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## **A systematic review of the factors associated with post-traumatic growth in parents following admission of their child to the intensive care unit**

O'Toole, S., Suarez, C., Adair, P., McCormack, D., Willis, S., & McAleese, A. (2020, Sep 28). A systematic review of the factors associated with post-traumatic growth in parents following admission of their child to the intensive care unit. PROSPERO.

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## Review question

What demographic, clinical, and psychosocial factors predict post-traumatic growth in parents following a Paediatric Intensive Care Unit (PICU) or Neonatal Intensive Care Unit (NICU) hospital experience?

## Searches

A search for relevant empirical research will be undertaken across seven databases; PubMed, MEDLINE, Web of Science, PsycINFO, CINAHL, PILOTS (Published International Literature on Traumatic Stress) and Embase.

A combination of controlled vocabulary terms from databases (e.g., MeSH), and free-text words will be chosen to reflect the focus of the review on post-traumatic growth in parents following admission of their child to the intensive care unit.

A variation of the following search strategy will be employed: "[posttrauma\* growth OR post-trauma\* growth OR PTG OR personal growth OR positive growth] AND [parent\* OR mother\* OR father\* OR caregiver\*] AND [paediatric critical illness OR pediatric critical illness OR paediatric critical care OR pediatric critical care OR critically-ill child\* OR paediatric intensive care unit OR pediatric intensive care unit OR PICU OR neonatal intensive care unit OR NICU].

No date restrictions will be applied to this search due to the limited research in this area unearthed via preliminary scoping searches.

Studies not published in the English language (and for which there is no translation available) will be excluded.

In addition, the reference lists of all eligible research studies and any relevant published reviews will also be screened for relevant papers.

## Types of study to be included

Inclusion: 1) quantitative or a mixed-methods research with data pertaining to post-traumatic growth in parents of children admitted to the intensive care unit.

Exclusion: 1) qualitative research, 2) books, book chapters, opinion pieces, editorials, letters, systematic reviews, and dissertations/theses, 3) studies not published in the English language (and for which there is no translation available), and 4) studies with no data pertaining to post-traumatic growth in parents of children previously admitted to the intensive care unit.

## Condition or domain being studied

This systematic review will be examining post-traumatic growth (PTG) in parents following the admission of their child to the intensive care unit.

PTG may be defined as the experience of positive effects following a highly stressful or traumatic event, in this case the admission of one's child to the intensive care unit (PICU or NICU).

## Participants/population

1) Parents of children who have been admitted to the Paediatric Intensive Care Unit (PICU); or

2) Parents of children who have been admitted to the Neonatal Intensive Care Unit (NICU).

### Intervention(s), exposure(s)

Post-traumatic growth in parents following the admission of their child to the intensive care unit, as assessed using a validated measurement tool, including, but not limited to; the Post Traumatic Growth Inventory (PTGI), the Benefit Finding Scale, and the Perceptions of Changes in Self Scale.

Additionally, the assessment of hypothesised associated variables (demographic, clinical or psychosocial in nature) using suitable validated measurement tools.

### Comparator(s)/control

Not applicable.

### Context

The present review seeks to elucidate predictors of post-traumatic growth in parents who have experienced their child being admitted to the intensive care unit. Existing relationships between PTG and demographic, clinical, and psychosocial variables evidenced in the research literature will be outlined and discussed.

### Main outcome(s)

1) Post-traumatic growth as measured by a valid psychometric tool.

2) Demographic, clinical, and psychosocial factors associated with post-traumatic growth as measured by a valid psychometric tool.

### Measures of effect

Included studies will examine the above main outcomes at a time-point following discharge of parent's child from the intensive care unit.

### Additional outcome(s)

None.

### Measures of effect

Not applicable.

### Data extraction (selection and coding)

The present systematic review will be conducted and reported in accordance with the guidelines published on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. A number of stages will be employed in the screening of papers against the inclusion and exclusion criteria to identify studies eligible for inclusion in the review. These stages will be illustrated via the use of a PRISMA flowchart.

Primarily, electronic searches across the seven databases will be completed. Following this, any duplicate papers will be identified and removed. The remaining papers will undergo a two-stage screening process. In the first stage of screening, the titles and abstracts of all papers will be screened by the primary reviewer (SOT). In the second stage, the full texts of potentially eligible papers will be retrieved and reviewed independently by two reviewers (SOT and CS) for eligibility. Cohen's Kappa statistic will be used to calculate inter-rater reliability. In the case of any discrepancies, these will be discussed with two further reviewers (PA and DMcC) to reach consensus. Reasons for excluding studies at all stages will be noted.

Results will be tabulated to capture the key data extracted from the included studies. The following information will be extracted for each study: author, year, and country of origin; study aim/objective; study design; data collection method (including any measures/instruments); sample; recruitment source; and key findings related to post-traumatic growth in parents following admission of their child to the intensive care unit and the factors associated with this phenomenon.

### Risk of bias (quality) assessment

The quality of included studies will be assessed independently by the primary reviewer (SOT), using the 'Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies' (developed by the National Heart,

Lung, and Blood Institute) [<https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools>]. Following this, a subset of studies will be independently assessed by a second reviewer (CS), resolving any disagreements by discussion and consensus. Cohen's Kappa statistic will be used to calculate inter-rater reliability. Reasons for low quality appraisals will be outlined, where applicable.

### Strategy for data synthesis

If appropriate, a meta-analysis of associated variables will be undertaken. Due to the anticipated heterogeneity of tools used to measure variables of interest (PTG and associated factors), and participant samples, a random-effects meta-analysis will be used. A forest plot will be used to demonstrate the results of the meta-analysis. The primary reviewer (SOT) will conduct the initial meta-analysis. Following this, a subset of the analysis will be independently assessed by a second reviewer (CS), resolving any disagreements by discussion and consensus. Where there is significant heterogeneity amongst studies (i.e. - the emergent data cannot be statistically combined to carry out a meta-analysis), a narrative synthesis will be undertaken. Methodological quality of the included studies will be taken into account when interpreting the findings.

### Analysis of subgroups or subsets

Subgroup analyses will be carried out in the event that there is similarity between sufficient variables, and will include, if possible: the parents of children admitted to the PICU, the parents of children admitted to the NICU, and the measures of PTG employed (e.g. Post-Traumatic Growth Inventory versus other validated measures).

### Contact details for further information

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### Organisational affiliation of the review

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### Type and method of review

Epidemiologic, Meta-analysis, Systematic review

### Anticipated or actual start date

01 April 2019

### Anticipated completion date

01 May 2020

### Funding sources/sponsors

Stephanie O' Toole is completing this systematic review in partial fulfillment of the Doctorate in Clinical Psychology at Queen's University Belfast

### Conflicts of interest

### Language

English

### Country

Northern Ireland

### Stage of review

Review Ongoing

### Subject index terms status

Subject indexing assigned by CRD

### Subject index terms

Child; Child Health; Critical Care; Critical Illness; Hospitalization; Humans; Intensive Care Units; Parent-Child Relations; Parents; Posttraumatic Growth, Psychological; Stress, Psychological

### Date of registration in PROSPERO

15 April 2019

### Date of first submission

27 March 2019

### Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	Yes	Yes
Risk of bias (quality) assessment	Yes	Yes
Data analysis	Yes	Yes

### Revision note

Systematic review complete and manuscript submitted for publication.

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

### Versions

15 April 2019

28 September 2020

28 September 2020