Reviewer's report

Title: Knowledge and Behaviour of Parents concerning Sunning their Babies

Version: 1 Date: 26 April 2006

Reviewer: Simone Harrison

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General

The authors have conducted a study in Turkey that is similar to studies originally conducted in Australia by the James Cook University Skin Cancer Research Group to determine the prevalence and sources of inappropriate beliefs about the reputed therapeutic uses of sun exposure during infancy in a predominantly caucasian population at high risk of skin cancer (Harrison et al 1999, Harrison et al 2005).

Whilst there is value in repeating this study elsewhere, regretfully, in its current form, this article provides an incomplete introduction to and discussion of what are controversial and important issues. The relevance and focus of issues surrounding the therapeutic use of sun exposure varies from country to country and is influenced by the amount of ambient ultraviolet radiation, sun exposure behaviour, and the susceptibility of the population to skin cancer (Fitzpatrick skin type, skin reflectance etc) or poor bone health. In countries such as Australia, the effects of over-exposure to sunlight are great cause for concern (skin cancer, cataracts etc), whereas in temperate climates and darker-skinned populations etc, the sequelae of under exposure to sunlight (e.g.vitamin D deficiency, infantile rickets, osteoporosis in elderly etc) may be more of a concern. Thus, it important that the authors (1) point out that these concerns vary from place to place for the reasons described; (2) present their data with adequate information about the study setting; (3) discuss current evidence based clinical guidelines for the appropriate treatment of these conditions in that environment (or in the absence of published guidelines, evidence from the medical literature) supporting or refuting the appropriateness of intentionally sunning babies for each of the reasons discussed in this paper.

In summary, the authors need to provide a more comprehensive and balanced introduction to the topic, present their results in a clearer manner and describe and discuss them more fully in the results and discussion sections.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. As it currently stands, the introduction section of this paper is based on an incomplete review of the relevant literature and leaves the reader uncertain which of the practices presented are appropriate and which are inappropriate.

1 (a) For instance, the authors do not describe the incidence of rickets and vitamin d insufficiency in babies in Turkey, or current recommendations for the maintenance of healthy vitamin d levels in this population.

1 (b) The authors also failed to clearly convey information about the incidence of skin cancer in this population (on p3 the authors say "Melanoma due to sunlight is underreported in Turkey" presumably they mean the incidence of melanoma is relatively low?)

2. Elaborate on description of study setting, particularly in relation to level of ambient ultraviolet radiation. Perhaps the UV index (mean/median and range) by season could be used to give the reader a better understanding amount of the level of ambient UV in this environment. The authors should also give latitude, population size (rather than saying it is a "small town") and give an indication of rurality.

3. The authors have not adequately defined their study population. Ethnicity of the study population and skin type are important in terms of skin cancer risk yet the authors give no indication whether this is a predominantly Caucasian population or the distribution of Fitzpatrick skin types or skin reflectance values etc in this group. The authors should not assume that the readership has an intuitive sense of the predominant phenotypic characterstics of this group.

4. The phrase "risky behaviours" is used to describe some of the findings of this study (e.g. p9)
without defining this, leading the reader to interpret the findings depending on their understanding of this term (may be heavily influenced by where the reader lives). I would suggest that a less subjective term, such as “inappropriate” be used and that the authors clearly outline which of the practices presented were considered to be inappropriate and which (if any) where considered appropriate for this population and why. Thus, the authors will need to provide evidence from the published literature which supports their decision/definition.

5. The results presented on page 6 and in table 4 require further clarification. Previous studies asked parents specific questions about the various conditions discussed (e.g. for nappy rash, for jaundice etc). For instance, other studies have asked parents whether when they used sunlight to treat jaundice they placed their baby in direct sunlight outdoors, or in the shade or sunned them indoors through a window (i.e. mutually exclusive categories which together add to 100%). Do the results on page 6 relate to sunning babies specifically to treat jaundice? Or some other reason, like bone health? This is not specifically stated anywhere in the results section. In fact, on page 6, the authors have not even told us if the results in table 4 relate to “sunning” babies for health reasons. Readers may be uncertain whether these results relate to time spend outside for pleasure activities, or even intentional sunning a child for aesthetic reasons, such as getting a suntan. Given that there is a sentence that indicates that nearly half the parents were told to sun their baby by medical staff, I guess we are to presume that these results relate to intentionally sunning a child for health reasons (maybe not otherwise specified)? The authors really need to be clearer in expressing their results with an international audience in mind.

6. As the sum of the percentages for outdoors and indoors in Table 4 exceeds a 100%, the authors presumably asked separate questions relating to exposure outdoors and exposure indoors through glass. Please clarify this point in the manuscript by stating the questions in the manner they were asked. If some parents do in fact sun their children both ways (i.e. sometimes through window and sometimes outdoors) it would be useful to show the ratio of outdoor exposure to exposure indoors through glass.

7. The authors concluding remarks and recommendations are unclear with respect to sun exposure and the treatment of common ailments in infancy such as mild neonatal jaundice, diaper rash etc. For instance, they talk about “teaching parents how to sun their babies safely”. What exactly are the recommendations that would be incorporated into such an education program? For which conditions (if any) is sunning justified or considered best practice? And if this is considered evidence based practice, provide the evidence supporting this claim and outline precise instructions that should be given to parents e.g direct or indirect exposure; appropriate duration of exposure (by season), appropriate time of day; whether to sun baby with or without clothing, whether to use suncreen, whether to sun baby outdoors in direct sunlight, in shade or inside through a window etc.

8. The authors need to present a complete and balanced summary of evidence in relation to safety or necessity of using sunlight to treat mild neonatal jaundice and other conditions such as nappy rash. For instance, they have not mentioned the work of Lewis and co-workers published in Lancet (1982) which showed that neonatal jaundice subsides spontaneously in 85% healthy term infants with Serum Bilirubin (SBR) concentrations between 250 and 320 μmol/l, indicating that treatment may be safely withheld in otherwise healthy term infants until SBR exceeds 320 μmol/l. There are also published evidence based guidelines in place in other countries which do not advocate use of sunlight (Practice parameter: management of hyperbilirubinemia in the healthy term newborn. American Academy of Pediatrics. Provisional Committee for Quality Improvement and Sub-committee on hyperbilirubinemia. Pediatrics 1994;94(4 Pt 1):558-65. [Published erratum appears in Pediatrics 1995;95(3):458-61]). If there are economic etc reasons for not using standard phototherapy protocols when intervention is justified on basis of SBR levels or if newer technology such as biliblankets are not available, then it would be useful to mention this for the benefit of the audience in the introduction and/or discussion sections.

9. As the results p6 report mention sunning babies through a window, there is a need to provide an explanatory sentence/paragraph of the risks of exposure to sunlight filtered through glass.

10. The authors need to discuss the weaknesses of their study design and describe potential sources of bias.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. The paper contains numerous typographical and spelling errors (e.g. abstract, line 1, diaper rush instead of rash; line 2 asses instead of assess).

2. Some of the percentages reported in the results section are incorrect (last paragraph p5). For instance 4/118 is not 0.03%. It should read 3% and 26/118 is 22% not 0.22%. The decimal place in wrong position.

3. The authors present results about sunlight in relation to diaper rash and bone development under the heading “Parents knowledge about the benefits of sunlight and jaundice”. This heading should be altered to more accurately reflect the information conveyed in this section.

4. The percentages presented in tables 2, 3 and 4 are based on raw data when it is customary to present valid percentages in manuscripts [i.e. after excluding missing data from sample. Preferably show valid % and use footnotes or column sub-headings to indicated number of missing values/ reduced sample size). For instance: “yes” for nappy rash should be 6.5% (i.e. 7/107). This facilitates comparison with results from other studies.

5. Some of the references are questionable and should be re-checked for accuracy by the authors (e.g. para 5 p3, reference 18 talks of skin cancer risk but reference is about nutrition and vitamin d?; and para 6, p3, reference 19 mentions agencies which are not authors on the paper mentioned in the reference list “this is about tanning beds) and in some cases, the authors have used a paper as a reference which merely cites the references of interest rather than seeking out the reference of the original article.

6. The authors should seek editorial assistance to improve the clarity of expression and grammar.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests