Reviewer's report

Title: Parent distress reactions following a serious illness or injury in their child: A protocol paper for The Take a Breath Cohort Study

Version: 2 Date: 25 January 2015

Reviewer: G Colville

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This paper - which is written clearly, well-referenced for the most part and addresses an important topic - provides detailed information on the ‘Take a Breath’ study. The main aim of the study is to collect longitudinal data on post-traumatic stress reactions over time in children in paediatric settings and their parents. Settings include four units at one centre – in all cases the groups studied were of parents of children facing acute life threat.

The authors make a good point about the validity of conceptualising parents’ distress in this situation as deserving of consideration of the definition of ‘traumatic event’ despite the recent changes to this definition in DSM-V. They also explain the clear relevance of Kazak’s Pediatric Medical Traumatic Stress Model to this study.

The case for the need for more information in this field is well made. There is a paucity of longitudinal research on children and very little information on long term rates of symptom (eg > 1 year). There is also a very small literature on the interaction between parental and child symptoms.

The fact that reasons for non-participation were sought is a strength of this study – particularly given that the team were precluded by the regulations from examining the characteristics of non-consenting families. This is important information which is often not gathered.

Table 1 is clearly laid out. It is helpful to see which measures are completed by whom and at which timepoints.

The main aim of the study seems to be to establish the degree to which illness related factors interact with the better understood PTSD risk factors relating to demographics and previous mental health/experience over time and across illness type, as well as collecting information on the prevalence and trajectories of parents’ symptoms over an 18 month period and examining associations with child symptoms. However the rate of attrition by T4 will limit the authors’ ability to test some of their hypotheses, particularly in relation to discriminating between illness groups.

Apart from the obvious factors relating to the availability of the resources needed to carry out such longitudinal research, the main stumbling blocks in terms of ending up with sufficient data to report on meaningfully in the long run are the difficulty of achieving representative recruitment at the outset subsequent attrition. From the data in the Flow Diagram the overall response rate at outset
was 68% but given that it appears that the attrition rate by T4 was quite high (ie approx 50%) it seems that the final data being analysed will only apply to approx 1/3 of those approached which may threaten the validity of the findings.

Other Points:
1) Purpose of a protocol: Strictly speaking I would not expect a protocol to present data – my understanding is that usually a protocol is published ahead of data collection. I was also surprised that, on the basis of the information provided in the Method section on p8, the data collection will have by now already been completed.

Minor changes
2) Fig 3: It might be easier to follow this diagram if you distinguish more clearly between ‘eligible’ and ‘approached’. Lack of participation in the approached group is a different thing to being impossible to contact in the first place – different strategies needed to remedy in future research. Also It is not clear from the flow diagram how much information was obtained directly info from children in the end. What proportion of the total sample were aged over 7 ? And what proportion of this older group provided data directly?

3) Layout: I am not clear why some sub-headings are underlined/in capitals/italicised/indented. Please consider making the structure of the manuscript clearer in this respect.

Discretionary changes
4) Collapsing two subgroups: The original intention was to recruit from 4 units but the response rate from Neurology was low (although this is not provided) so the Neurology data was collapsed into one group with the PICU group data. Did you consider eliminating the Neurology group instead? It is hard to know how to interpret response rates by unit given the current decision to amalgamate – I understand the need to maximise your n but are you not affecting your PICU response rate (and therefore your overall response rate) adversely?

5) References : The authors might usefully consider including some more recent, relevant references (eg Le Brocque (2010) on trajectories of PTS symptoms in children after PICU; Colville& Pierce (2012) on prevalence in 66 child-parent pairs at 2 timepoints after PICU; the work of Christine Eiser on parents of children with cancer and Bryant et al (2013) on fluctuating trajectories in adults after traumatic events). Reference to meta analyses from the wider field of PTSD risk factors by Ozer and/or by Brewin might also usefully be made.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare I have no competing interests