RESEARCH ARTICLE

Attitudes of women in Cambodia towards child physical abuse

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Abstract

Background: This study attempted to explore the women's attitude towards child physical abuse in relation to the respondent's background factors, personal issues and autonomy.

Methods: This was a cross-sectional study of 18,749 women of reproductive age (15-49 years) using 2010 Cambodia Demographic and Health Survey. Chi-square tests and bivariate analyses were performed.

Results: A significant proportion of women supported beating physically abusing sons (69.2%) and daughters (67.2%). Rural, non-Buddhist, those with no or primary education, poverty, seasonal or occasional employment seem to be risk factor for supporting child physical abuse by women (in bivariate analysis). Age, education and household economic status of the women are significantly relevant for child physical abuse (in bivariate analysis). Women who came from male-headed households more often supported beating their children. Female autonomy is an important factor for child physical abuse. Women who justify physical abuse towards wives were also generally supportive of child physical abuse.

Conclusions: The current study provides knowledge about maternal factors such as age, education, economic status, rural/urban dwelling, two or more lifetime partners and autonomy in the supporting of beating sons and daughters. Further attention needs to be paid to increasing women's education and autonomy in Cambodian family life.

Keywords

children, abuse, physical punishment, autonomy, mother, Cambodia

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Introduction

Child abuse is a major public health problem¹. Child abuse is now alarmingly widespread in East Asia and the Pacific region, and it has immediate, long lasting and devastating effects on children². Among other forms of abuse, physical abuse is more common among Asian and Pacific families than families from other parts of the world³⁻⁵. The overall prevalence rates of physical abuse range from 10 to 30.3% in the East Asia region. Boys are more exposed of physical abuse than girls, which can include physical punishment and severe physical contact violence². In Cambodia over half of all children have experienced physical abuse⁶.

Both abuse and neglect negatively affect the development of a child's brain⁷. It is well established that physical abuse has negative impact on physical, psychological and social and behavioral health of children⁸. This can ultimately affect the child's long-term health-related quality of life and lead to problems such as depression, substance abuse, anxiety and suicidal behavior, increased risk of sexually transmitted diseases, and even cancer⁹⁻¹². Adolescents who have been physically abused are more likely to show increased of externalizing problems and criminal offending^{13,14}. In addition, adolescents and adults who had experienced physical and/or sexual abuse in their childhood are four times more likely to have suicidal ideation, than their peers who had not experienced such abuses². Furthermore, among adults who had been physically abused as children there is a higher degree of aggression compared with adults who had not been abused^{13,14}. Physical punishment of children are very frequent in East Asia and the Pacific region including Cambodia². A study of low- and middle-income countries indicated that more than half of children were subjected to some kind of violent physical punishment, as the adults believe that such physical abuses of the children are not harmful¹⁵. However, the experts have strongly argued that child physical punishment such as beating should not be believed to be a minor form of physical abuse, as it causes several physical and psychological health problems¹⁶.

Many studies have explored the parental risk factors of child abuse. Such risk factors include poverty, low family income and socioeconomic status. Lower level of parental education, large families, younger parental age, substance abuse and mental illness in parents are also contributing factors of child abuse. Adults having been maltreated in their childhood, intimate partner violence, parents' divorce, or violence between other family members are identified risk factors for child abuse^{1,4,13,17}. Furthermore, low parental self-esteem, depression, psycho-pathology, and social isolation are also positively related to child physical abuse^{18,19}. Moreover, a recent study suggested that men who abused their wives were also frequently abusive to their children²⁰. Therefore, parents' background and personal experiences can influence the likelihood of child abuse. However, we have no specific information how Cambodian parents are perpetrating, though child abuse prevalence is very high^{2,16}. African studies and Indian study have indicated that autonomy is important factor for child abuse, while we have no information from Cambodia^{1,16,18}. Therefore, in this context, considering the mother's role within family and towards her children, the current

study has focused on women's background factors, personal issues and autonomy for household decision-making in relation to child physical abuse.

It has been narrated that mothers are twice more likely to psychologically or physically abuse their children than fathers²¹. Cambodian refugee mothers in America who suffered from depression frequently abused their children²². Previous research found that maternal stress has a direct role in the physical abuse of children²³. Another study conducted among Korean immigrant mothers found that the amount of time spent with children, experience of corporal punishment as a child, children's gender and age, family acculturation conflicts, mothers' age, and length of time in US are the macro-level variables that affect Korean immigrant mothers' attitudes toward child physical abuse²⁴. Existing studies of abusing Cambodian children are mainly focused on immigrant families in high income countries⁴. To better understand the situation, a national representative study is highly warranted¹. Cambodia has a very high prevalence of child physical abuse, including child punishment at home. UNICEF has strongly advocated for preventing child abuse at home¹⁶. Women are leading factors in household issues, especially in Southeast Asian countries, such as Cambodia. However, to our knowledge, no research has been conducted to reveal women's attitude towards child abuse at home in Cambodia⁴. Therefore, the objective of this study was to explore women's attitude towards child physical abuse in relation to the respondent's background factors, personal issues and autonomy.

Methods

The study employed 2010 Cambodia Demographic and Health Survey (CDHS-2010) data²⁵. In total, 18,749 women of reproductive age (15–49 years) were interviewed between 23 July 2010 and 20 January 2011 in 19 national sampling domains throughout Cambodia (14 individual provinces: Banteay Mean Chey, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kandal, Kratie, Phnom Penh, Prey Veng, Pursat, Siem Reap, Svay Rieng, Takeo, and Otdar Mean Chey. Five groups of provinces: Battambang and Pailin, Kampot and Kep, Preah Sihanouk and Koh Kong, Preah Vihear and Steung Treng, and Mondol Kiri and Rattanak Kiri).

The sampling frame used two stratified stages (more details available in CDHS-2010)²⁵. Initially, stratification was made by separating 19 domains into urban and rural areas. Then from each of 19 sampling domains one rural area and one urban area were considered totaling 38 sampling strata. Initially, from these 38 sampling strata, 611 enumeration areas (EAs) were selected with a probability proportional to size (PPS) based on the 2008 Cambodia General Population Census. In total, 191 EAs from the urban areas, and 420 EAs from the rural areas were selected. Each household was then listed within each selected EA. From the list, 24 households in each urban EA and 28 households in each rural EA were randomly selected, totaling, 16,344 households.

However, 15,829 households had potential respondents during data collection. In these households 19,237 women of reproductive age (15–49 years) who were the usual residents

of the selected households, or visitors who had spent the previous night before the survey, were identified as being eligible for individual interview. Finally, 18,749 women responded to the interview questionnaires (response rate 97.5%).

In total, 109 field staff received 22 days training and 4 days field practice. Each field team was comprised of a team leader, a field editor, three female interviewers, and one male interviewer. Data processing personnel had three data processing supervisors, 10 office editors/coders, 19 data entry operators. In total 37 data entry staff had received necessary classroom training. To minimize data entry error, all questionnaires were entered twice in to the data entry system.

Variables of interest

In the survey, three questions were asked regarding the women respondents' justification towards parental beating of sons and three questions addressed the parental beating of daughters. "In your opinion, is a parent justified in hitting or beating his son/daughter for the following reasons:

- i) disobeying them: yes/no
- ii) being impolite: yes/no
- iii) doing something embarrassing to the family: yes/no

In the current study, main variables were constructed merging all three reasons "justified beating of son by parents" and "justified beating of daughter by parents".

As independent variables, respondents background factors, personal issues and their autonomy issues are considered in the study. Background factors include: age (seven age groups: 15–19, 20–24, 25–29, 30–34, 35–39, 40–45 and 45–49 years); residency (rural/urban); religion (Buddhist/non-Buddhist); education (No-education, primary, secondary and higher); economic status (poorest, poorer, middle, richer and richest); employment status (all round the year, seasonal and occasional) and sex of household head (female or male) and if the respondent was covered by health insurance (yes/no). Personal issues of the respondents consisted of eight variables: exposure to media, such as reading newspapers, listening to radio or watching television (yes/no); sons/daughters who lived at home; sons/daughters who have died; husband lived with the respondent (living with her/lives elsewhere); justified wife beating (yes/no); number of partners (one/two or more). Autonomy of the respondents was measured by five questions: Who decided on spending money; decision making on healthcare; decision making on large household purchases; decision making on visits to family or relatives; decision making on what to do with the money the husband earns. All questions have had three options: respondent alone; respondent and husband/partner jointly or partner or other person without the respondent.

Statistical analyses

We used proportions and chi-squared tests to explore the cross relationships between attitudes towards beating sons/daughters and the independent variables. Bivariate logistic regressions were performed to study the potential associations between the

justification of child beating by parents and the respondents' socioeconomic factors, personal issues and autonomy. IBM SPSS version 22 was used for the data analysis.

Ethical issues

This study used secondary data and hence does not need any ethical permission.

Results

Of the 18,749 participants, a significant proportion of women supported physically abusing sons and daughters (69.2% and 67.2%). There is an association between age and supporting beating children. Women who lived in rural area, who had no education, and who were poorest, most often supported beating sons and daughters ($p < 0.001$). This was also more prevalent among non-Buddhist women. In addition, full- or part-time employment of women was associated with supporting beating sons and daughters ($p < 0.001$). Finally, women who came from male-headed households more often supported beating their children (Table 1).

Support for beating sons and daughters was more prevalent among those parents for whom health care service costs were covered by insurance ($p < 0.001$). A higher proportion of women who had no exposure to media supported beating sons and daughters. A significant proportion of women with at least one dead son/daughter supported beating children. In addition, a higher proportion of women who justified wife beating more often supported beating their child ($p < 0.001$). Finally, women who had two or more lifetime partners more often supported beating sons and daughters ($p < 0.001$) (Table 2).

A significant proportion of women who could not make decisions about their own healthcare, large household purchases, visits to family or relatives or how to spend their husband's money most often supported beating sons and daughters ($p < 0.001$) (Table 3).

Multivariate analyses

Compared with the oldest age group, women between 20–34 years were more likely to support beating sons and daughters. Uneducated mothers were more likely to support beating of sons (odds ratio (OR) 2.8187, CI 1.936–4.099; $P < 0.0001$) and to support beating daughters (OR 2.644, CI 1.825–3.829; $P < 0.0001$) compared to higher educated women. In addition, compared with the richest women, the poorest mothers were more likely to support child beating (son: OR 1.53, CI 1.205–1.943; daughter: OR 1.432, CI 1.134–1.809). Moreover, women who did not justify wife beating were less likely to support child beating (son: OR 0.194, CI 0.172–0.219; daughter: OR 0.206, CI 0.184–0.232). Furthermore, women who had the autonomy to take decision about their own healthcare, visiting family or relatives, and on spending husbands' money were less likely to support beating sons and daughters ($p < 0.0001$) (Table 4).

Discussion

This study investigated women's attitudes towards child physical abuse by parents in relation to the women's background factors, personal issues and autonomy. The current work provides

Table 1. Background factors of the respondent women who supported beating of sons and daughters.

Variables	N	Supported beating sons		Supported beating daughters	
		% (n)	P value	% (n)	P value
<i>Age, years</i>			0.03		.009
15–19	3914	70.7 (2767)		68.6 (2686)	
20–24	3170	67.3 (2133)		65.1 (2063)	
25–29	3209	68.1 (2186)		66.0 (2119)	
30–34	2178	70.0 (1526)		68.7 (1496)	
35–39	1993	70.4 (1403)		68.4 (1364)	
40–44	2225	69.4 (1545)		68.1 (1515)	
45–49y	2060	68.3 (12967)		66.2 (1364)	
<i>Residence</i>			<0.001		<0.001
Urban	6073	60.6 (3681)		59.0 (3587)	
Rural	12673	73.3 (9286)		71.2 (9020)	
<i>Religions</i>			<0.001		<0.001
Buddhist	17794	68.8 (12250)		66.8 (11895)	
Non Buddhist	955	75.1 (717)		74.6 (712)	
<i>Education</i>			<0.001		<0.001
No-education	3203	77.2 (2474)		76 (2433)	
Primary	8792	73.6 (6469)		71.6 (6296)	
Secondary	6140	62.2 (3819)		59.9 (3679)	
Higher	614	33.4 (205)		32.4 (199)	
<i>Economic status</i>			<0.001		<0.001
Poorest	3259	77.4 (2521)		75.8 (2471)	
Poorer	3159	76.0 (2401)		74.0 (2339)	
Middle	3240	73.1 (2367)		70.6 (2287)	
Richer	3734	70.0 (2615)		67.6 (2526)	
Richest	5357	57.2 (3063)		55.7 (2984)	
<i>Employment status</i>			<0.001		<0.001
All year	7019	62.7 (4404)		60.6 (4255)	
Seasonal	7472	76.5 (5713)		74.5 (5567)	
Occasional	523	76.3 (399)		75.1 (393)	
<i>Sex of household head</i>			<0.001		<0.001
Male	14232	69.7 (9916)		68.0 (9673)	
Female	4517	67.5 (3051)		65.0 (2934)	
<i>Covered by health insurance</i>			<0.001		<0.001
No	16196	68.0 (11017)		66.0 (10686)	
Yes	2552	76.4 (1950)		75.3 (1921)	

Table 2. Respondent women's personal issues in relation to child abuse (both sons and daughters).

Variables	N	Supported beating sons		Supported beating daughters	
		%	P value	%	P value
<i>Media Exposure</i>			<0.001		<0.001
No	2161	77.5 (1675)		76.1 (1645)	
Yes	16588	68.1 (11292)		66.1 (10962)	
<i>Sons at home</i>			<0.001		<0.001
No	10084	67.8 (6840)		65.8 (6632)	
Yes	8665	70.7 (6127)		69.0 (5975)	
<i>Daughters at home</i>			<0.001		<0.001
No	10197	67.6 (6891)		65.4 (6672)	
Yes	8552	71.0 (6076)		69.4 (5935)	
<i>Sons who have died</i>			<0.001		<0.001
No	17077	68.7 (11740)		66.8 (11409)	
At least one son died	1672	73.4 (1227)		71.7 (1198)	
<i>Daughters who have died</i>			<0.001		<0.001
No	17332	68.8 (11922)		66.9 (11587)	
At least one daughter died	1417	73.7 (1045)		72.0 (1020)	
<i>Husband lives in house</i>			0.18		0.03
Living with her	11008	70.3 (7738)		68.4 (7532)	
Staying elsewhere	520	73.1 (380)		72.9 (375)	
<i>Justified wife beating</i>			<0.001		<0.001
No	9626	52.5 (5058)		50.6 (4869)	
Yes	9119	86.7 (7908)		84.9 (7737)	
<i>Number of partner/s</i>			<0.001		<0.001
One life time partner	11833	69.8 (8257)		67.9 (8036)	
Two or more lifetime partners	1003	75.5 (757)		74.4 (746)	

some new insight in the research concerning the women's demographic factors and supporting beating sons and daughters.

The study found that a significant proportion of women supported beating sons and daughters, and that it was more prevalent among uneducated rural dwellers and the poorest mothers. Women who came from male-headed households more often supported beating their children. Women without media exposure proportionally experienced more physical violence than their peers with media exposure. The first group of women (without media exposure) supports more child physical abuse than the other group (with media exposure). Also, women having two or more lifetime partners more often supported beating sons and daughters.

Previous literature demonstrates a robust connection between poverty and child physical abuse²⁶. The current study also has same findings. Compared with other factors, poverty and low socioeconomic status is consistently associated with child maltreatment and the most severe abuse cases were found among the poorest people^{27,28}. We have found that younger women were more likely to support beating children than older women. In addition, younger parental age, low education, and parental physical-mental health are significant predictors of child maltreatment²⁹. The results of a previous study indicates that families with low socioeconomic status or lower level of income, parental mental illness augments the risk of child abuse and maltreatment³⁰. Our findings have supported the same results in the context of Cambodia. It was also found that mental stress

Table 3. Respondent women's autonomy as associated factors of child abuse (both sons and daughters).

Variables	Supported beating sons			Supported beating daughters	
	n	%	P value	%	P value
<i>Who decides how to spend money</i>			0.74		0.27
Respondent alone	4,867	67.8 (3,301)		65.4 (3,183)	
Respondent and husband/partner	2,368	68.5 (1,622)		66.9 (1,585)	
Partner/other person	123	65.9 (81)		61.8 (76)	
<i>Final say on own health care</i>			<0.001		<0.001
Respondent alone	4,736	68.8 (3,258)		67.5 (3,199)	
Respondent and husband/partner	5,727	69.5 (3,981)		67.2 (3,851)	
Partner/other person	1,070	82.3 (881)		80.7 (863)	
<i>Final say on making large household purchases</i>			<0.001		<0.001
Respondent alone	1,728	75.6 (1,306)		73.6 (1,271)	
Respondent and husband/partner	9,180	68.6 (6,293)		66.9 (6,137)	
Partner/other person	625	83.4 (521)		80.8 (505)	
<i>Final say on visits to family or relatives</i>			<0.001		<0.001
Respondent alone	2,525	74.1 (1,870)		71.5 (1,806)	
Respondent and husband/partner	8,425	69.1 (5,822)		67.5 (5,689)	
Partner/other person	583	73.4 (428)		71.7 (418)	
<i>Final say on deciding what to do with money husband earns</i>			<0.001		<0.001
Respondent alone	5,928	69.6 (4,123)		67.7 (4,013)	
Respondent and husband/partner	4,960	70.6 (3,501)		68.9 (3,415)	
Partner/other person	598	78.1 (467)		76.4 (457)	

because of inadequate housing, overcrowding, lack of social support, and social isolation all increase the risk of abuse among Cambodian refugee families in America⁴. Poor families face challenges in providing adequate child care and supervision.

Although most of the previous studies found little differences in child abuse incidence rates between urban and rural areas, we found that women who live in rural areas supported beating their children more than in urban areas^{22–24,31}. Similarly, another study found that physical and sexual abuse was common among rural dwellers than non-rural dwellers in the USA³².

The present study indicates that women's higher education may be a protective factor for child physical abuse, which is contrary to the existing research, where higher parental education was a risk factor for child physical abuse¹³. Previous studies also indicated that lack of income to meet the family's needs as well as no or lower education augments the risk of child physical abuse in both low- and high-income countries^{33,34}.

We also found that women who experience physical violence more often supported child beating. Previous studies indicated

that domestic violence (DV) enhances the risk of child physical abuse^{17,31}. There is evidence that exposure to physical DV is independently associated with an increased risk of mothers using violent methods to correct child behavior¹. Children from families with a history of DV are at increased risk of physical abuse, resulting a cycle of violence between spouse and child physical abuse^{31,35}.

This study found in the bivariate analysis that women who came from male-headed households often supported beating their child. In the logistic regression this was not significant. Similarly, a prior study found that the rate of female-headed households was negatively associated with abuse rates in African American neighborhoods³⁶.

The results of this study indicate that increased autonomy for women in relation to their own health care and permitting visiting family or relatives and spending husband's money may reduce son and daughter beating. In fact, World Health Organization (WHO) violence prevention meetings have highlighted female empowerment as a way of tackling violence within the family³⁷. Our study has added materials in to that WHO call³⁷

Table 4. Bivariate analysis of associated factors of child abuse (both sons and daughters).

Variables	Supported beating sons			Supported beating daughters		
	ORs	Lower CI	Upper CI	ORs	Lower CI	Upper CI
<i>Age</i>						
15–19 years	1.103	0.762	1.596	1.114	0.777	1.599
20–24years	1.501***	1.193	1.888	1.489***	1.189	1.865
25–29years	1.372***	1.128	1.669	1.336***	1.103	1.619
30–34years	1.381***	1.127	1.691	1.383***	1.133	1.688
35–39years	1.316**	1.072	1.615	1.284**	1.05	1.57
40–44years	1.143	0.937	1.394	1.149	0.945	1.396
45–49year	Ref.			Ref.		
<i>Residence</i>						
Urban	1.114	0.962	1.29	1.12	0.97	1.294
Rural	Ref.			Ref.		
<i>Religions</i>						
Buddhist	1.232	0.885	1.716	1.19	0.858	1.65
Non Buddhist	Ref.			Ref.		
<i>Education</i>						
No-education	2.817***	1.936	4.099	2.644***	1.825	3.829
Primary	2.518***	1.778	3.566	2.237***	1.585	3.157
Secondary	1.861***	1.321	2.622	1.662***	1.184	2.334
Higher	Ref.			Ref.		
<i>Sex of household head</i>						
Male	1.091	0.946	1.258	1.12	0.97	1.294
Female	Ref.			Ref.		
<i>Economic status</i>						
Poorest	1.53***	1.205	1.943	1.432***	1.134	1.809
Poorer	1.468***	1.178	1.829	1.364***	1.1	1.691
Middle	1.296**	1.061	1.584	1.253**	1.029	1.525
Richer	1.413	1.194	1.672	1.374***	1.164	1.622
Richest	Ref.			Ref.		
<i>Employment status</i>						
All year	0.872	0.601	1.263	0.792	0.55	1.143
Seasonal	0.88	0.605	1.279	0.788	0.545	1.14
Occasional	Ref.			Ref.		
<i>Covered by health insurance</i>						
No	0.929	0.775	1.115	1.033	0.917	1.165
Yes	Ref.			Ref.		
<i>Media Exposure</i>						
No	1.024	0.841	1.247	1.064	0.878	1.289
Yes	Ref.			Ref.		
<i>Sons at home</i>						
No	Ref.			Ref.		
Yes	0.976	0.863	1.104	0.994	0.881	1.122

Variables	Supported beating sons			Supported beating daughters		
	ORs	Lower CI	Upper CI	ORs	Lower CI	Upper CI
<i>Daughters at home</i>						
No	Ref.			Ref.		
Yes	1.002	0.887	1.133	1.033	0.917	1.165
<i>Sons who have died</i>						
No	Ref.			Ref.		
At least one son died	1.009	0.842	1.208	0.98	0.822	1.168
<i>Daughters who have died</i>						
No	Ref.			Ref.		
At least one daughter died	1.027	0.845	1.247	1.039	0.859	1.257
<i>Husband lives in house</i>						
Living with her	Ref.			Ref.		
Staying elsewhere	1.075	0.814	1.419	1.274	0.968	1.679
<i>Justified wife beating</i>						
No	0.194***	0.172	0.219	0.206***	0.184	0.232
Yes	Ref.			Ref.		
Number of partner						
One life time partner	Ref.			Ref.		
Two or more lifetime partner	1.045	0.843	1.295	1.114	0.902	1.376
<i>Decision on spending money</i>						
Respondent alone	Ref.			Ref.		
Respondent and husband/partner	0.893	0.765	1.044	0.985	0.846	1.146
Partner/other person	0.635	0.393	1.028	0.664	0.416	1.06
<i>Deciding on own health care</i>						
Respondent alone	Ref.			Ref.		
Respondent and husband/partner	1.186**	1.043	1.349	1.07	0.943	1.214
Partner/other person	1.752***	1.352	2.27	1.628***	1.268	2.09
<i>Deciding on making large household purchases</i>						
Respondent alone	Ref.			Ref.		
Respondent and husband/partner	0.797**	0.667	0.953	0.819**	0.688	0.975
Partner/other person	0.929	0.622	1.388	0.737	0.507	1.071
<i>Deciding on visiting family or relatives</i>						
Respondent alone	Ref.			Ref.		
Respondent and husband/partner	0.915	0.789	1.062	1	0.865	1.156
Partner/other person	0.615***	0.445	0.851	0.709	0.517	0.974
<i>Deciding on husband's money</i>						
Respondent alone	Ref.			Ref.		
Respondent and husband/partner	1.43***	1.222	1.675	1.367***	1.172	1.595
Partner/other person	1.477**	1.02	2.139	1.441**	1.005	2.066

Reference categories are denoted as Ref. ***p<0.001; **p<0.01.

for women empowerment extending the protective factor from DV to child abuse. However, the current study along with other reproductive age group, includes young women aged 15–19 years who are still regarded as minors in many countries. In Cambodia, girls are often married early. In Cambodia, the majority of the teenaged girls have household autonomy such as own monetary spending, health care, visiting friends/relatives and a level of control over husband/partners income²⁵. Previous studies found that maternal stress, psychopathology and depression are closely linked with child abuse^{26,37}. Less autonomy increases maternal stress which in turn increases the likelihood of child physical abuse. There is evidence that personal autonomy and social capital reduces the onset of depression in women, which ultimately reduces child abuse³⁸.

Compared to other national surveys, the CDHS has some important advantages. CDHS is nationally representative; therefore, findings and conclusions are applicable to the whole of Cambodia. CDHS, like other DHS studies, has high response rates. CDHS has used very high-quality interviewer training and standardized data collection procedures. The sampling methodology is well tested in Cambodia and in other low and middle income countries. The study has some limitations. DHS data from many countries advocate that DHS surveys underestimate the extent of violence and abuse. On the other hand, other surveys like multi-country surveys from WHO or UNICEF better estimate the extent of violence and abuse³⁹. Therefore, the current findings might underestimate the extent of violence and abuse. In many cases, more than one respondent from the same household was interviewed. However, each respondent was interviewed separately and privately to minimize response

bias³¹. The cross-sectional analysis does not allow for causal inference. Therefore, the current study is suffering from the same problem indicating the necessity of longitudinal studies to firmly establishing the causality. This study contributed to the literature by identifying relevant women's characteristics in relation to attitude towards child physical abuse. Fathers' characteristics were not assessed in this study. Future studies may include fathers in order to make a full evaluation of familial disciplinary attitudes and behaviors. Also, qualitative studies exploring the attitude towards child physical abuse could be of interest.

The current work provides knowledge about maternal factors such as age, education, economic status, rural/urban dwelling, two or more lifetime partners and autonomy in the supporting of beating sons and daughters. Further attention needs to be paid to increasing women's education and autonomy in their family life in Cambodia.

Data availability

Data for this study were obtained from the DHS Program (Cambodia: Standard DHS, 2010). Access to the dataset requires registration, and is granted to those that wish to use the data for legitimate research purposes. A guide for how to apply for dataset access is available at: <https://dhsprogram.com/data/Access-Instructions.cfm>.

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John D Melville

Division of Child Abuse Pediatrics, Medical University of South Carolina, Charleston, SC, USA

The work presents a cross sectional study of attitudes of Cambodian women regarding corporal punishment.

A few criticisms:

1. The question asked, when translated into English, combines both "hitting" and "beating" which, at least in the American South, considers different degrees of severity. It is unclear to me what behaviors the women considered to be acceptable.
2. The risk factors identified reflect well known risk factors for physical discipline, and the ORs are quite modest. Many of these small distinctions are statically significant due to the large sample size.
3. The reporting of the logistic regression is unclear. The methods section describes "bivariate logistic regression" which in the results section is titled "multivariate analysis." Logistic regression can be used for both bivariate and multivariate analysis but the interpretation of the resulting numbers is very different. The article should clarify how the analysis was performed.
4. The second paragraph of the introduction has little relevance to the paper presented and should be omitted.
5. A somewhat surprising statement: "It has been narrated that mothers are twice more likely to psychologically or physically abuse their children than fathers" is cited to Al Dosari (2017). Upon reviewing the cited paper it is not immediately clear that the citation supports the claim.
6. The authors suggest that increasing female autonomy will decrease child physical abuse. While this may be true, it is inappropriate to infer causation in a cross-sectional survey such as this one.

In summary this paper reports a secondary analysis of a significant effort to survey a representative sample of Cambodian women. The article is of limited significance, only because the results are strongly concordant with prior research. The paper could be improved with a better description of the multivariate analysis and a more focused hypothesis and conclusion.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Partly

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

No

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Child Abuse Pediatrics

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 07 October 2019

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Mina Golestani

Road Traffic Injury Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

It seems very important to choose the subject of child abuse and research in this area; in this way, a few items seemed vague that needed correction:

1. It's not better to look at social status or relationships with friends in relation to confounding factors. It also seems to be effective in child abuse.

2. In Table 2, the authors noted that "media exposure" had a significant relationship with the child abuse. Please explain this clearly.
3. The authors stated that "families with daughters/sons who died" supported beating the child - this is due to many factors regardless of the cause of the child's loss. Please explain the reason for this in the paper.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Partly

Are the conclusions drawn adequately supported by the results?

Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Injury research, of course I have also published an article in this area

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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