



Parental physical discipline in Singapore: Childhood experiences and future behavioral intentions

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ABSTRACT

Previous research has focused on quantifying the prevalence or frequency of physical discipline, with limited attention given to how it is experienced. This study has broadened our understanding by assessing detailed experiences and future behavioral intentions of children who have been physically disciplined in a culture where this practice is normalized. Young adults ($N = 449$) in Singapore reported on their childhood experiences of parental physical discipline, including its prevalence, frequency, and nature of experiences such as physical and emotional aftermath. Further, they reported on their future intention to use physical discipline and their (dis)approval of its ban. Overall, 88% experienced at least one occurrence of physical discipline during their childhood. Inconsistent with prior research suggesting that physical discipline is commonly administered in a controlled manner in cultures where it is normative, the majority of participants who experienced physical discipline (89%) recalled some instances of their parents not being in control of their emotions. Moreover, 63% indicated at least one injury after physical discipline, and negative emotions (e.g., feeling fearful of parents) were common among those who experienced physical discipline. Despite the acknowledgement of the physical and emotional harm of physical discipline, the majority of young adults (71%) did not support a physical discipline ban in Singapore, reflecting deeply ingrained cultural beliefs in the acceptability and effectiveness of physical discipline as a disciplinary practice. The findings contribute to the comprehensive understanding of the nature of physical discipline and highlight the need for the promotion of alternative disciplinary methods.

1. Introduction

1.1. Prevalence and effects of physical discipline

Parental use of physical discipline remains a common parenting practice in many countries, including Canada (Afifi et al., 2022), China (Wang & Liu, 2014), Portugal (Abrahamyan et al., 2024), the United States (Finkelhor et al., 2019; Policastro et al., 2024), Thailand (Watakakosol et al., 2019), and Singapore (Sudo et al., 2023). For example, in a nationally representative sample of the United States, 37% of children aged 17 years old and below were spanked in the past year (Finkelhor et al., 2019). Furthermore, 87% of college students from the United States reported experiencing physical discipline when they were growing up (Policastro et al., 2024). In a large birth cohort study based

in Portugal, over 74% of children aged seven years old self-reported experiencing at least one physical discipline (e.g., spanked on the bottom), and 23% reported experiencing at least one severe or very severe physical assault (e.g., hit on body part other than bottom with hard object) from their parents (Abrahamyan et al., 2024).

A substantial body of research indicates that physical discipline is not only ineffective in promoting positive child development, but is also associated with a range of adverse outcomes, such as increased behavioral problems, worse parent-child relationship, and poor mental health (Durrant & Ensom, 2012; Ferguson, 2013; Gershoff, 2002a; Gershoff & Grogan-Kaylor, 2016). The severity of these negative implications may vary in magnitude, possibly due to factors such as the cultural norms and values surrounding physical discipline and nature of physical discipline experiences (Deater-Deckard & Dodge, 1997; Gershoff, 2002a, 2002b).

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Past studies have primarily focused on the prevalence or frequency of physical discipline (e.g., Sudo et al., 2023; Wang & Liu, 2014), with relatively fewer studies examining how physical discipline is experienced, such as the specific implements of physical discipline (Policastro et al., 2024). Hence, there remains a limited understanding of the nature of physical discipline experiences. The following paragraphs will review two frameworks, the cultural normativeness hypothesis and the process-context model, which outline how physical discipline occurs, beyond its frequency of occurrence. The cultural normativeness hypothesis suggests that cultural norms and beliefs shape the use of physical discipline and its effects (Deater-Deckard & Dodge, 1997), while the process-context model proposes that the impact of physical discipline on child development is mediated by a range of psychological processes in the child (e.g., emotional arousal) and moderated by contextual factors (e.g., parents' emotional state, the location in which discipline occurs, public policy; Gershoff, 2000a, 2002b).

1.2. Experiences of physical discipline

The cultural normativeness hypothesis posits that in societies where physical discipline is commonplace, its use and effects differ significantly from contexts where it is not normative (Deater-Deckard & Dodge, 1997). This hypothesis suggests that parents from cultures where physical discipline is commonplace tend to administer physical discipline in a more controlled manner within a nurturing parent-child relationship, and children are more likely to interpret physical discipline as appropriate and rooted in parental care (Deater-Deckard & Dodge, 1997). Hence, the negative impacts of physical discipline on child outcomes may be less severe in these cultural contexts (Deater-Deckard & Dodge, 1997). However, empirical support for this hypothesis remains inconclusive. Some multinational studies found that perceived normativeness of physical discipline moderated the association between physical discipline and child behavioral outcomes (Gershoff et al., 2010; Lansford et al., 2005; Liu & Wang, 2018), yet other research suggested that perceived normativeness did not significantly moderate these relationships (Cuartas, 2021; Dede Yildirim et al., 2020; Pace et al., 2019). This inconsistency in findings underscore the need for further investigation into the fundamental assumptions of the cultural normativeness hypothesis. Do parents in cultures where physical discipline is normative consistently administer it in a controlled manner? Is physical discipline in these contexts truly embedded within a nurturing parent-child relationship? To evaluate whether the nature of physical discipline varies depending on cultural normativeness, it is essential to move beyond prevalence and frequency and attend to the detailed characteristics of physical discipline experiences.

In addition to the cultural normativeness hypothesis, Gershoff's (2000a, 2002b) process-context model provides a sophisticated framework for understanding how the nature of physical discipline, particularly how it is experienced by children, impacts their development. The model demonstrates that physical discipline triggers complex mediational processes, which in turn contribute to long-term negative consequences in children. When children experience physical discipline, they encounter immediate physical (e.g., bodily pain) and emotional (e.g., fear, anger) responses that become deeply internalized (Gershoff, 2002a, 2002b). The physical pain and emotional distress from physical discipline may paradoxically motivate children to avoid the painful stimulus, which is the parent (Elliot, 2006; Gershoff, 2002a). As such, this can undermine parent-child relationship and hinder the parent's effort to educate their child (Gershoff, 2002a). In addition, repeated exposure to emotional distress from physical discipline is associated with heightened threat response and deficits in the abilities of identifying and regulating one's emotions, which subsequently increase the risk of externalizing and internalizing problems in children (Cuartas et al., 2021; Gershoff, 2016; Khan & Jaffee, 2022; Kim & Cicchetti, 2010). Children's negative immediate reaction to physical discipline is evident in past research where children reported experiencing physical

pain and feeling sad following physical discipline (Breen et al., 2015; Dobbs & Duncan, 2004; Twum-Danso Imoh, 2013; Willow & Hyder, 1998).

Most studies have examined the frequency of physical discipline, but it is also important to assess the physical injuries and emotional responses that accompany physical discipline, as such reactions may provide insight into the immediate consequences of physical discipline and potentially reflect the intensity of physical discipline. These bodily pain and emotional distress are mediational processes that play a role in shaping parent-child relationship and are ultimately linked to child development (Gershoff, 2002a). Additionally, the presence of injuries and intense negative emotions may contradict the assumption underlying the cultural normativeness hypothesis, which suggests that physical discipline occurs within a nurturing parent-child relationship in contexts where it is commonplace.

Experiences of physical discipline include the immediacy, predictability of physical discipline, and emotional state of parent. Past research highlighted that discipline is most effective when it is administered in a consistent and predictable manner (Baumrind et al., 2010; Grusec et al., 2017), while unpredictable physical discipline administered due to parent-centered reasons such as anger was particularly worse for child outcomes (Straus & Mouradian, 1998; Turner & Muller, 2004). Compared to the predictability of physical discipline, the setting where physical discipline takes place has been examined less often, but when physical discipline happens in view of others, children can feel more negative emotions like shame. It is imperative to examine children's experiences with physical discipline, as there is a wide variability in how physical discipline occurs. Children's immediate reactions and emotions following physical discipline are challenging to investigate, due to practical and ethical concerns of asking young children to describe their physical discipline experiences in the immediate aftermath. Our study aimed to fill in this research gap through detailed retrospective accounts of young adults' childhood experiences of physical discipline.

1.3. Future behavioral intentions

Beyond its immediate physical and emotional consequences, childhood experiences of physical discipline can shape long-term attitudes towards physical discipline that contribute to its intergenerational transmission. Individuals who experienced physical discipline during childhood are more likely to use physical discipline on their own children, partly due to their positive attitudes towards physical discipline (Affi et al., 2022; Wang et al., 2018). Childhood experiences of physical discipline shape one's positive attitudes towards physical discipline, shaping one's view of it as an appropriate, acceptable, and effective disciplinary method (Deater-Deckard et al., 2003; Policastro et al., 2024). An eight-year longitudinal study of American children found that children who were spanked by their mothers had already formed favorable attitudes towards physical discipline at the young age of 13 (Deater-Deckard et al., 2003). Similarly, college students in Canada who were physically disciplined as children were more likely to hold positive attitudes towards physical discipline than those who were not physically disciplined (Durrant et al., 2018). Given that college students typically have not had children yet, the researchers were examining their future intention to use physical discipline should they become parents. In a recent study of college students in the United States, 75% reported an intention to use physical discipline on their children in the future (Policastro et al., 2024). A significantly higher proportion of those who were physically disciplined by their parents during childhood (84%) expressed such an intention compared to those who did not experience physical discipline (19%; Policastro et al., 2024). The intention to use physical discipline contributes to the intergenerational transmission of physical discipline as a parenting practice. It is also crucial to examine how the next generation of parents will view a legal ban on the use of physical discipline, as this reflects their broader societal acceptance and

policy attitude.

1.4. Physical discipline in the Singaporean cultural context

In Singapore, parental use of physical discipline at home is lawful (Ngiam & Tung, 2016). A 2010 survey found that 78% of Singaporean adults do not view caning (i.e., hitting using a rattan stick) children as an abusive act, suggesting the widespread acceptance of physical discipline (Lui et al., 2019). A recent study examining the prevalence of physical discipline in a comprehensive birth cohort revealed that over 80% Singaporean children experienced at least one physical discipline from ages 4.5 to 11 years (Sudo et al., 2023).

The prevalence of physical discipline in Singapore is deeply rooted in its unique cultural context. Singapore's resident population comprises 74.3% Chinese, 13.5% Malay, and 9% Indian, reflecting its multi-ethnic character (Department of Statistics Singapore, 2021). This demographic composition, particularly the Chinese majority, significantly influences parenting practices. Singaporean parenting is shaped by Confucian principles, notably the concepts of “chiao shun” (training) and “guan” (governing) (Chao, 1994). These principles emphasize parents' duty to educate their children through strict discipline and control (Chao, 1994). Interestingly, while strict discipline may be interpreted negatively in Western context, it often carries a more positive connotation in Chinese culture (Chao, 1994). Many Singaporean parents view authoritarian parenting, characterized by physical discipline and strict control, as an expression of parental care and concern rather than hostility (Cheung & Hawkins, 2014; Cheung & Lim, 2022). This cultural interpretation contributes to the acceptance and perpetuation of physical discipline as a parenting tool.

1.5. The present study

This study aimed to investigate the experiences and future behavioral intentions of physical discipline in Singapore. Whereas most studies only investigated the prevalence or frequency of physical discipline, the present study aimed to broaden our understanding by assessing various aspects related to young adults' childhood experiences of physical discipline. Participants recollected the implement used for physical discipline, their emotional and physical reactions, parents' emotions, immediacy, privacy, and predictability of physical discipline during middle childhood. Furthermore, future behavioral intentions were assessed through young adults' future intention of using physical discipline and approval of a ban on physical discipline in Singapore.

2. Methods

2.1. Participants

Participants were 449 young adult citizens or permanent residents of Singapore. They were recruited through on-campus posters, online advertisements, mass emails or the Psychology program's research participation system. Table 1 presents the demographic characteristics of participants. The mean age of the sample was 22.57 years ($SD = 1.77$, Range = 18 to 29). Around half of the sample was female (52%) and the majority identified as Chinese (89%). Most of them (88%) reported experiencing at least one form of physical discipline in their lifetime.

All participants provided informed consent before completing the questionnaire. They were compensated for their time with a gift card worth 10 Singapore dollars or research credits to fulfill requirement for a general psychology course. Nanyang Technological University's institutional review board approved the current study (reference number: IRB-2022-487, dated 22 August 2022).

2.2. Measures

The Parent-Child Conflict Tactics Scales (Straus et al., 1998) was

Table 1
Demographic characteristics of participants ($N = 449$).

	<i>n</i>	%
Gender		
Female	233	52
Male	216	48
Nationality		
Singaporean citizen	424	94
Permanent resident	25	6
Ethnicity		
Chinese	399	89
Indian	27	6
Malay	13	3
Others ^a	10	2
Parent's current marital status ^b		
Married	383	85
Divorced	38	8
Never married	12	3
Widowed	10	2
Separated	5	1
Mother's education level ^c		
Elementary school education (PSLE) / elementary school	40	9
Secondary education (O-levels) / middle school	129	29
Junior college education (A-levels) / high school / diploma / vocational certificate	140	31
University / college education	139	31
Father's education level ^d		
Elementary school education (PSLE) / elementary school	43	10
Secondary education (O-levels) / middle school	106	24
Junior college education (A-levels) / high school / diploma / vocational certificate	119	27
University / college education	170	39
Living with parent(s)		
Yes	423	94
No	18	4
Others ^e	8	2
Number of siblings		
None	66	15
One	242	54
Two or more	141	31
Lifetime exposure to physical discipline		
None	53	12
Mother only	124	28
Father only	28	6
Both parents	244	54

Note.

^a Other ethnicities included Boyanese, Burmese, Pakistani, Japanese, Sinhalese, Arab, Chinese-Indian, and Filipino.

^b Missing one data.

^c One participant indicated not applicable.

^d 11 participants indicated not applicable.

^e Four participants indicated living with mother only, two participants indicated living in university hall, two participants reported living in university hall during weekdays and with parents during weekends.

used to assess young adults' recollection of parental use of physical discipline. Further, young adults responded to a series of questions related to their detailed experiences of physical discipline (“Implement” to “End of Physical Discipline Practice”). Only young adults who indicated experiencing at least one occurrence of physical discipline answered the measures from “Emotional Reactions” to “End of Physical Discipline Practice”. Finally, young adults were asked about their future intention of, and approval of a ban on, using physical discipline.

2.2.1. Parent-Child Conflict Tactics Scales (CTSPC)

The CTSPC (Straus et al., 1998) was adapted to assess young adults' recollection of parental use of physical discipline in middle childhood. The original CTSPC measures parental self-report of five disciplinary strategies, including non-violent discipline, psychological aggression, minor physical assault, severe physical assault, and very severe physical assault. Due to the current study's focus on parental physical discipline, we excluded the non-violent discipline and psychological aggression subscales that assessed non-physical discipline, as well as the very severe

physical assault subscale that examined extremely serious physical acts that go beyond typical disciplinary practice (e.g., beating up the child). In order to assess experiences of physical discipline, the present study used nine items from the minor and severe physical assault subscales, comprising of five minor physical discipline items (e.g., “Hit you on the palm or bottom with something like a belt, hairbrush, a stick or some other hard object [e.g., cane]”) and four severe physical discipline items (e.g., “Slapped you on the face or head or ears”). We adapted the items which were originally developed for parental self-report to be young adults' report on their childhood experiences of physical discipline. To align with the Singaporean cultural context, we integrated the cane (i.e., a rattan stick used for physical discipline) as an example of a hard object in items about hitting the child with such an object, considering the widespread use of cane as an instrument for physical discipline in the local cultural context (Lui et al., 2019).

Young adults rated each item separately for their mother and father to indicate the frequency at which they experienced each physical discipline when they were nine years old. Previous studies employing the CTSPC to assess retrospective experiences of physical discipline have set a referent period for participants to report their experiences, allowing participants to reflect on their experiences during a specific time-frame rather than an ambiguous period (Fr chet te et al., 2015; Watakakosol et al., 2019). We selected age nine as the referent period for three reasons. First, physical discipline occurs at high prevalence in Singapore at age nine (Sudo et al., 2023). Second, young adults are more likely to be able to provide valid accounts of their experiences in middle childhood than in earlier childhood. Third, age nine is similar to the referent period used by past retrospective studies (e.g., age ten; Fr chet te et al., 2015; Watakakosol et al., 2019). The response scale ranged from 0 (*this has never happened*) to 6 (*more than 20 times*), along with an additional option of 7 (*not at age 9, but it happened before*). Cronbach's alphas were 0.86 and 0.88 for maternal and paternal physical discipline, respectively.

2.2.2. Implement

Young adults were asked whether they grew up with a cane at home (*yes* or *no*). In addition, they answered about the implement(s) used by their parents or caregivers for physical discipline. They could select more than one type of implement from five options (cane, hand, hanger, ruler, belt), indicate any other implement that was not stated or indicate *not applicable* if they were not physically disciplined.

2.2.3. Emotional reactions

Young adults rated the negative emotions (shameful, guilty, fearful, hurt, angry) they felt following physical discipline on a four-point Likert scale ranging from 1 (*almost never true*) to 4 (*almost always true*). Furthermore, they rated their parents' emotions during (angry, in control) and after (guilty) physical discipline, using the same four-point Likert scale.

2.2.4. Physical reactions

Young adults reported if they received any noticeable injuries due to physical discipline. They could select more than one type of injuries from four options (redness, marks/welts on skin, bruises, cuts/bleeding) and indicate any type of injury that was not otherwise stated. Subsequently, the pain of physical discipline was assessed using a four-point Likert scale ranging from 1 (*no pain*) to 4 (*hurt terribly*).

2.2.5. Immediacy

Young adults reported when they usually received physical discipline from their parents following a misbehavior, using one item from the Physical Punishment Questionnaire (Rohner et al., 2005). Four options were given: *Punished me at the moment, waited a short while* (e.g., *a few minutes*) *before punishing me, waited quite a long time* (e.g., *several hours*) *before punishing me, and waited a day or more before punishing me*.

2.2.6. Privacy and predictability

Young adults answered whether physical discipline occurred in presence of others (*yes* or *no*). To assess the predictability of physical discipline, young adults rated three items (e.g., *always get punished for the same offences*) that were adapted from the Physical Punishment Questionnaire (Rohner et al., 2005). Responses ranged from 1 (*almost never true*) to 4 (*almost always true*).

2.2.7. End of physical discipline practice

An open-ended question was used to obtain information regarding the age when the physical discipline practice ended for young adults.

2.2.8. Future behavioral intentions

Young adults responded whether they will use physical discipline in the future on their children using responses of *yes*, *maybe*, or *no*. They also reported if they approve of a physical discipline ban in Singapore (*yes* or *no*).

2.3. Data analysis

Our research objective was to examine the experiences and future behavioral intentions of physical discipline in Singapore, based on young adults recollecting about their childhood experiences, as well as their intention of using physical discipline and approval of a physical discipline ban. We first calculated the percentage of young adults who experienced each of the nine physical discipline at varying frequencies during age nine. To facilitate prevalence reporting, we combined responses of *once* and *twice* into one category (*once or twice*), as well as *3–5 times* and *6–10 times* into one category (*3–10 times*). To calculate the prevalence of physical discipline, we computed the percentage of young adults who reported experiencing at least one of the nine physical discipline at age nine and throughout their lifetime, regardless of frequency. The prevalence for minor and severe physical discipline at age nine and throughout their lifetime were calculated separately.

To examine whether there was a difference between the prevalence of maternal and paternal physical discipline, Mc Nemar's tests were run, using data from 436 young adults who reported on both maternal and paternal physical discipline. Next, frequencies and percentages were computed for each variable about the details of young adults' physical discipline experience. For the immediacy of physical discipline, we combined the three responses other than *punished me at the moment* to create a dichotomous variable (*punished me at the moment* or *did not punish me at the moment*). We conducted chi-square tests to examine whether young adults' future intention of using physical discipline and their approval of a physical discipline ban differed by lifetime prevalence of physical discipline.

3. Results

3.1. Prevalence and frequency of physical discipline

Tables 2 demonstrates the frequency of maternal and paternal physical discipline reported by young adults. The prevalence of physical discipline at age nine and across lifetime are presented. The percentage of the young adults who recollected experiencing at least one occurrence of maternal and paternal physical discipline in their lifetime was 82% and 62% respectively. Lifetime prevalence differed significantly by parent sex ($\chi^2 = 52.45, p < .001$). Over half of the young adults (55%) experienced at least one form of severe physical discipline from their mothers and 42% of the young adults experienced at least one form of severe physical discipline from their fathers. Hitting on the palm or bottom with a hard object such as cane was the most reported form of maternal (73%) and paternal (53%) physical discipline throughout their lifetime, followed by slapping on the limbs such as arms and legs.

In terms of their physical discipline experience at age nine, 76% and 56% of the young adults recollected experiencing at least one occurrence

Table 2
Prevalence of parental physical discipline ($N = 449$)^a.

Child report of parent	Items	Frequency at age nine reported by young adults %					Prevalence % ^b	
		Never at age nine	Once or twice a year	3–10 times a year	11–20 times a year	More than 20 times a year	At age nine	Lifetime
Mother ($n = 447$)	Minor physical discipline							
	Hit on the palm or bottom with object (e.g., cane)	37	13	34	6	9	63	73
	Slapped on the limbs	46	12	26	9	6	54	60
	Spanked on the bottom	64	7	18	5	5	36	44
	Pinched	67	10	16	3	3	33	36
	Shook	78	8	10	2	2	22	26
	Any minor maternal physical discipline ^c	–	–	–	–	–	73	80
	Severe physical discipline							
	Hit on other body part with object (e.g., cane)	57	9	24	4	6	43	49
	Slapped around the face	75	9	10	3	4	25	29
	Hit with a fist or kicked hard	90	3	6	1	1	10	12
	Threw or knocked down	93	2	4	0.4	0.2	7	8
	Any severe maternal physical discipline ^c	–	–	–	–	–	49	55
	Any maternal physical discipline ^c	–	–	–	–	–	76	82
Father ($n = 438$)	Minor physical discipline							
	Hit on the palm or bottom with object (e.g., cane)	53	13	23	5	5	47	53
	Slapped on the limbs	64	11	18	3	4	36	39
	Spanked on the bottom	75	7	13	2	3	25	28
	Shook	84	7	7	1	1	16	18
	Pinched	88	4	6	1	1	12	14
	Any minor paternal physical discipline ^c	–	–	–	–	–	54	61
	Severe physical discipline							
	Hit on other body part with object (e.g., cane)	70	8	16	3	4	30	34
	Slapped around the face	81	8	8	2	2	19	24
	Hit with a fist or kicked hard	88	5	5	2	1	12	14
	Threw or knocked down	92	3	3	1	1	8	9
	Any severe paternal physical discipline ^c	–	–	–	–	–	37	42
	Any paternal physical discipline ^c	–	–	–	–	–	56	62

Note.

^a Missing two maternal data and 11 paternal data.

^b Percentage of young adults who self-reported experiencing physical discipline, regardless of frequency, when they were nine years old or throughout their lifetime.

^c Percentage of young adults, regardless of frequency, self-reported experiencing at least one physical discipline of particular type (minor or severe or overall) from mother or father, when they were nine years old or throughout their lifetime.

Table 3
Lifetime prevalence of physical discipline by implement used and injuries reported (*N* = 449).

	<i>n</i>	%
Grew up with cane at home		
Yes	355	79
No	94	21
Lifetime prevalence of physical discipline by implement used		
Not physically disciplined	53	12
Physically disciplined ^a	396	88
Cane	310	69
Hand	291	65
Hanger	123	27
Ruler	86	19
Belt	57	13
Others ^b	17	4
Lifetime prevalence of physical discipline by injuries reported		
Not physically disciplined	53	12
Physically disciplined, experienced no noticeable injuries	112	25
Physically disciplined, experienced noticeable injuries ^a	284	63
Redness	241	54
Marks / welts on my skin	147	33
Bruises	127	28
Cuts / bleeding	31	7
Others ^c	2	0.4

Note.

^a Participants could select more than one type of implement or injury.

^b Other implements indicated by 17 participants included the following implements that were listed by three participants: book, feather duster, slippers, as well as these implements that were indicated by one participant: comb, clothes pole, broom, fans, leg, marker, singlet, newspaper, spatula, stick, umbrella, stuffed chili in mouth, anything readily available to them.

^c Other injuries indicated by two participants included nose bleeding and “nothing lasting longer than 3 h of marking.”

of maternal and paternal physical discipline, respectively. Again, prevalence at age nine differed significantly by parent sex ($\chi^2 = 49.34, p < .001$). Hitting on the palm or bottom with a hard object such as cane was the most common form of maternal and paternal physical discipline at age nine. Among the young adults who were subject to this form of physical discipline, the median frequency was three to ten times a year by mothers and fathers.

3.2. Detailed experiences of physical discipline

Table 3 presents lifetime prevalence of physical discipline by the specific implements used and injuries reported. A vast majority of the

young adults in the current study recollected growing up with a cane at home (79%). However, only 69% were physically disciplined using cane, suggesting that 10% recalled having a cane at home but were not physically disciplined with it. The second most used implement was the hand (65%). In total, 63% of the sample experienced noticeable injuries following physical discipline. Around half of the young adults (54%) reported redness due to physical discipline, 33% recalled having marks or welts, and 28% had bruises after physical discipline.

Fig. 1 describes young adults' recollection of their emotional reactions and their parents' emotions surrounding a physical discipline episode. Fig. 1a shows that most of the young adults recalled experiencing negative emotions after physical discipline, including feeling shameful, guilty, fearful of parent(s), emotionally hurt, and angry. Fig. 1b reveals that 89% of participants recollected instances of their parents being not in control of their emotions and 98% felt that their parents were angry to some extent during physical discipline. Around 80% of them indicated that their parents at least sometimes felt guilty after physical discipline.

Fig. 2a demonstrates the immediacy and privacy of physical discipline. Of young adults who recalled being physically disciplined, 69% recollected that their parents physically punished them at the moment and 60% said physical discipline happened in the presence of another person. Typically, someone else such as a family member was present during physical disciplining. Physical discipline was typically predictable (Fig. 2b). Most respondents often to almost always knew if they would get punished (78%) and recalled being consistently punished for the same misbehavior (69%). Nearly half of respondents (48%) often to almost always knew the specific punishment they would receive.

Physical discipline was painful for most participants, such that 43% reported that physical discipline hurt quite a lot and 11% said it hurt terribly (Fig. 2c). Only 4% said they experienced no hurt from physical discipline. Fig. 2d illustrates the cumulative percentage of young adults who no longer experienced physical discipline at various ages of childhood. Almost half of them (45%) indicated that physical discipline ceased between 12 to 14 years old. For the majority (96%), physical discipline had ceased by the age range of 15 to 17 years old. There was only one young adult who reported that physical discipline was ongoing.

3.3. Future intention of using physical discipline

Of the total sample, 55% expressed some level of intention to use physical discipline in the future if they had children (46% responded *maybe* and 9% responded *yes*). Conversely, 45% unequivocally indicated that they would not use physical discipline. Their future intention differed by whether they had experienced physical discipline ($\chi^2 =$

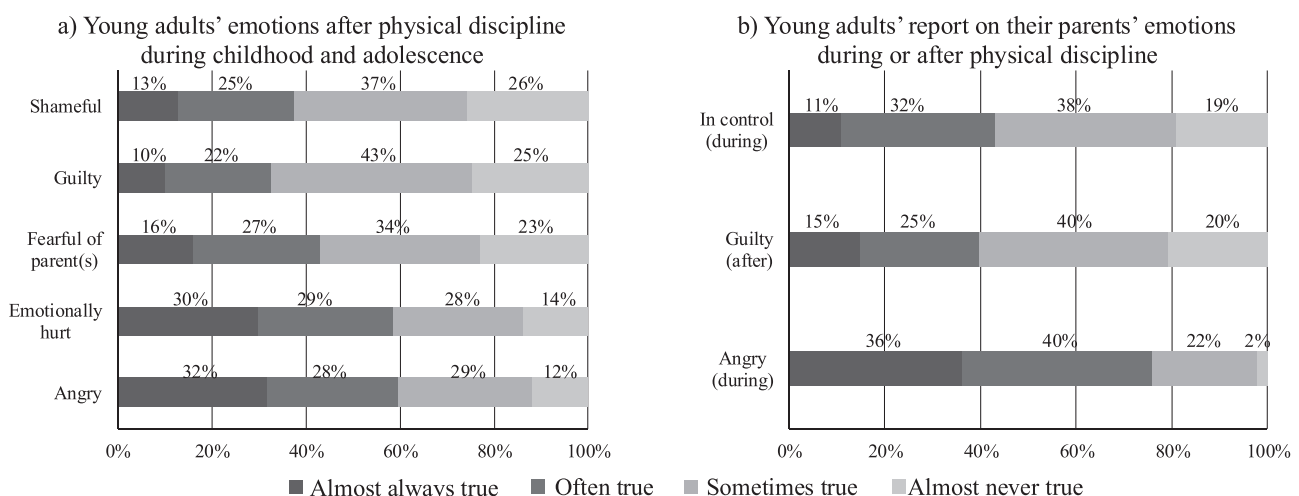


Fig. 1. Young adults' reports on own and their parents' emotions during or after physical discipline (*n* = 396).

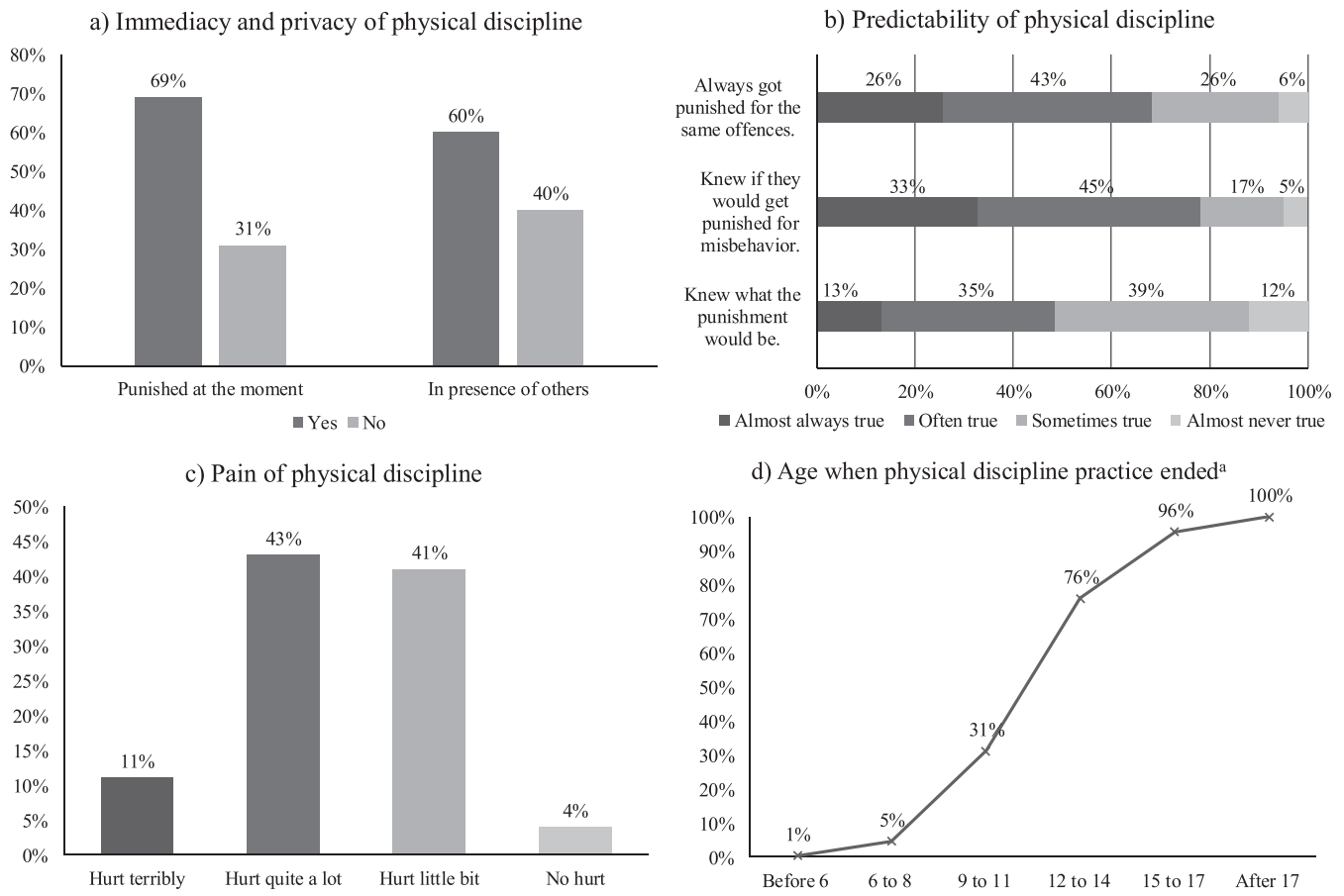


Fig. 2. Physical discipline experiences (n = 396).

Note. ^an = 384. Missing five data, three participants indicated they don't remember, one indicated before primary school, one indicated secondary school, one indicated physical discipline is still ongoing, and one mentioned "It just gradually became just threats of physical punishment and then it became jokes about physical punishment that still happens to today."

20.18, $p < .001$).

Among young adults who have experienced physical discipline, 59% of them indicated some intention to use physical discipline in the future, whereas 41% said they will not use physical discipline. Of the young adults who were never physically disciplined, 74% had no future intention to use physical discipline.

3.4. Approval of a physical discipline ban

A majority, 71%, believed that physical discipline should not be banned in Singapore. Furthermore, young adults' approval of a physical discipline ban differed by lifetime prevalence of physical discipline ($\chi^2 = 8.04, p = .005$). For young adults who have experienced physical discipline 73% opposed a physical discipline ban in Singapore, while only 27% supported a physical discipline ban. Among those who were never physically disciplined by their parents, 55% opposed a physical discipline ban in Singapore and 45% supported such a ban. Further, supplementary analyses explored the relationships between young adults' experiences of physical discipline and their future intention to use physical discipline, as well as their approval of a physical discipline ban (see Table S1 in Supplementary Material).

4. Discussion

The aim of the current study was to investigate young adults' experiences of, and future behavioral intentions towards physical discipline. This study offers a comprehensive overview of how physical discipline is

used and experienced in a culturally normative context.

4.1. Physical discipline is prevalent in Singapore

Physical discipline continues to be a common disciplinary method in many countries (Abrahamyan et al., 2024; Afifi et al., 2022; Finkelhor et al., 2019; Wang & Liu, 2014). Overall, 88% of young adults in our study recollected experiencing at least one occurrence of parental physical discipline in their lifetime, supporting other findings that physical discipline is acceptable and prevalent in Singapore (Lui et al., 2019; Sudo et al., 2023). Prior research on whether physical discipline use varies by parent sex has yielded mixed findings (Cheung & Hawkins, 2014; Sudo et al., 2023; Wang et al., 2018). The present study indicated that the prevalence of maternal physical discipline was higher than that of paternal physical discipline. This finding aligns with a previous finding showing that mothers administer physical discipline more frequently than fathers in Singapore (Cheung & Hawkins, 2014). For Singaporean children aged seven to nine years, 71% of mothers were the primary caregiver, spending more time with their children, and thus having more opportunities to notice their children's misbehaviors (Cheung & Hawkins, 2014). In addition, mothers were more likely than fathers to view physical discipline as an effective disciplinary practice (Cheung & Hawkins, 2014).

Further, recent research in the United States found that 77% of college students who experienced physical discipline in childhood indicated that their parents used implements during physical discipline, with a belt being the most commonly used implement (Policastro et al.,

2024). In our study, the cane was the most common implement of physical discipline. Thus, the implement of physical discipline may vary across cultural contexts and reflect culture-specific norms.

4.2. Physical discipline is not necessarily administered in a controlled manner

Our results paint a different picture from that suggested by the cultural normativeness hypothesis - that in societies where physical discipline is commonplace, physical discipline is commonly administered in a controlled manner and within a nurturing relationship (Deater-Deckard & Dodge, 1997). The vast majority of young adults in our sample who had experienced physical discipline recalled their parents being not fully in control of their emotions during physical discipline and felt fearful of their parents after being disciplined. According to the cultural normativeness hypothesis that posits that physical discipline may result in less adverse effects on children within a cultural context where it is prevalent (Deater-Deckard & Dodge, 1997), if physical discipline is employed, parents should maintain emotional control to mitigate its negative impact on children. However, our study revealed that achieving such control is challenging, as the majority of young adult participants reported that their parents were not fully emotionally regulated during instances of physical discipline. This difficulty in maintaining control aligns with previous research where parents who physically discipline their children inadvertently applied more force than intended when instructed to perform a half-strength grip test (Crouch et al., 2008).

Most of the participants indicated intense pain and noticeable injuries associated with physical discipline experiences. The emergent picture is a combination of physical discipline being predictably meted out in response to children's violations, and parents not being fully in control of their emotions when physically punishing their children. Prior research highlighted that children could interpret physical discipline as parental care in a context where the practice is culturally normative (Deater-Deckard & Dodge, 1997). The present study did not examine this interpretation, thereby no conclusion could be drawn regarding this aspect of the cultural normativeness hypothesis. Nonetheless, our study demonstrated that the cultural normativity of physical discipline does not necessarily translate to the notion that parents administer physical discipline in a controlled manner.

4.3. Physical discipline as a family matter

In addition, the majority of young adults reported being disciplined in the presence of others such as family members. Disciplining a child may be considered as a family matter in Singapore (Elliott et al., 1997), rather than a private matter limited solely to the deliverer and recipient of physical discipline. However, it is unclear whether physically disciplining children in the presence of others can exacerbate the negative effects of physical discipline on children's well-being.

4.4. Preliminary evidence of intergenerational continuity of physical discipline

Prior research has established findings about the intergenerational transmission of physical discipline (Afifi et al., 2022; Wang et al., 2018), such that individuals who were physically disciplined are more likely to use this form of discipline strategy on their children (Wang et al., 2018). A prospective multigenerational study found that children's increased aggression is explained by the continuity of harsh parenting, including hostile, coercive, and indifferent parenting practices, from their grandparents to parents (Neppi et al., 2020). More favorable attitudes towards physical discipline have consistently been related to its use (Wang et al., 2018). The present study examined two indicators of young adults' attitudes towards physical discipline by assessing their future intention to use physical discipline on their children and whether they support

banning physical discipline. Among young adults who experienced physical discipline, we observed only a slight preponderance of those with some future intention to use physical discipline on their children.

Surprisingly, most of the young adults who were physically disciplined did not support a physical discipline ban in Singapore, despite the acknowledgment of the physical and emotional harm associated with physical discipline. The opposition to a physical discipline ban could be explained by one's belief in the effectiveness of physical discipline in reducing child misbehavior (Cheung & Hawkins, 2014). Further, young adults' views on a physical discipline ban may reflect a broader perspective, extending beyond an individual's intention to use physical discipline and encompassing consideration about societal norms. Many of the young adults may be undecided regarding their future parenting, and prefer to retain physical discipline as a lawful disciplinary method, given its widespread acceptance and use in Singapore. The acceptance of physical discipline in Singapore is likely related to the long-standing belief that physical discipline is an appropriate way to discipline children out of parental care and concern (Ngiam & Tung, 2016). Further, a recent study in Singapore examining physical discipline from 2014 to 2022 revealed its high prevalence, indicating that physical discipline remains a normative parenting practice used by Singaporean parents (Sudo et al., 2023). Nonetheless, past research demonstrated that frequent physical discipline was linked to children evaluating lower level of care from fathers, but was not related to their evaluation of maternal care (Sudo et al., 2023). Therefore, the speculation on whether children truly perceive physical discipline as a parental act driven by parental care and concern warrants further empirical investigation. Overall, our study demonstrated preliminary evidence of intergenerational continuity of physical discipline in Singapore. Future research is needed to elucidate the factors associated with breaking the intergenerational cycle of physical discipline.

4.5. Limitations and future directions

There are several possible limitations to discuss. The current study investigated the characteristics of childhood experiences of physical discipline but did not study their consequences for long term outcomes. Prospective studies are needed to examine if the negative effects of physical discipline on child outcomes depend on the nature of physical discipline. Secondly, the majority of our sample identified as Chinese, which reflects Singapore's ethnic composition where Chinese constitutes 74.3% of the population (Department of Statistics Singapore, 2021). It is unclear whether the findings of the current study are generalizable to the minority ethnic groups in Singapore. Future research should oversample participants from diverse backgrounds. Thirdly, although the prevalence and frequency of physical discipline were evaluated separately for mothers and fathers, the nature of physical discipline was examined collectively for both parents. Future research should differentiate between mothers and fathers for the latter as well, considering that the nature of physical discipline could vary depending on which parent uses it. In addition, the current research's reliance on young adults' retrospective data presents both strengths and limitations. While this approach allows us to capture young adults' recollection of and perspective on their childhood experiences, it is subject to potential recall biases. Individuals with current psychological symptoms, such as depression, may tend to recall their childhood experiences with parents less favorably (Lewinsohn & Rosenbaum, 1987). Additionally, the passage of time may affect the accuracy of recalled details. Although children's detailed experiences of physical discipline have not been examined much in past research, our findings align with non-retrospective studies on the prevalent use of physical discipline in Singapore (Lui et al., 2019; Sudo et al., 2023), whereby mothers engage in physical discipline more frequently than fathers (Cheung & Hawkins, 2014), and the physical and emotional responses to physical discipline (Breen et al., 2015; Dobbs & Duncan, 2004; Twum-Danso Imoh, 2013; Willow & Hyder, 1998). However, to minimize potential recall biases,

concurrent data collection when physical discipline is ongoing may be a potential avenue for future research.

5. Conclusion

The present study provided novel insights into the nature of physical discipline in a context where physical discipline is regarded as a normative socialization experience for most children. Our findings challenge the assumption that physical discipline is typically administered in a controlled manner within a cultural context where it is commonplace. Instead, this study showed that physical discipline is often not used in a controlled manner, with participants reporting intense negative emotions and noticeable injuries. Despite the acknowledgement of physical and emotional harm resulting from physical discipline, the majority of young adults did not support a physical discipline ban in Singapore, reflecting deeply ingrained cultural beliefs in its acceptability and effectiveness as a disciplinary method. More empirical investigations regarding the complex dynamics of physical discipline are needed, but the findings of this study can inform policymakers and encourage the promotion of alternative non-violent disciplinary strategies to reduce distress and improve parent and child relations.

CRedit authorship contribution statement

Ying Qing Won: Writing – original draft, Visualization, Project administration, Methodology, Formal analysis, Conceptualization. **Mioko Sudo:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Henning Tiemeier:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Peipei Setoh:** Writing – review & editing, Supervision, Project administration, Methodology, Funding acquisition, Conceptualization.

Ethics approval

This study was approved by the institutional review board of Nanyang Technological University (reference number: IRB-2022-487, dated 22 August 2022).

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Declaration of competing interest

None

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.actpsy.2025.105071>.

Data availability

The dataset that supports the findings of this study is deposited at OSF.

[Parental Physical Discipline in Singapore: A Study of Context, Practice, and Perception \(Original data\)](#) (OSF)

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