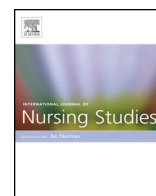




ELSEVIER

Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

Review

Fever phobia: The impact of time and mortality – A systematic review and meta-analysis

Edward Purssell^{a,*}, Jacqueline Collin^b^a Florence Nightingale Faculty of Nursing and Midwifery, King's College London, James Clerk Maxwell Building, 57 Waterloo Road, London SE1 8WA, United Kingdom^b Florence Nightingale Faculty of Nursing and Midwifery, King's College London, United Kingdom

ARTICLE INFO

Article history:

Received 12 March 2015

Received in revised form 13 July 2015

Accepted 7 November 2015

Keywords:

Anxiety

Children

Fever

Fever phobia

Parent

Pyrexia

Temperature

ABSTRACT

Background: Fever phobia is a term that has been used to describe the exaggerated and unrealistic fear of fever expressed by parents and carers. Since the term was first used in the early 1980s, there have been numerous publications and guidelines' stating that fever is not, in itself dangerous, however these fears persist.

Objectives: Investigate the extent of fever phobia and to explore potential associations with time, under-5 mortality rate and geography.

Data sources: Embase (1980 to week 1 2015) and Medline (1946 to week 1 2015) were searched using the terms 'fever' and 'phobia'; and 'fever phobia' as a free text term. One additional paper was published during the review period.

Study eligibility criteria: Studies giving proportion of parents, carers or professionals expressing fear of fever.

Study appraisal and synthesis methods: Meta-analysis and cluster analysis using metafor, meta and Cluster in R.

Results: Fear of brain damage, coma, convulsions, death and dehydration was high across many of the studies; however there was significant variation as shown by the high I^2 scores which exceeded 95%. This was not explained by the two predictive variables of year of publication, or background mortality apart from a reduction in the fear of brain damage (-0.0185 , CI -0.0313 to -0.0057 , $p=0.0046$) and dehydration (-0.0831 , -0.1477 to -0.0184 , $p=0.0118$) associated with increased child mortality.

Limitations: Studies were all cross-sectional surveys with a high risk of bias. The pooled estimate, although statistically significant is not the outcome of interest and so should be interpreted with caution.

Conclusions and implications: Fever phobia is common and has not significantly declined over time. This may suggest that it is a cultural, rather than individually learned trait and that individual educational programmes are unlikely to be successful in the face of widespread cultural transmission.

© 2015 Elsevier Ltd. All rights reserved.

* Corresponding author. Tel.: +44 0207 848 3021; fax: +44 2078483555.
E-mail address: edward.purssell@kcl.ac.uk (E. Purssell).

What is already known about the topic?

- Fever phobia is the exaggerated fear of fever amongst parents and carers and is very common.
- This leads to anxiety and over-treatment.
- Multiple guidelines have suggested that fever is not, in itself, dangerous.

What this paper adds

- Despite these guidelines there is little evidence of a reduction in fever phobia.
- There is no evidence that the level of fear is linked to background child mortality rates.
- There is no clear evidence of clustering of levels or types of anxiety.

1. Background

Fever is a common symptom in childhood that is usually associated with self-limiting infections and minor illnesses; however, in a small number of cases it can be a sign of more serious underlying conditions such as serious bacterial or invasive infections. The key responsibility of healthcare professionals is to differentiate between these, and to ensure that appropriate treatments are instigated. Having done this, attention may then turn to symptom management, a common part of which is fever control.

The symptomatic treatment of fever, although common, is controversial. This is because although the physiological mechanisms by which fever is generated are well described, its role in recovery from infection is less clear. Arguments for it having a beneficial effect are usually centred around its evolutionary conservation and ubiquity across species; the role that it has in up-regulating aspects of the immune response, and the fact that it is itself mediated by mediators of the immune response (Kluger et al., 1998). However when examining the benefits of fever, it is impossible to isolate the febrile response from the other behavioural, immunological, and physiological changes that occur with this *in vivo*.

Fever, as opposed to hyperthermia, is a regulated rise in temperature; and although very high temperatures can be damaging, there are multiple physiological mechanisms that prevent such temperatures occurring in fever, a phenomenon sometimes referred to as ‘fever’s glass ceiling’ (Mackowiak and Boulant, 1996). Other concerns such as brain damage, death, dehydration and convulsions are not warranted; and in the otherwise healthy child fever need not be treated (NICE, 2013). Despite this, it is known that fever causes significant anxiety among both parents and professionals, these fears being termed ‘fever phobia’ (Schmitt, 1980). In this original study Schmitt found that many parents were worried about possible outcomes such as brain damage, convulsions and death as a result of fever, and since then many studies have been conducted looking at parental and professional views of fever. The important distinction between these exaggerated fears of fever and more rational ones is that they are not necessarily related to the underlying condition, but are unwarranted fears of the fever itself.

Over the same time period as these studies were conducted, many publications and guidelines have been produced which reiterate the point that fever is not harmful and that it does not routinely require treatment. Alongside these a number of tools have been designed to help the differentiation of children with serious underlying conditions from those without; for example the NICE Traffic Light system (NICE, 2013). There has also been a consistent reduction in under-5 mortality in most countries, meaning that the most serious outcomes from febrile illness have decreased.

Heightened anxiety about fever has a number of negative consequences, in particular over-use of formal health services and administration of antipyretic drugs (Maguire et al., 2011; Teagle and Powell, 2014). Although the two most commonly used drugs, ibuprofen and paracetamol are very safe, all drugs have the potential to be harmful and these are no different (Pierce and Voss, 2010; Southey et al., 2009); furthermore there is evidence that they are often misused either through design or error, possibly resulting from high levels of anxiety (Teagle and Powell, 2014).

This leads to an interesting question about whether heightened fear of fever is a phenomenon that is learned on an individual basis; or whether there is a more fundamental fear of fever that is part of human culture? If fever phobia were to be a rational (if unwarranted) response to serious outcomes associated with febrile illness one might expect that it would show regional patterns, be related to the probability of serious adverse outcomes, or to be declining over time as these become rarer.

1.1. Aims

The aim of this review is to investigate the extent of fever phobia and to explore potential associations with time, under-5 mortality rate and geography. This was undertaken in three ways:

1. To look at the levels of specific fears related to fever reported in studies over time; namely brain damage, coma, convulsions, death, dehydration.
2. To compare levels of fear to under-5 mortality.
3. To identify geographic or other patterns of fever-related fear through meta-analysis regression and cluster analysis of the top fears.

1.2. Method

1.2.1. Search

Embase (1980 to week 1 2015) and Medline (1946 to week 1 2015) were searched using the terms ‘fever’ and ‘phobia’; and ‘fever phobia’ as a free text term. This term was used because it has become common parlance for the phenomenon under investigation, and alongside the hand search it was thought to be strike an appropriate balance between sensitivity and specificity. The inclusion criteria were that papers had to provide numerical data on parental or professional fears of fever in children; and be written in the English language; no time period or

Download English Version:

<https://daneshyari.com/en/article/1076004>

Download Persian Version:

<https://daneshyari.com/article/1076004>

[Daneshyari.com](https://daneshyari.com)