic journals or presented at conferences.

Who should I contact for further information?

If you have any questions or require more information about this study, please contact me using the contact details on the following page:

Molly Abdo
Clinical Psychology
Aire Building
The University of Hull
Cottingham Road
Hull
HU6 7RX
E-mail: m.e.abdo-2016@hull.ac.uk

What if I have further questions, or if something goes wrong?

If you wish to make a complaint about the conduct of the study, you can contact the University of Hull using the research supervisors details below for further advice and information:

Dr Jo Beckett
Clinical Psychology
Aire Building
The University of Hull
Cottingham Road
Hull
HU6 7RX
+44 (0)1482 463568
Jo.Beckett@hull.ac.uk

Dr Tim Alexander
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T.Alexander@hull.ac.uk

Thank you for reading this information sheet and for considering taking part in this research.

Appendix G. Consent Form

CONSENT FORM

Title of study: **The Experiences of Thriving at Work in Paramedics**

Name of Researcher: Molly Abdo

Please initial box

1. I confirm that I have read the information sheet dated 04/05/2021 (version 1.0) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected. I understand that the data I have provided up to the point of withdrawal will be retained. ☐

3. I understand that the research interview will be audio recorded and that my anonymised verbatim quotes may be used in research reports and conference presentations. ☐

4. I understand that the information collected about me may be used to support other research in the future and may be shared anonymously with other researchers. ☐

5. I give permission for the collection and use of my data to answer the research question in this study. ☐

6. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent	Date	Signature

Appendix H: Demographic Survey

The Experiences of Thriving at Work for Paramedics

Demographics Survey

Required*

1. What is your participant number? *

The value must be a number

2. What is your gender? *

O Female

O Male

O Transgender

O Non-binary

O Other

O Prefer not to say

3. What is your age? *

O 21-30

O 31-40

O 41-50

O 51-60

O 61+

4. What is your marital status? *

O Single

O Married

O Civil Partnership

O Divorced

O Separated

O Widowed

5. What is your employment contract? *

O Full-time; permanent

O Full-time; fixed term

O Full-time; temporary

O Flexitime

O Full-time; night-shift

O Part-time; night shift

O Part-time; permanent

O Part-time; fixed term

O Part-time; temporary

6. What city is your workplace based in? *

7. How many years have you been in service as an operational paramedic? *

The value must be a number

8. What is your band? *

O Band 6

O Band 7

O Band 8

9. What are your average contracted hours per week? *

The value must be a number

10. What are your average overtime hours per week? *

The value must be a number

Appendix I. Semi-structured Interview Checklist and Schedule

Beginning

- Introduce my name and my role as a researcher based at the University of Hull and thank for taking part in the study
- Check audio and visuals are working on the laptop
- Check that the participant has read and understood the information sheet
- Remind that the interview will last between 60-90 minutes
- Recap the purpose of the study and acknowledge that this is not a COVID-19 study, but that this may be important to discuss at the end of the interview
- Reiterate that this research is interested in thriving at work and not thriving at home
- Remind the participant that they can withdraw from the study at any point
- Check that the participant would still like to proceed with the interview.
- Remind the participant that if they disclose risk to self or others, or potential malpractice, the interviewer will have to break confidentiality and contact the appropriate authorities to ensure that the participant and/or other people are safe
- Gain informed consent to take part in the interview:
    - Check whether the participant has signed each item and emailed the form to myself
    - If not, start the audio recording and obtain verbal consent for each item and then stop the audio recording
    - Check whether the participant would like their video to be recorded in addition to audio, if not, set up Dictaphone and explain that video will not be recorded although must be kept on for non-verbal body language to be noted throughout the interview
- Check whether the participant has any questions or concerns at this stage.

Pre-interview Checks

- Ask the participant if they are alone and in a quiet and safe place where they will not be interrupted during the interview
    - Ask the participant to put their phone on silent or airplane mode to reduce distraction or interruption
- Discuss the contingency plan for weak internet connection or failure – Ask the interviewer or interviewee to repeat what was said, close and re-try link and then move to telephone. If after 15-minutes contact was unable to be made rearrange the interview
- Check that the participant has 60-90 minutes available to complete the interview
- Ask the participant if they would like to take a short break (5-minutes) halfway through the interview and schedule this into the interview script – remind of break when the participant has finished answering a question or ask if they would like to carry on with the rest of the interview. Inform the participant that they can take pauses at any time during the interview

- Inform the participant that the purpose of the interview is to have a conversation about thriving at work. Explain that the emphasis of the interview will be on the participant to talk about their experiences of thriving in the workplace and that the interviewer is to facilitate the questions and prompt the participant when necessary
- Remind the participant that anything said is confidential and that names will be anonymised in the transcript
- Start audio/video recording.

Introduction to the topic

- There is limited research on thriving in the healthcare sector and no known research on the experiences of thriving at work for paramedics. Research has suggested that thriving is associated with high job satisfaction and staff retention, however we are not sure what influences thriving in the workplace, how this is experienced, or what thriving means to paramedics. This is something that I would like to ask you about today. Is this ok?
- Ask the participant if they have any questions before the interview begins
- Ask for permission to take brief notes during the interview.

Questions on Thriving

Research aim 1: How do paramedics make sense of thriving at work?

- *What does thriving at work mean to you?*

Prompts:

If one word response ask: “Could you tell me a little bit more?”

“What do you think has shaped your meaning of thriving”?

“How does this shape your experience of working?”

- What are your experiences of thriving in the workplace? This can be personal, observed or imagined.

Prompts:

“What was it like? When? With whom?

“Why do you think it happened that way?”

“Did you learn anything from that experience?”

“What does thriving (personal, observed or imagined) feel like?” “This can be physical sensations and/or emotions.”

Research aim 2: What influences the experiences of thriving in the workplace for paramedics?

- What do you think influences thriving in the workplace?

Prompts:

“What do you think could prevent or promote thriving in the workplace?”

“Can you give me a specific or recent example to help me understand more about what you mean by your answer?”

“What? When? With whom?”

“Did you learn anything from this experience?”

“How do you think your colleagues may answer this question?”

COVID-19 Reflection

- What has your experience been of thriving during the COVID-19 pandemic?
- Has your experience of thriving changed during the COVID-19 pandemic?

Ending

- Tell the participant that the interview has come to an end and ask if there is anything else they would like to discuss
- Ask the participant if they have any questions
- Ask the participant how they found the interview process – if they say or appear to be distressed ask if they have somebody to talk to
- Inform the participant that you will email them a sources of support sheet with contact details, which will signpost to occupational health, their GP and further mental health organisations, if necessary
- Ask the participant if they consent to (anonymised) direct quotes being used in the report
- Reiterate that the participant has 2-weeks to withdraw their data from the research study, but once the interview has been transcribed this will not be possible as the findings have been analysed and committed to a final report

- Inform the participant that you will be in touch to notify them that the report has been written up and research findings will be discussed in a team meeting and later made available on the University of Hull's on-line repository https://hydra.hull.ac.uk
- Provide them with the sources of support sheet.

Appendix J. Recruitment Poster

UNIVERSITY OF HULL

NHS Yorkshire Ambulance Service NHS Trust

V2 18.06.2021 IRAS ID [redacted]

Are you thriving at work?

I would like to talk to paramedics (band 6+) who are operational and have at least two years post-qualified experience. I am conducting this research as part of my Clinical Psychology Doctorate. I am interested to find out how paramedics may (or may not) experience thriving at work, and what they feel influences this.

I hope this research will produce findings that increase our understanding of thriving in the workplace, and that this could help services develop to reduce stress-related sickness absence and further promote workplace practices and policies that enable thriving within ambulance services.

If you would like to participate or have any questions, please contact Molly Abdo m.e.abdo-2016@hull.ac.uk with your name and preferred contact details.

Appendix K. Sources of Support Sheet

Your local trusts **Occupational Health** service offers advice, information, and support for managing short-term and long-term mental and physical health conditions at work.

Mind offers advice, information, and support for mental health needs across the UK.

https://www.mind.org.uk/

info@mind.org.uk

Confidential helpline - Infoline: 0300 123 3393

(line open from 9AM – 6PM; Monday – Friday except for bank holidays)

The Blue Light Programme by Mind offers specific advice, information, and mental health support for emergency workers.

https://www.mind.org.uk/news-campaigns/campaigns/blue-light-programme/

Confidential Blue Light Infoline: 0300 303 5999 (9AM – 6PM; Monday – Friday)

The Ambulance Staff Charity (TASC) offers advice, information, and support for mental, physical, and financial wellbeing.

https://www.theasc.org.uk/

support@theasc.org.uk

Freephone number: 02477 987 922

(line open from 8AM - 6PM; Monday - Friday)

For urgent support for yourself or someone you are worried about, **Samaritans** offers a talking service 24 hours a day, 365 days a year.

https://www.samaritans.org/

jo@samaritans.org (response time 24 hours)

Freephone number: 116 123

Self-help app: https://selfhelp.samaritans.org/

You can also seek advice from your GP.

Appendix L. Example of Annotated Transcript

Experiential Statements	Transcript	Exploratory Comments Key: Conceptual Linguistic Descriptive
	Consent gained to audio and video record*… Interviewer: So, I guess the first question is what does thriving at work mean to you?	
Thriving as an unknown or relatively new concept Progression Growth	P1: Um, good question. I think to me… to me thriving… thriving means progressing and growing. You know we all... we've all had jobs where I've certainly felt like I've simply attended and done stuff and not thrived, whereas when one is thriving… when one is thriving it feels like you go to work, and you do your job and you do it well. But not only do you do it well, but you find… yeah, this is a fun thing for you cos I did my MSc dissertation with a focus group, how do you transcribe gestures, that's a	Implied uncertainty due to filler word and phrase ('good question') - tricky or thriving has not been thought about before? Thriving as 'progressing and growing'. Thriving is taking a more active than passive role at work. Sense of doing your job well Tails off MSc dissertation indicates high education level
Doing your job well		

	challenge (holding both hands up in a pincer position). Thriving is going to work and not just doing your role and realising, you know what, I can do it a bit better, and I can grow. I can grow within my role and that growing isn't simply a growth of discontent, it's a growth of you know what I'm better at it, I'm enjoying it more, I'm more effective, I'm more efficient. Like… like a plant in a pot, just growing and growing and growing and growing. Interviewer: Yeah, that's a really nice analogy. Erm, so you've talked a lot about growing, erm in what way would you see yourself growing in the workplace? Could you give me a specific example? P1: So, what timeframe are we talking about? (pointing at self). Interviewer: So, erm for this research ideally prior to covid, but we will have	
Doing your job well Growth Enjoying your job Growth		Continually improving in your role at work and realising you are performing better and 'growing'. Instead of a 'growth' or increase in dissatisfaction or negativity, it is a positive growth with enjoyment, which aids efficiency? Plant metaphor to explain growth, repetition of growing x4 -important aspect of thriving.

	some time to talk about that towards the end as well. Erm, but because you're based at _ambulance service, within your current role, within your current workplace.	
Progression	P1: Ok, are you a paramedic? Interviewer: No, no. I'm a Trainee Clinical Psychologist. P1: (Thumbs up). Ok, good answer. Ok so, I've been…I've been with the trust [redacted] years. I was a technician for [redacted], I've been a paramedic since [redacted] and over the last [redacted] I've fallen in to…er, clinical supervisor, locality manager, and team leader roles, so I've been a kinda… I don't like the phrase middle manager, but I've been a kind of middle manager role, both clinically and operationally for about five years. And through being in the ambulance service… ambulance-ing	Seems relieved that researcher is not a paramedic ('thumbs up' and 'good'). Is a paramedic not a good job in current climate? Or understanding of different occupational background/ fondness towards the role of psychology? Perhaps researcher seen as independent? Reels off a list of different roles, possibly to demonstrate career progression. Hesitant. Dislike towards role as a 'middle manager'. Wants to progress in superiority? Experience working clinically with patients and operationally with colleagues
Working to make a living vs work as part of identify		Interesting term

	was something I came to quite late; I was thirty when I joined the service and up until then, I'd never enjoyed work, I never felt I was any good at it, it was simply something one did to get paid. Have money to spend on books and stuff erm but joining the ambulance service made me feel as if this was something I could do, and something I could be, and something I was good at. That was the important thing, that was always the important thing for me. This is something I'm good at and certainly if we look at pre-covid, so I'd become a [redacted] which is… there's the staff (puts hands in middle of screen) and [redacted] are the first rank of people above the general population (gestures above). I became a [redacted]	Joined the ambulance service when turned 30 Disliked previous work and didn't feel he was any 'good'; lack of investment ('simply' used x3 now). Minimising importance and effort in prior roles? Reading books to get better and learn or recreationally? Felt capable, ambulanc-ing formed part of identity. Repetition of important x2. Being 'good' at something is needed to thrive and enjoy work? Repetition of 'good' x2 - strengthens inference. [redacted] ranks above paramedics 'general population'?
Enjoying your job		

	[redacted]. And… and I just enjoyed that role…that role had an element of mentoring, had a growing level of management, but also had an element of command, when there's…	Enjoyed being [redacted] Variation in role - Mentoring, managing other paramedics and operational command. Telling people what to do
Doing your job well		
Growth		
Learning	when there's a significant incident. The staff… the staff (laugh), will be looking after the people, and I would be looking after the scene and running them. And it's something I've felt… I've felt as if I'm good at and something I've felt as if I've grown. And that's how it…that's how you know, there were troubles over the way… during covid I ended up the next level up and that was… that was er, very much starting a new job and learning how to do and be that, and I didn't enjoy that as much…	Juxtaposition between dealing with significant incident(s) and thinking about staff response. Use of humour ('laugh') to distract from significant incidents? Or thinking about staff using humour or being amusing to work with? Sardonic laughter due to superior role? Repetition of good x growth Troubles during time in the ambulance service – promoted to a senior role Did not enjoy new job and learning despite progression being important for thriving.
Growth		
Progression		

Appendix M. Reflective Statement

In this statement I have used a narrative approach (Winter, 2012) to reflect on both the process and content of the portfolio thesis throughout the past three years from the conceptualisation of the research question(s) to the write-up of the final draft. I have considered Gibb's reflective cycle (Gibbs, 1988) and consulted my research journal to reflect on both the positives and negatives of this experience.

Empirical Study

Conceptualisation of the Research Question

At the beginning of the doctorate, I found it difficult to choose a research topic as I was fully immersed in the varied and novel content of the teaching. I considered all areas of research with curiosity and an open mind. However, at first glance over the research fair abstracts, there appeared to be a plethora of published and current research and I found it difficult to shift my focus and attention from teaching to research, which left me feeling dispirited. I then read through the research fair abstract from Dr Jo Beckett and came across the potential for research on staff wellbeing in the fire or police service. This made me broadly consider emergency services, as I remembered that I had enjoyed volunteering for an ambulance charity as a first aider prior to the doctorate. I then recalled a conversation I had with the team leader about mental health and wellbeing following a stressful day of patient care (due to my newness to the role). At the time, I did not sense that the organisation encouraged staff to talk openly about mental health as this was not mentioned during the induction. The team leader then took a period of stress-related sickness leave and it made me strongly consider the importance of mental health and staff wellbeing in a field dominated by physical illness and injury. After reviewing the literature, I realised that there was a lack of research concerning pre-hospital staff and a high rate of stress-related sickness absence in the

local NHS ambulance service. Initially, I came across literature on resilience and stress (such as Clompus & Albarran (2016)), but after discussion with my primary research supervisor, I was then introduced to a relatively new concept of 'thriving', which shifted my focus from stress and sickness absence to positive mental health outcomes and thriving at work, which was refreshing and eye-opening. Thriving was different to resilience in that it went beyond 'bouncing back' or 'absorbing stress' and instead suggested that thriving could occur in non-adverse (Sarkar & Fletcher, 2014) and traumatic situations (O'Leary, 1998). There was no research known to me on the experiences of thriving in ambulance services and I began to formulate the research question. Choosing the population and method was a difficult decision, but I felt swayed by the statistics on stress-related sickness absence in paramedics within the local area and hoped that my findings could promote thriving at work and reduce sickness absence. What kept paramedics going to work and what influenced thriving? Due to the lack of published literature, I chose a qualitative approach as previous research in other areas utilised quantitative methodologies, but I found this to be somewhat reductionist as this did not capture lived experiences, like the conversation I had with my team leader. I then considered the utility of the research, and I chose to focus on the role of a paramedic due to the sample pool, which should provide an appropriate and homogenous sample for an Interpretative Phenomenological (IPA) project (Smith et al., 2021).

Ethics Process and Recruitment

Seeking ethical approval and recruitment were slow processes, each taking up to 6 months independently. The timeframe for feedback and the green light to collect data was not often within my control, and I had to embrace the uncertainty (Buhr & Dugas, 2009; Gillies, 2017), which I found challenging. Both processes caused a significant delay to the progress of my empirical study, and I felt my motivation and hope waver. Due to the Covid-19 pandemic, the organisation I was recruiting from became understaffed and overworked. As a

result, the military were drafted in due to demand pressures. Therefore, it was difficult to encourage paramedics to take part in research on thriving and it felt unethical to do this. I felt guilty about asking paramedics to engage in research when they were working overtime to help people and save lives. This was compounded by my supervisors being on long-term sickness absence throughout the duration of my final year. Despite these challenges, I remained persistent and sought further approval to advertise my study online and by word-of-mouth. I then decided to watch an episode of 'Ambulance' a BBC One series (Fletcher, 2021) documenting the dilemmas and pressures ambulance services face in the UK prior to and during the covid-19 pandemic. This was extremely insightful, and I became aware of some of my assumptions being challenged when I noticed a team leader providing emotional support following a traumatic critical incident. This reinvigorated my passion to push on with my research. However, soon after I was involved in a severe car accident, and I was taken to the local hospital via ambulance. This was a difficult experience and I had to take a period of sick leave to recover.

Data Collection and Transcription

Due to my car accident, I found interviewing and transcription to be retraumatising (Danieli, 2010) as paramedics would often talk about road traffic accidents. I also struggled with somatic countertransference (Margarian, 2014) as paramedics were tired following a 12-hour shift and I would unconsciously mirror (Gallese, 2001) this during the interview and transcription stage. Despite this, paramedics were happy to talk with me and reflected that the interviews were 'interesting' and 'flowed well'. This gave me a confidence boost to continue collecting data. Occasionally, I considered the repetition and irrelevant topic as a weakness of my interviewing etiquette. I then perceived this as a strength because I gave more time for participants to direct the conversation, and this established trust and a good rapport. I wanted to maximise 'quantity over quality' as I was struggling with recruitment, and I wanted the

data to be as rich as possible in the circumstance I was unable to gather more data. In hindsight, I realise that data richness is not dependant on the length of an interview. I will definitely use Microsoft Teams if conducting research again in the future as I felt the data were more secure being directly saved onto a cloud service. This also enabled paramedics extra flexibility if an emergency had arisen. I feel that I also preferred the safety of remote interviewing in the midst of a global pandemic and following a car accident. The environment of the interview felt less formal and put both the participant and I at ease. Paramedics also helped to promote the study and confidentiality was maintained by encouraging participants to mention the research but not their participation. I also sought support from my interim supervisor when needed and took the process slowly with regular breaks away from the screen. I then began working on my systematic literature review, which explored post-traumatic growth in ambulance personnel. During this time, I also reflected on post-traumatic growth (PTG) within myself and saw that I had a deeper appreciation for the ambulance service, personal strength, and philosophical change, which are signs of growth following a trauma (Tedeschi & Calhoun, 1996). Over time, I shifted my focus from negative and self-critical thoughts to positivity and self-compassion (Gilbert, 2009).

Data Analysis

In terms of data analysis, I felt both an eagerness to begin immersing myself in the lived experiences of thriving at work for paramedics, and yet I was overwhelmed by the vast amount of data. I flitted between feeling enlightened by the voices' of paramedics and lost in the noise. I was often concerned with whether I was doing transcription and analysis 'the right way', which made me feel stuck and doubting my abilities to embrace a new challenge. During my undergraduate degree, I felt that qualitative research was often discussed briefly in one lecture and then put aside in favour of more structured and scientific quantitative methods. This question resonated with participants as they often asked if they had 'answered

the question the right way' and I explained that there was no 'right or wrong way'. I then took heed of this advice and understood that my interpretation is subjective, and I could find comfort in adding structure by clustering experiential statements into themes. Initially, I felt a sense of sadness and loss when I came across repeated information or isolated statements which were not related to my research question. I also went through several iterations of themes, whittling the data from 6 broad categories to 3 superordinate themes through discussion and validation with Annette and Emma. I attempted to embrace my themes with a mindset of 'being good enough' and considering my themes as relevant 'key messages' rather than getting caught up in the small proportion of data that had been put aside and excluded.

Systematic Literature Review

As previously mentioned, the topic of the systematic literature review (SLR) was on the prevalence rates and facilitators of post-traumatic growth in ambulance personnel. I came across this concept whilst researching PTSD as a mental health outcome of paramedics when writing the rationale and introduction section to my research proposal for the empirical study. I felt it linked thematically with my empirical due to its roots in positive psychology. Overall, I enjoyed completing this piece of work. Initially I worried that this would not be a feasible topic as the paper count began to dwindle during screening and there were less than a dozen papers which met the inclusion criteria. I found myself multi-tasking between data gathering for my empirical and writing up the SLR. This was a lengthy process and I found myself re-running the searches to check that no new papers had been published or that an SLR on the same topic had been completed. When it came to choosing a journal, I decided that I wanted the ambulance personnel to benefit from the research as one of my research participants mentioned they were interested in mental health and post-traumatic growth, and this would hopefully be more accessible. All of the paramedic journals were conservative in word count, only 3000 words. This seemed like an impossible feat as it was drilled into me that we should

aim to submit to a journal with a word count between 5000-7000 words and I was initially discouraged. I spoke to Dr Emma Wolverson whilst I was reading through my first transcript for my empirical and she encouraged me to prioritise ‘quality over quantity’, which turned my worry into excitement, and I saw this as a positive challenge and a skill to summarise research in a succinct way.

Final Reflections

Throughout this project, I have felt a rollercoaster of emotions: Frustration over the lengthy and arduous processes; excitement to begin recruitment; fear over the monumental task of data analysis and write-up of the thesis; sadness, relief, and pride that this project is coming to a meaningful end. I wanted to close this statement by considering what I would do differently if I were to embark on a research journey in the future. Firstly, I would consider telephoning local collaborators and potential participants rather than anxiously waiting for emails and I would encourage trainees and other researchers to consider this method of contact. This would have reduced my uncertainty and ensure participant documentation was received and then arrange a tentative interview in one contact, which could have made the process more efficient. I was often hesitant to follow-up on emails as I felt guilt when the media showed paramedics being overwhelmed at work, and I did not want to be another source of stress, but I continued to persist and ultimately, I think my efforts paid off and were well-intended. I would also contingency plan more, such as considering other ways to recruit in the first instance and widening the participant pool to reduce the pressure put on one organisation. Overall, I am left with a sense of hope that the novel findings offer something consequential to paramedics, ambulance services and the field of clinical psychology from an occupational health perspective.

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Appendix N. Epistemological and Ontological Statement

The epistemological and ontological statement outlines the philosophical stance of the researcher, which guided the research design and methodology underpinning the portfolio thesis. It is important for the researcher to have an awareness of their assumptions, beliefs, and values which can influence how they see and interpret the world around them. This determines the researcher's positionality, which is discussed in terms of epistemology and ontology.

Epistemology refers to the "nature of knowledge and how it can be acquired" (Ritchie et al., 2013, p. 2). Positivism aims to gain objective knowledge through value-free inquiry, meaning that truth is obtained in a scientific manner separate from the values held by society, such as personal involvement from the participant or researcher (Willig, 2013). This epistemological position is often associated with quantitative research. Interpretivism is the opposite of positivism, the latter posits that reality is subjective, socially constructed, and is concerned with how human beings interpret their reality with an aim to 'give voice' to participants' experiences (Larkin et al., 2006; Ritchie et al., 2013). This approach is utilised by qualitative researchers.

Ontology is concerned with "the nature of the world and what there is to know about it" (Ritchie et al., 2013, p. 5). There are two dominant and contrasting branches of ontology: realism and relativism. Realists believe that one 'truth' exists in an independent reality, thus making research findings generalisable (Willig, 2013), whereas relativists subscribe to 'multiple realities' based on individual experiences of a phenomenon (Ritchie et al., 2013).

The researcher adopted a relativist ontology and an interpretivist epistemology. These positions influenced the qualitative methodology that was chosen, which was Interpretative Phenomenological Analysis (IPA) (Smith et al., 2021). IPA is interested in understanding

personal lived experience and exploring persons' relatedness or engagement with a phenomenon of interest to the researcher (Larkin et al., 2006; Smith et al., 2021). Although IPA has its roots in health psychology, the approach has been widely used in clinical and counselling fields, in addition to social and educational psychology to explore people's lived experience (Smith et al., 2021). The researcher felt that IPA could be applied to understand a concept from positive psychology within an occupational context because IPA has a 'person-in-context' focus (Larkin et al., 2006). The research question wished to understand the experiences of thriving (phenomenon) at work (context) in paramedics (person). IPA also acknowledges the role of the researcher in the co-construction of meaning. This creates a double hermeneutic, whereby the researcher makes sense of the participant making sense of a phenomenon (Smith et al., 2021).

In terms of the systematic literature review (SLR), the researcher was interested in the prevalence rates and facilitators of post-traumatic growth (PTG) in ambulance personnel. The majority of papers aligned with a realist ontological position and positivist epistemology to investigate the predictors of post-traumatic growth (PTG) using objective questionnaires. One paper utilised a hermeneutic phenomenological methodology with semi-structured interviews (qualitative) to gather information on multifaceted traumatic exposure in paramedics and emergency medical technicians. The SLR included both types of paper due to a lack of published research on post-traumatic growth (PTG) in ambulance personnel. These findings were interwoven to enable a triangulation of data and provide a comprehensive understanding of PTG in ambulance personnel (Noble & Heale, 2019). However, the researcher recommended that future research could utilise a qualitative methodology pertaining to an interpretivist approach. This is because reactions to trauma are idiographic and therefore understood by the researcher as a subjective experience which is lacking in extant literature.

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