

# The Consequences of Bullying Victimization on Health and Psychosocial Outcomes in Young Children

Duc Thanh Nguyen

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# Motivations

- Bullying victimization is a very common experience among adolescents and a global phenomenon.
- Being bullied has intermediate and long-lasting negative impacts on physical and mental health, health and social behavior and psychological well-being.
- Little is known about bullying victimization and its consequences on health and psychosocial outcomes.

# Contributions

- Examines the heterogeneous effects of bullying.
- Deals with the endogeneity of bullying by using an instrumental variable approach.
- Contributes to the very limited evidence about the impacts of a variety of types of bullying on health and psychosocial outcomes in developing country settings.

# Literature Review

- Use a single-item approach or only a single question to assess overall exposure to bullying.
- Most of existing studies provide limited quantitative evidence due to
  - do not consider selection and endogeneity issues.
  - Use observable measures and face measurement error problems in measuring bullying.
- Eriksen et al. (2014) use instrumental variables to address the endogeneity issues of victimization, but do not deal properly with measurement errors and unobservable heterogeneity.
- Sarzosa and Urzua (2021) deal with measurement error problems and control for the endogeneity of bullying, but bullying victimization is defined as a single binary variable, focus on physical bullying.
- My approach uses instrumental variables and a structural model with factor analysis to overcome these challenges.

# Data, Definition and Measures

- Data from the Older Cohort in Round 3, the Young Lives survey in Vietnam.
- Bullying victimization is defined as repeated and intentional exposure to hostile actions that cause harm or discomfort over time by others.
- Bullying victimization in the Young Lives study were assessed based on the 9-item self-administered questionnaires from the 9-item Social and Health Assessment Peer Victimization Scale.
- I exclude random, one-off incidents of victimization, and individuals are considered being bullied if they experienced each behavior of being bullied twice or more times.

# Measures of Bullying Victimization

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## 9 items of victimization

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Children were asked the questions: during the last 12 months, I want to know whether other young people did the following bullying behaviors:

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1. punched, kicked or beat you up
  2. hurt you physically in some other way
  3. made fun of you for some reason
  4. called you names or swore at you
  5. refused to talk to you or made other people not talk to you
  6. tried to get you into trouble with your friends
  7. made you uncomfortable by staring at you for a long time
  8. took something without permission or stole things from you
  9. tried to break or damaged something of yours
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## Types of victimization

### Physical victimization

Indicates whether a child has been physically victimized. It takes a value of 1 if any of items 1 and 2 is 1 and 0 otherwise.

### Verbal victimization

Indicates whether a child has been verbally victimized. It takes a value of 1 if any of items 3 and 4 is 1 and 0 otherwise.

### Relational victimization

Indicates whether a child has been relationally victimized. It takes a value of 1 if any of items 5,6 and 7 is 1 and 0 otherwise.

### Attacks on property

Indicates whether a child has been victimized by property attacks. It takes a value of 1 if any of items 8 and 9 is 1 and 0 otherwise.

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# Percentage of Children Experiencing Different Forms of Bullying Two or More Times

	Full	Male	Female
<b>Physical victimization</b>	<b>6.9</b>	<b>9.0</b>	<b>4.9</b>
Punched, kicked or beaten up	5.3	7.6	3.1
Hurt physically	3.9	4.0	3.7
<b>Verbal victimization</b>	<b>20.1</b>	<b>20.2</b>	<b>20.0</b>
Made fun of	17.7	17.4	17.9
Called or swore	7.2	8.0	6.4
<b>Relational victimization</b>	<b>27.1</b>	<b>25.8</b>	<b>28.3</b>
Refused to talk	5.0	4.5	5.6
Friend trouble	8.9	8.5	9.2
stared at	21.0	20.1	21.9
<b>Attacks on property</b>	<b>8.9</b>	<b>7.7</b>	<b>10.0</b>
Theft	6.1	4.9	7.2
Property damage	5.1	4.9	5.3
<b>Overall victimization</b>	<b>37.9</b>	<b>35.8</b>	<b>39.9</b>
Observations	971	480	491

# Outcomes

- Self-rated health: The question asked the youth to rate their general health. The response is then dichotomized as 0 indicating poor health status and 1 denoting good health based.
- Subjective well-being: Individuals were asked the question 'where on the ladder do you feel you personally stand at present time?'. The responses are recoded as 0 indicating low subjective well-being and 1 denoting high subjective well-being.
- Alcohol consumption: a dummy variable equal to 1 for those who reported alcohol use at least once a month and 0 otherwise.
- Emotional and mental distress: used the five-item Emotional Difficulties subscale of the Strengths and Difficulties Questionnaire (SDQ) to assess distress.

# Latent factors

- Bullying victimization factor:

$$B_{ij}^* = \alpha_j + \beta_j \mathcal{B}_i + u_{ij} \quad (1)$$

where:

- $\mathcal{B}_i$  is a latent bullying factor.  $B_{ij}$ ,  $j = \{P, V, R, A\}$  denote a 4x1 vectors of the observable victimization measures.
  - Bullying victimization measures are binary and we only observe the measure  $B_{ij} = 1$  if  $B_{ij}^* > 0$  and  $B_{ij} = 0$  otherwise.
- Family background factor:

$$P_{ik}^* = \alpha_k + \beta_k \mathcal{P}_i + v_{ik} \quad (2)$$

where:

- $P_{ik}$  be the observable measures of family background characteristics including wealth index, mother's education, father's education, household size, birth order and whether either parent are alive or not.
- $P_{ik}^* = P_{ik}$  if  $P_{ik}$  is continuous. If  $P_{ik}$  is binary,  $P_{ik} = 1$  if  $P_{ik}^* > 0$  and  $P_{ik} = 0$  otherwise.

# Outcomes

- The first stage:

$$B_i = \beta_x X_i + \beta_p \text{Troubledfamily}_i + \beta_f \text{Troubledfriend}_i + u_{B_i} \quad (3)$$

where:

- *Troubledfamily<sub>i</sub>* and *Troubledfriends<sub>i</sub>* are the instruments, which are the percentage of children in the Young Lives survey clusters being physically punished by their parents, the number of the child's friends being physically bullied
- Second-stage:

$$Y_{im}^* = \beta_{xm} X_{im} + \beta_{Bm} \hat{B}_i + \beta_{Pm} P_i + u_{Y_{im}} \quad (4)$$

# Estimation

- First step: Estimate the parameters of the measurement system and distribution of the factors

$$\begin{aligned} B_{ij}^* &= \alpha_j + \beta_j \mathcal{B}_i + u_{ij} \\ P_{ik}^* &= \alpha_k + \beta_k \mathcal{P}_i + v_{ik} \end{aligned} \quad (5)$$

- The distribution of the latent factors are assumed to follow a mixture of normals.
- Second step: estimate the outcome models by drawing  $\theta$  ( $\mathcal{B}$  and  $\mathcal{P}$ ) from the conditional distributions of  $\theta$  and treat them as observable data

$$\mathcal{B}_i = \beta_x X_i + \beta_p \text{Troubledfamily}_i + \beta_f \text{Troubledfriend}_i + u_{\mathcal{B}_i} \quad (6)$$

$$Y_{im}^* = \beta_{xm} X_{im} + \beta_{\mathcal{B}m} \hat{\mathcal{B}}_i + \beta_{\mathcal{P}m} \mathcal{P}_i + u_{Y_{im}} \quad (7)$$

# Determinants of Bullying Victimization

Variables	Bullied
Intercept	-2.923*** (0.890)
Female	0.105** (0.042)
Urban	0.082 (0.054)
Ethnic group	0.126* (0.066)
Child age (in years)	0.049 (0.060)
Troubled family	0.553*** (0.198)
Troubled friends	0.200*** (0.016)
No. of obs.	971

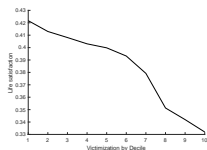
Note: Standard errors in parentheses based on 100 bootstrap replications of the entire estimation process; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

# Consequences of Bullying Victimization on Outcomes

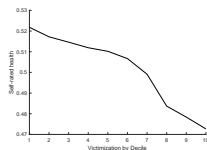
Variables	Life satisfaction	Self-rated health	Alcohol use	Distress
Female	0.306*** (0.112)	0.045 (0.106)	-0.956*** (0.113)	0.129*** (0.022)
Urban	-0.074 (0.137)	0.065 (0.148)	-0.492*** (0.171)	-0.088*** (0.023)
Ethnic group	0.840*** (0.225)	-0.034 (0.168)	-0.220 (0.170)	0.106*** (0.039)
Child age (in years)	-0.255 (0.160)	0.097 (0.147)	0.150 (0.194)	0.103*** (0.031)
Bully	-0.226** (0.096)	-0.116 (0.083)	0.354*** (0.103)	0.149*** (0.019)
Family	4.343*** (0.503)	0.587 (0.401)	0.389 (0.540)	-0.493*** (0.082)
Bully AME	-0.087*** (0.033)	-0.054 (0.038)	0.135*** (0.035)	0.284*** (0.036)
Family AME	0.114*** (0.012)	0.018 (0.012)	0.009 (0.012)	-0.060*** (0.010)
Baseline value	0.400	0.502	0.296	1.728
No. of obs.	969	969	960	961

# Outcomes by Deciles of the Victimization Factor Distribution

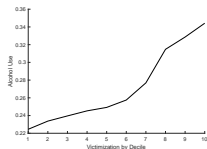
(a) Life satisfaction



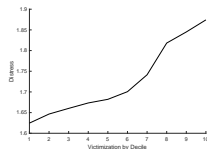
(b) Self-rated health



(c) Alcohol Use



(d) Distress



# Conclusions

- Peer victimization strongly affects subjective well-being, alcohol consumption, and emotional and mental distress of children.
- The findings are particularly relevant for prevention efforts to sensitize parents, teachers, and other protective resources to recognize these behaviors and to understand that they are not just a harmless rite of passage.
- The findings highlight the need to mobilize protective resources and efforts and develop adequate education policies to curb modifiable bullying behaviors.

Thank you!