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## International Journal of Psychology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/pijp20>

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Published online: 18 Apr 2013.

To cite this article: Marije Stoltenborgh, Marian J. Bakermans-Kranenburg, Marinus H. van IJzendoorn & Lenneke R. A. Alink (2013): Cultural-geographical differences in the occurrence of child physical abuse? A meta-analysis of global prevalence, *International Journal of Psychology*, 48:2, 81-94

To link to this article: <http://dx.doi.org/10.1080/00207594.2012.697165>

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# Cultural–geographical differences in the occurrence of child physical abuse? A meta-analysis of global prevalence

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**O**ur comprehensive meta-analysis combined prevalence figures of child physical abuse reported in 111 studies, including 168 independent samples with a total of 9,698,801 participants. The overall estimated prevalence was 3/1000 for studies using informants and 226/1000 for studies using self-report measures of child physical abuse, with no apparent gender differences. Methodological factors partly explained the vast variation of self-reported prevalence rates in individual studies. The highest prevalence rates were found for studies using a broad definition of child physical abuse, studies measuring physical abuse over the longest period of 0–18 years, studies using college samples, studies in which adults served as respondents, and studies using more questions on physical abuse. Cultural–geographical factors did not seem to affect prevalence rates of physical abuse, which may be partly due to procedural factors. More crosscultural research on physical abuse is badly needed, especially in Africa and South America. We conclude that child physical abuse is a widespread, global phenomenon affecting the lives of millions of children all over the world, which is in sharp contrast with the United Nation's Convention on the Rights of the Child.

**Keywords:** Child physical abuse; Child maltreatment; Meta-analysis; Epidemiology; Global perspective.

**N**otre méta-analyse détaillée combinait les taux de prévalence de l'abus physique d'enfant rapportés dans 111 études, incluant 168 échantillons indépendants, pour un total de 9,698,801 participants. Le taux de prévalence général estimé était de 3/1000 pour les études faisant appel à des informateurs et de 226/1000 pour les études utilisant des mesures auto-rapportées d'abus physique d'enfant, sans différence apparente de genre. Les facteurs méthodologiques expliquaient partiellement la grande variation des taux de prévalence auto-rapportés dans les études individuelles. Les plus hauts taux de prévalence ont été trouvés dans les études utilisant une définition plus large de l'abus physique d'enfant, les études mesurant l'abus physique sur une plus longue période s'étalant de 0 à 18 ans, les études utilisant des échantillons collégiaux, les études dans lesquelles les répondants étaient des adultes et les études utilisant plus de questions sur l'abus physique. Les facteurs culturels-géographiques ne semblaient pas affecter les taux de prévalence d'abus physique, ce qui peut être partiellement dû aux facteurs procéduraux. Plus de recherche multiculturelle sur l'abus physique est sérieusement nécessaire, spécialement en Afrique et en Amérique du Sud. Nous concluons que l'abus physique d'enfant est un phénomène global et répandu qui affecte la vie de millions d'enfants à travers le monde, ce qui représente un contraste marqué avec la Convention relative aux droits de l'enfant des Nations Unies.

**N**uestro metaanálisis global combinó las cifras preponderantes sobre el abuso físico en niños de 111 estudios, incluidas 168 muestras independientes con un total de 9,698,801 participantes. La preponderancia estimada global fue de 3/1 000 en estudios que utilizaron informantes y de 226/1000 en estudios que utilizaron medidas de autoinforme de abuso físico infantil, sin diferencias aparentes entre los sexos. Los factores metodológicos

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MJBK and MHvIJ were supported by awards from the Netherlands Organization for Scientific Research (VIDI grant no. 452-04-306 and SPINOZA prize respectively)

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explicaron parcialmente la gran variedad de índices de prevalencia de autoinforme en los estudios individuales. Se hallaron índices de prevalencia más elevados en estudios que utilizaron una definición amplia para describir el abuso físico infantil, estudios que midieron el abuso físico por períodos más largos de 0 a 18 años, estudios que utilizaron muestras con universitarios, estudios donde respondieron los adultos, y estudios que utilizaron más preguntas sobre el abuso físico. Los factores culturales y geográficos no parecen haber afectado los índices preponderantes de abuso físico, lo que en parte puede deberse a los factores de procedimiento. Se necesitan con urgencia más investigaciones transculturales sobre el abuso físico, especialmente en África y Sudamérica. En conclusión se puede decir que el abuso físico infantil es un fenómeno generalizado global que afecta la vida de millones de niños de todo el mundo, lo que está en agudo contraste con la Convención de las Naciones Unidas sobre los Derechos del Niño.

Childhood physical abuse is defined by the Consultation on Child Abuse Prevention (World Health Organization, 1999) as

that which results in actual or potential physical harm from an interaction or lack of an interaction, which is reasonably within the control of a parent or person in a position of responsibility, power or trust. (p. 15)

Childhood physical abuse is a widespread phenomenon with adverse effects on children's short- and long-term development. Physically abused children are at increased risk for physical (Springer, Sheridan, Kuo, & Carnes, 2007), behavioral (Lansford et al., 2002; Shen, 2009; Todd Manly, Kim, Rogosch, & Cicchetti, 2001; Wilson & Spatz Widom, 2010), cognitive (Perez & Spatz Widom, 1994), and psychological problems (Lansford et al., 2002; Springer et al., 2007; Todd Manly et al., 2001; Yanos, Czaja, & Spatz Widom, 2010), indicating that, beyond the harm done to children, the costs of physical abuse for society are also considerable.

That said, it is not clear how often physical abuse actually occurs. Prevalence rates reported in individual studies range from 0.0092% (Sibert et al., 2002) to 95.7% (Milner, Robertson, & Rogers, 1990), underlining the need for a meta-analytic synthesis. We conducted such a meta-analysis, aiming at providing a worldwide estimate of the prevalence of childhood physical abuse. In an attempt to unravel the substantial variation in prevalence figures reported in primary studies, we investigated the influence on physical abuse prevalence of methodological factors and sample characteristics, focusing on possible variation due to geographical areas of origin of the samples and ethnicity of the samples.

## CULTURAL DIFFERENCES

Cultural differences in the occurrence of childhood physical abuse have not been extensively

investigated, which makes it difficult to formulate hypotheses regarding variation in reported prevalence. Inspiration for such hypotheses comes from research on physical discipline, which can be seen as one end of a continuum of unpleasant parental behaviors with physical abuse at the other end (Whipple & Richey, 1997). Parents who physically discipline their children are at greater risk for physically abusing their children (Zolotor, Theodore, Chang, Berkoff, & Runyan, 2008). The perception of greater normativeness of physical discipline strategies seems to be related to more frequent use of this strategy (Lansford et al., 2010), and to not regarding physically abusive behaviors such as slapping, hitting, or spanking as physical abuse (Gracia & Herrero, 2008). Therefore it may be expected that the prevalence of physical abuse is higher in cultures in which physical discipline is an acceptable strategy, such as in Africa and Asia (Mbagaya, 2010; Meston, Heiman, Trapnell, & Carlin, 1999).

Poverty or low socioeconomic status (SES) might be another factor contributing to a higher prevalence of child physical abuse, because a lack of resources causes stress for parents and this could in turn increase the use of harsh and abusive physical discipline (Deater-Deckard, Bates, Dodge, & Pettit, 1996; Dodge, Pettit, & Bates, 1994; Mesman, Van IJzendoorn, & Bakermans-Kranenburg, in press). A large family size increases family stress, is a strain on family resources (Euser, Van IJzendoorn, Prinzie, & Bakermans-Kranenburg, 2011), and is found to be related to child physical abuse (Stith et al., 2009). Both poverty and large family sizes are more common in low-resource than in high-resource countries. Accordingly, we may expect to find higher prevalences of child physical abuse in low-resource countries compared to high-resource countries.

On the more positive side, Korbin (1991) notes that the embeddedness of child rearing in social networks, which is common in many parts of the world, may serve as a protective factor

against maltreatment. Social networks provide opportunities for assistance with child rearing tasks, diminishing the likelihood of harsh parenting. Further, unwanted children, who are at higher risk for maltreatment than children who are wished for, can be informally fostered or adopted by members of the social network. Lastly, the regular involvement of others in child rearing will not only aid in conserving acceptable boundaries of child rearing methods and goals, but also better allow for interventions across families when these boundaries are crossed, thus reducing the likelihood of maltreatment. In contrast, and for the opposite reasons, isolation of families has been found to be a risk factor for child maltreatment in general and physical abuse in particular (for a review see Cicchetti & Valentino, 2006), as has single parenthood (Brown, Cohen, Johnson, & Salzinger, 1998; Stith et al., 2009).

## THIS STUDY

Although cultural differences in the prevalence of child physical abuse might exist, it is not clear how often child physical abuse occurs in different parts of the world. The current meta-analysis was conducted with the specific aim of providing an estimate of the worldwide prevalence of child physical abuse, focusing on possible differences based on ethnicity and on geographical areas of origin of the samples. In addition, the influence of other sample characteristics and methodological factors on the reported prevalence of child physical abuse was examined.

## METHOD

### Literature search

Three search methods were used to identify eligible studies, published between January 1980 and January 2008. First, we searched the electronic databases PubMed, Online Contents, Picarta, ERIC, PsycINFO, and Web of Science for empirical articles using the terms *prevalence* and/or *incidence* combined with one of the following terms: (*child\**) (*physical*) *maltreatment*, (*physical*) *abuse*, and (*physical*) *victimization*. Second, we electronically searched the specialized journals *Child Abuse and Neglect* and *Child Maltreatment* with the same terms as mentioned above. Third, the references of the papers, dissertations, and book chapters that were collected were searched for relevant studies, as were other reviews and meta-analyses on physical abuse. Studies were

included if the prevalence of physical abuse was reported (a) in terms of proportions at child level (excluding studies only reporting estimates at the family level), (b) for victims under the age of 18 years, in (c) nonclinical samples, and (d) if sufficient data were provided to determine this proportion as well as the sample size.

If different publications reported on the same sample or on overlapping samples, the publication providing the maximum of information was included in the meta-analysis. Thus, the independence of samples and the inclusion of every participant only once in the meta-analysis were ascertained. When possible and necessary, the coding form for the study was supplemented with information from the other, excluded, publication(s) on the same sample. When a publication reported the prevalence of physical abuse for more than one sample separately, for example for male and female participants or for participants of different ethnicities, these subsamples were treated as independent studies. This procedure yielded 111 publications, published from 1986 to 2007, covering reports on the prevalence of physical abuse for 168 samples including 9,698,801 participants. The publications are listed in the References below, and are not necessarily referred to individually in the text.

### Data extraction

We coded two types of moderators: sample characteristics and procedural moderators. *Sample characteristics* comprised gender (male, female, mixed), the country and the geographical area from which the sample originated (Africa, Asia, Australia and New Zealand, Europe, North America, South America), the predominant ethnicity of the sample for the subset of studies originating from the USA and Canada (African American, Asian, Caucasian, or Hispanic), the level of economic development of the sample's country of origin (high-resource or low-resource according to the World Economic Outlook Database; International Monetary Fund, 2010), the type of sample (cohorts, college samples, high school samples, samples originating from a specific occupational group, and populations), and in case of self-report, who the respondent was (adults or children reporting on their own abuse experiences, or parents reporting on the abuse experiences of their children).

*Procedural moderators* included the following variables: the type of evidence used to determine physical abuse (self-report—scored also

when parents reported on the abuse experiences of their children—*versus* informant, based on clinical judgment, medical evaluation, or jurisprudence), the definition of physical abuse that was used compared to the definition used in the third National Incidence Study (Sedlak, 2001), resulting in two categories (stricter than or according to NIS vs. broader than NIS), the period of prevalence for which respondents were asked to report their physical abuse experiences (0 up to 12, 0 up to 18, limited period up to one year; each participant was included in a single category), the type of instrument used for the study (face-to-face interview, telephone interview, paper-and-pencil questionnaire, or computerized questionnaire), whether the instrument used was validated or not, the sampling procedure (convenience, modified randomized, or randomized), and the continuous variables sample size, response rate, number of questions used to establish physical abuse, and year of publication (see Stoltenborgh, Van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011, for a similar coding system).

Agreement between the coders for moderators and outcome variables was satisfactory (mean kappa for categorical variables .74, percentage agreement on average 90%; mean intraclass correlations for continuous variables .92).

### Meta-analytic procedures

The meta-analysis was performed using the Comprehensive Meta-Analysis (CMA) program (Borenstein, Rothstein, & Cohen, 2005). For each study, the proportion of abused children was transformed into a logit event rate effect size and the corresponding standard error was calculated (Lipsey & Wilson, 2001). After the analyses, logits were retransformed into proportions to facilitate interpretation of the results. The outcome was the proportion of children physically abused. Combined effect size analyses were carried out both including and excluding one outlying physical abuse logit event rate (for the China sample in Ross et al., 2005), with similar results. Therefore, results are reported including this outlier. Two outlying sample sizes within the set of self-report studies were Winsorized (Ackard & Neumark-Sztainer, 2002; Young, Hansen, Gibson, & Ryan, 2006).

Significance tests and moderator analyses were performed through random effects models (Borenstein, Hedges, & Rothstein, 2007). Random effects models allow for the possibility that there are random differences between studies

that are associated with variations in procedures, measures, or settings that go beyond subject-level sampling error and thus point to different study populations (Lipsey & Wilson, 2001; Hedges & Olkin, 1985). To test the homogeneity of the overall set and specific sets of effect sizes, we computed  $Q$ -statistics (Borenstein et al., 2005). In addition, we computed 95% confidence intervals (CIs), again based on random estimates, around the point estimate of each set of effect sizes.  $Q$ -statistics and  $p$ -values were also computed to assess differences between combined effect sizes for specific subsets of studies grouped by moderators. Again, the more conservative random effects model tests were used. Contrasts were only tested when at least two of the subsets consisted of at least four studies (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003). For continuous moderators, Fisher's  $Z$  scores were used in weighted least squares metaregression analyses.

We used the "trim and fill" method (Duval & Tweedie, 2000a, 2000b) to calculate the effect of potential publication bias on the outcome of the meta-analysis. Using this method, a funnel plot is constructed of each study's effect size against its precision (usually plotted as  $1/SE$ ). These plots should be shaped like a funnel if no publication bias is present. However, since smaller studies and studies with nonsignificant results are less likely to be published, studies in the bottom left-hand corner are often omitted (Duval & Tweedie, 2000b; Sutton, Duval, Tweedie, Abrams, & Jones, 2000). We used the logit of the reported prevalence as effect size. The  $k$  rightmost studies considered to be symmetrically unmatched were trimmed. The trimmed studies can be replaced and their missing counterparts imputed or "filled" as mirror images of the trimmed outcomes. This then allows for the computation of adjusted overall effect sizes and confidence intervals (Gilbody, Song, Eastwood, & Sutton, 2000; Sutton et al., 2000).

## RESULTS

### Combined prevalence

The combined prevalence of physical abuse for the total set of studies ( $k = 168$ ,  $N = 9,643,299$ ) was 17.7% (95% CI: 13.0%–23.6%;  $p < .01$ ). The set of studies was heterogeneous,  $Q(167) = 613,752.27$ ;  $p < .01$ . We conducted a moderator analysis contrasting self-report studies with studies based on informants and medical evaluation, which was significant,  $Q(1) = 27.59$ ;  $p < .01$ . The combined



prevalence for informant studies was 0.3% (95% CI: 0.0%–2.0%;  $p < .01$ ;  $k = 11$ ;  $N = 9,448,634$ ;  $Q(10) = 568,212.47$ ;  $p < .01$ ). The combined prevalence for the set of self-report studies was 22.6% (95% CI: 19.6%–26.1%;  $p < .01$ ;  $k = 157$ ,  $N = 194,665$ ;  $Q(156) = 36,444.67$ ;  $p < .01$ ). As the confidence intervals of self-report studies and studies based on informants did not overlap, these sets of studies were treated as representing separate populations of studies. Within the set of informant studies, moderator analyses were not possible due to the small numbers of studies. Therefore, we report the results of the moderator analyses for the set of self-report studies only. The subsets of all moderator analyses remained heterogeneous.

Duvall and Tweedie's (2000a, 2000b) trim and fill method revealed no asymmetry in the funnel plots for self-report studies, implying that publication bias is unlikely.

### Sample characteristics

The results of all moderator analyses are reported in Table 1. *Gender* was not a significant moderator, indicating that physical abuse occurs at approximately the same rate for boys and girls. No significant results were found for the *geographical origin* of the sample or for predominant *ethnicity* in the North American samples, nor for the level of *economic development* of the country of origin of the sample. Figure 1 shows the prevalence per country of origin of the samples, which was combined for countries for which more than one study had been included. It should be noted that large differences in the reported prevalence of child physical abuse seem to exist within the continents. Unfortunately, we were not able to test this contention through moderator analyses due to the small number of studies from many countries. These results indicate that the prevalence of physical abuse does not seem to depend on where the sample comes from nor on the predominant ethnicity of the sample.

The combined prevalence significantly differed between the various *types of samples*. Pairwise post-hoc contrasts indicated that the physical abuse prevalence reported for college samples was significantly higher than the prevalence reported for cohort samples, high school samples, samples from specific occupational groups, and population samples. This is shown in Figure 2 (top left). Whether the *respondents* were adults or children reporting on their own abuse experiences or parents reporting on the abuse

experiences of their children also significantly influenced the reported prevalence. As can be seen in Figure 2 (top right), children reported a significantly lower prevalence than did adults (about themselves) and parents (about the experiences of their children).

### Procedural moderators

An overview of the moderator analyses is presented in Table 1. The *definition* of physical abuse that was used in studies significantly influenced the reported prevalence. As is shown in Figure 2 (bottom left), studies using a definition stricter than or according to NIS-3 (Sedlak, 2001) yielded a lower combined prevalence than studies using a definition that was broader than the NIS-3 definition. In addition, differences in prevalence were found based on the *period of prevalence*. Pairwise post-hoc contrasts indicated that the reported prevalence was lower when a limited time period of up to one year was used than when physical abuse experiences were reported between the ages of 0 and 18 years (see Figure 2 [bottom right]). No significant results were found for the *type of instrument* that was used, be it face-to-face interviews, telephone interviews, paper-and-pencil questionnaires, or computer questionnaires. The reported prevalence was not significantly influenced by whether studies used *validated* or non-validated instruments, nor did it matter whether the *sampling procedure* was randomized or not.

Metaregression analyses revealed that neither the *response rate* nor the *sample size* exerted a significant influence on the reported physical abuse prevalence (both slopes = 0.00;  $z = 1.05$  and  $-0.56$  respectively;  $p = .29$  and  $.58$  respectively). The more recently the study was published, the lower was the reported physical abuse prevalence (slope =  $-0.10$ ;  $z = 4.51$ ;  $p = 0.00$ ). A higher number of questions was related to a higher reported prevalence (slope =  $0.17$ ;  $z = 7.73$ ;  $p = 0.00$ ).

## DISCUSSION

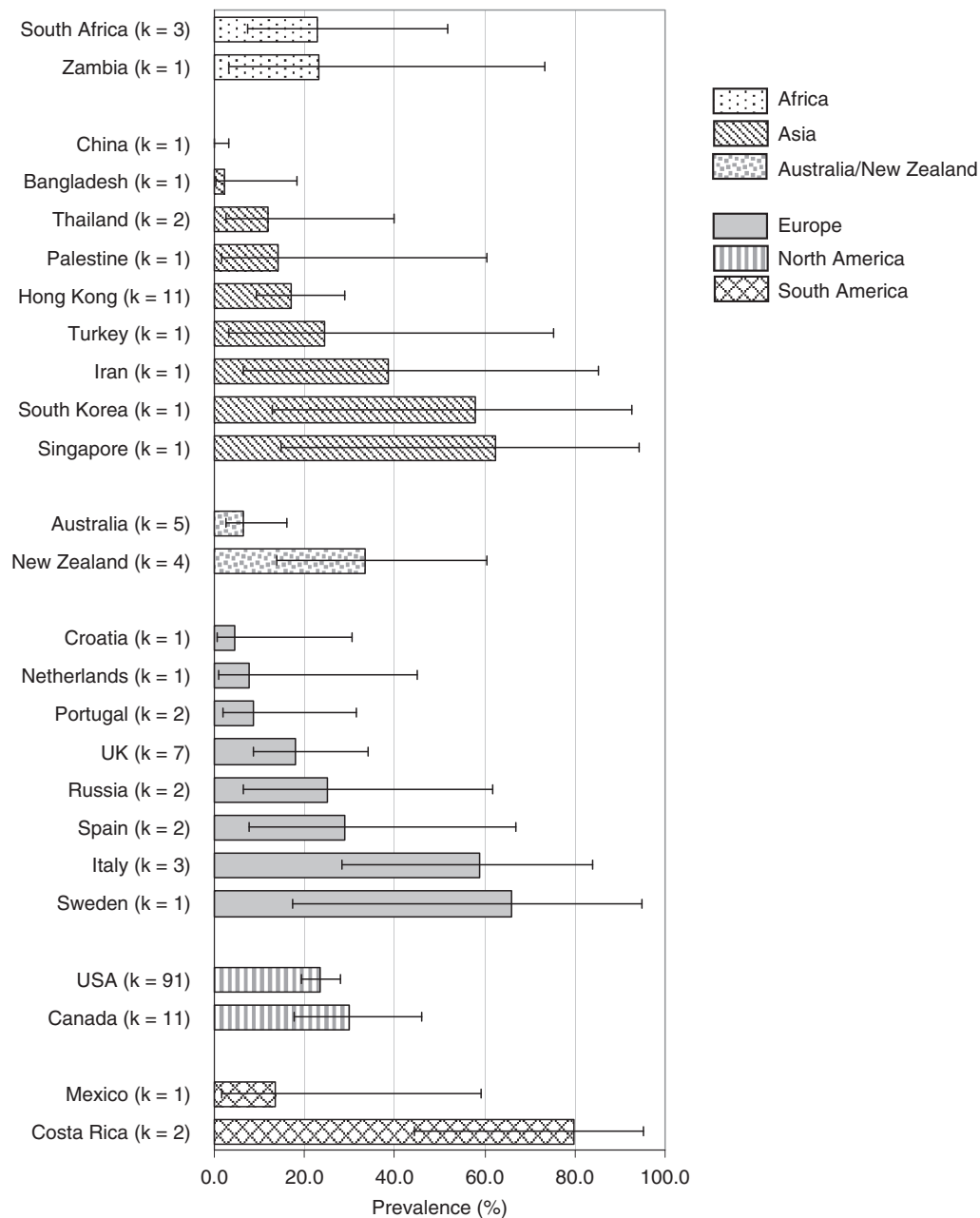
The global prevalence of self-reported child physical abuse, based on 157 independent samples with a total of 250,167 participants, was estimated to be 22.6% or 226 per 1000 children, with no apparent gender differences. Differences in prevalence rates for child physical abuse were found for four procedural moderators (definition of child physical abuse; period of prevalence; number of questions; year of publication) and two sample characteristics (type of sample; type of respondent). The highest

TABLE 1

Results of moderator analyses for self-reported physical abuse: Number of studies and participants, and combined prevalence including 95% confidence intervals (CI)

		<i>k<sup>c</sup></i>	<i>N<sup>e</sup></i>	<i>Combined prevalence (%)</i>	<i>95% CI</i>	<i>Q heterogeneity</i>	<i>Contrast Q<sup>d</sup></i>
<b>Overall estimate</b>		157	194,665	22.6**	19.6–26.1	36,444.67**	
<b>Sample characteristics</b>							
<i>Gender</i>							1.42
	Female	74	77,518	22.3**	18.0–27.3	8,394.51**	
	Male	45	48,340	24.8**	18.9–31.7	7,799.27**	
	Mixed	33	63,198	13.8**	13.8–26.3	16,024.41**	
<i>Continent</i>							4.46
	Africa	4	4,626	22.8*	8.5–48.3	29.33**	
	Asia	20	13,023	16.7**	10.6–25.3	2,307.45**	
	Australia	9	14,314	14.3**	7.2–26.5	2,133.46**	
	Europe	19	16,285	22.9**	14.9–33.6	3,365.65**	
	North America	102	144,794	24.0**	20.1–28.5	26,347.57**	
	South America	3	1,623	54.8	24.2–82.1	548.60**	
<i>Ethnicity<sup>b</sup></i>							0.39
	African American	7	2,673	24.3**	13.6–39.4	292.07**	
	Asian	3	542	72.7	47.2–88.8	12.19**	
	Caucasian	63	95,361	22.9**	19.0–27.4	11,043.79**	
	Hispanic	2	198	40.0	14.5–72.3	71.18**	
<i>Economic development</i>							0.84
	High-resource	140	180,805	23.2**	19.9–26.9	34,786.15**	
	Low-resource	17	13,860	18.5**	11.4–28.7	1,344.02**	
<i>Type of sample</i>							27.57**
	Cohort	17	24,334	17.9**	11.2–27.3	2,447.54**	
	College	39	25,090	40.3*	31.9–49.2	7,696.16**	
	High school	22	18,817	17.6**	11.7–25.6	1,101.20**	
	Occupational group	10	18,038	12.5**	6.5–22.8	2,727.61**	
	Population	56	91,248	20.2**	15.8–25.5	13,124.72**	
<i>Respondent</i>							11.60**
	Adult	111	122,134	24.6**	20.8–28.8	26,208.69**	
	Child	34	58,680	14.5**	10.4–20.0	4,617.05**	
	Parent	12	13,851	34.2*	21.4–49.8	1,794.94**	
<b>Procedural moderators</b>							
<i>Definition</i>							17.24**
	NIS or stricter	101	135,244	22.7**	19.0–27.0	27,147.91**	
	Broader than NIS	28	33,434	45.1	34.9–55.8	3,936.70**	
<i>Period of prevalence<sup>d</sup></i>							6.41**
	Limited period up to 1 year	17	16,378	13.1**	8.0–20.8	2,811.21**	
	0–12	6	6,607	31.4	15.3–53.7	1,512.23**	
	0–18	122	164,432	23.3**	19.8–27.3	28,845.79**	
<i>Type of instrument</i>							5.66
	Interview face-to-face	30	31,230	16.7**	11.3–23.9	6,043.31**	
	Interview telephone	19	31,486	28.5**	18.6–41.0	3,277.69**	
	Questionnaire	89	104,267	25.1**	20.6–30.3	24,522.34**	
	Questionnaire computer	8	24,110	16.7**	7.9–32.1	1,310.81**	
<i>Instrument validated</i>							3.23
	No	71	112,163	20.0**	16.0–24.8	15,177.78**	
	Yes	81	80,583	26.1**	21.5–31.3	19,286.39**	
<i>Sampling procedure</i>							3.37
	Convenience	87	70,843	25.8**	21.2–31.0	18,240.81**	
	Modified random	31	60,755	18.8**	13.1–26.1	6,308.13**	
	Random	36	59,584	20.2**	14.6–27.3	10,570.18**	

\* $p < .05$ ; \*\* $p < .01$ ; <sup>a</sup>subgroups with  $k < 4$  or 'other' categories are excluded from contrasts; <sup>b</sup>for the subset of studies originating from the USA and Canada; <sup>c</sup>differences in totals of  $k$  are due to the exclusion from the pertinent analysis of studies with missing values; <sup>d</sup>all participants are included in a single category; <sup>e</sup>the sample sizes of Ackard and Neumark-Sztainer (2002;  $n = 40,020$ ) and Young et al. (2006;  $n = 41,482$ ) were winsorized to 12,500 and 13,500 respectively, leading to a reduction of the total number of participants from 250,167 to 194,665; differences in totals of  $n$  are due to the exclusion of studies with missing values.



**Figure 1.** Reported prevalence of physical abuse per country, including 95% confidence intervals and number of studies per country.

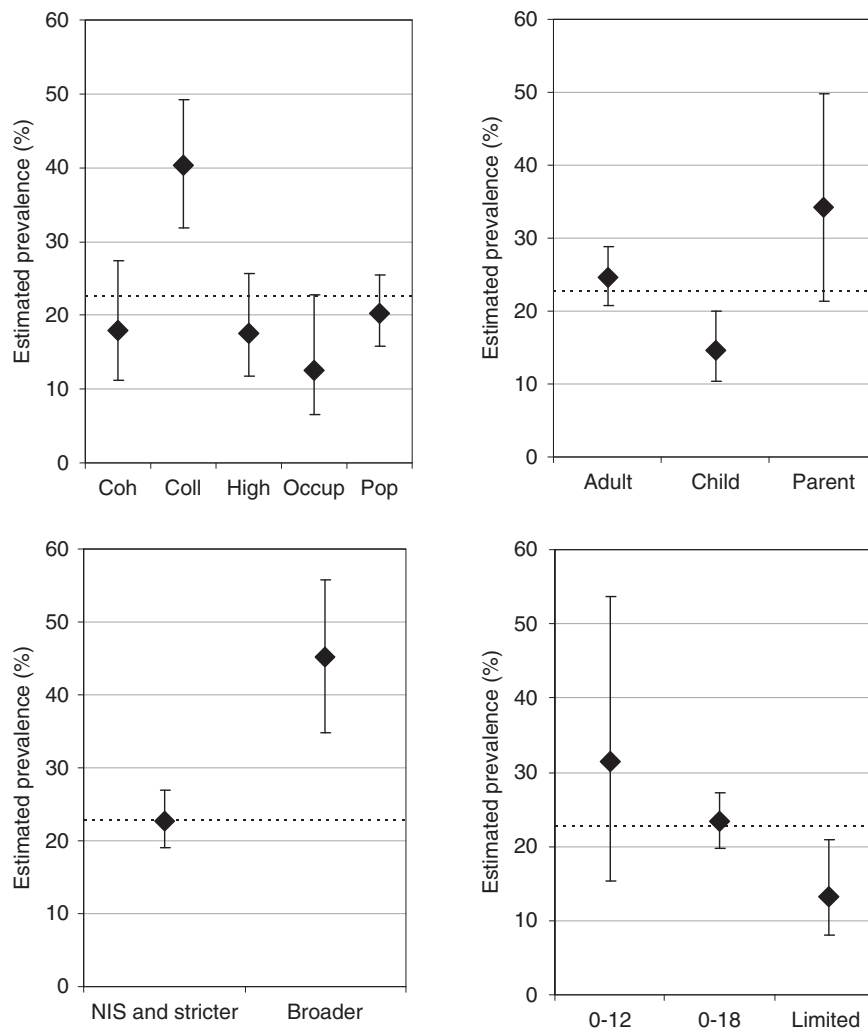
combined prevalence rates were found in studies using a definition of child physical abuse that was broader than the definition used by NIS-3 (Sedlak, 2001), studies measuring physical abuse during a period of 0–18 years, studies using college samples, and studies in which adults were the respondents. Moreover, the prevalence of child physical abuse increased when more questions on child physical abuse were used, and decreased with more recent years of publication. As is indicated by the persistent heterogeneity of subsets of moderator analyses, the methodological factors that were investigated did, however, not fully explain the

large variation in prevalence rates reported in individual studies. In other words, there were large differences between prevalence rates reported in the individual studies, and these differences could not be fully explained by our moderators.

### Geographical origin of the samples and ethnicity

No differences in the reported prevalence of physical abuse existed between different





**Figure 2.** The influence on estimated prevalence of (top left) type of sample, (top right) respondent, (bottom left) definitions of child physical abuse, and (bottom right) period of prevalence. The dotted lines represent the overall mean prevalence. Coh = cohorts; Coll = college samples; High = high school samples; Occup = samples originating from a specific occupational group; Pop = population samples.

geographical areas of origin of the samples. The null effect of geographical area of origin of samples was underlined by the absence of differences in reported prevalence between ethnicities within North America. The lack of differences in the prevalence of child physical abuse between continents might have several causes. Of course this finding may reflect an absence of systematic cultural-geographical differences in the occurrence of child physical abuse. In fact, the large variability of prevalence rates within the continents may have overshadowed differences between continents and between ethnicities (see Figure 1). The predominance of intracultural differences over intercultural differences has been found in other domains of child development as well (e.g., Van IJzendoorn & Kroonenberg, 1988).

In addition, the influence of the geographical area may have been confounded by other sample characteristics and procedural factors with a significant influence on the prevalence of physical abuse. For example, the high prevalence in South America could be partly explained by the use of only college samples and by a definition of physical abuse that was broader than NIS-3 (Sedlak, 2001) in all three South American studies, two methodological factors that were related to a higher prevalence of physical abuse in moderator analyses. This may have resulted in an overestimation of the prevalence of physical abuse in South America. The opposite argument can be made for Asia. Asian studies used mostly children as respondents, a limited time-period of prevalence for the assessment of physical abuse, and a small

number of questions. These factors were all associated with a low prevalence of child physical abuse and might have contributed to an underestimation of the prevalence in Asia.

The large difference between Asian samples and Asian-American samples may be explained in a similar fashion. The three Asian-American studies used college samples, used adults as respondents, used a definition of physical abuse that was broader than NIS-3, measured physical abuse during a period of 0–18 years, and used a large number of questions; all factors that were related to a high prevalence of physical abuse in moderator analyses.

Taken together, these findings emphasize the absence of cultural–geographical differences in the prevalence of physical abuse as indicated by the lack of influence on the prevalence of both ethnicity and continent of origin of the samples. In order to disentangle the influence of culture and procedural factors on the prevalence of child physical abuse, we recommend that future cross-cultural studies use similar or systematically differing methods, procedures, and instruments to measure the prevalence of child physical abuse in similar samples originating from different cultures. When conducting such studies, an effort should be made not to confound culture (defined as the shared values, behaviors, beliefs, norms, traditions, customs, and ideas of subgroups of individuals; Elliott & Urquiza, 2006), ethnicity (defined as membership in a group based on common ancestry, heritage, culture, or history; Elliott & Urquiza, 2006), and level of economic resources (Bakermans-Kranenburg, Van IJzendoorn, & Kroonenberg, 2004). Regrettably, the lack of information about the samples' SES in many available studies on child physical abuse prevented us from investigating the influence of SES.

## CONCLUSION

The current meta-analysis shows that child physical abuse is a widespread, global phenomenon, affecting the lives of many children all over the world. No country or continent seems to be exempt from the rule that children are far too often victims of family violence. This is in sharp contrast with the United Nations Convention on the Rights of the Child, which explicitly states that children should be protected from any type of maltreatment. The need for more crosscultural research is especially salient in Africa and South America, as these parts of the world lag behind

when it comes to investigating (the prevalence of) child physical abuse.

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