

Prevalence of bullying and perceived happiness in adolescents with learning disability, intellectual disability, ADHD, and autism spectrum disorder

In the Taiwan Birth Cohort Pilot Study

For-Wey Lung, MD, ScD^{a,b}, Bih-Ching Shu, RN, MSN, PhD^{c,*}, Tung-Liang Chiang, ScD^d, Shio-Jean Lin, MD^e

Abstract

Children with learning disability (LD), intellectual disability (ID), attention-deficit/hyperactivity disorder (ADHD), and autism spectrum disorder (ASD) reported higher risk of being bullied compared to their peers. Controlling for the co-morbidity of different diagnosis is important in investigating the frequency of bullying. Therefore, this study aimed to investigate the pathway relationship of adolescents' psychiatric diagnoses, including LD, ID, ADHD, ASD, with being bullied, their self-perceived psychological well-being (PWB) and social adaptation status (SAS) in 12-years-olds.

The Taiwan Birth Cohort Pilot Study dataset (N=1561) was used. The Chinese Oxford Happiness Questionnaire was used to measure PWB and SAS.

Adolescent-reported rate of bullying was 25.4%, while only 2.8% of the parents reported knowing their child had been bullied. Boys reported higher rate of being bullied than girls. Adolescents with ADHD were not at higher risk of being bullied compared to their peers, nevertheless, they perceived lower level of SAS. Adolescents diagnosed with ID and ASD reported 63% rate of bullying and those who have been bullied perceived lower level of happiness.

Adolescents with ADHD reported lower level of SAS, for disruption of harmony is even less acceptable in the Asian culture. Adolescents with ID and ASD reported higher rate of bullying than their peers and perceived lower level of happiness. A gap was found between parent and adolescent-reported rate of bullying. Encouraging adolescents to seek adult protection and support to reduce the effect of bullying on the perceived level of happiness is important.

Abbreviations: ADHD = attention deficit/hyperactivity disorder, AGFI = adjusted goodness-of-fit index, ASD = autism spectrum disorder, ID = intellectual disability, LD = learning disability, PWB = psychological well-being, RMSEA = root mean square error of approximation, SAS = social adaptation status, SEM = structural equation model, SPSS = Statistical Package for the Social Sciences, TBCS-P = Taiwan Birth Cohort Pilot Study.

Keywords: bully, oxford happiness questionnaire, psychiatric diagnosis, psychological well-being, social adaptation status

Editor: Massimo Tusconi.

This study was supported by grants from the Bureau of Health Promotion (grant number MOHW105-HPA-H-114-000701).

The authors have no conflicts of interest to disclose.

Supplemental Digital Content is available for this article.

^a Calo Psychiatric Center, Pingtung County, ^b Graduate Institute of Medical Science, National Defense Medical Center, Taipei, ^c Institute of Allied Health Sciences, Department of Nursing, College of Medicine, National Cheng Kung University, Tainan, ^d Institute of Health Policy and Management, College of Public Health, National Taiwan University, Taipei, ^e Genetic Counseling Center, Chi Mei Medical Center, Tainan, Taiwan.

* Correspondence: Bih-Ching Shu, Institute of Allied Health Sciences, Department of Nursing, College of Medicine, National Cheng Kung University, No. 1 Da-Hsueh Rd., Tainan 701, Taiwan (e-mail: forweylung@gmail.com).

Copyright © 2019 the Author(s). Published by Wolters Kluwer Health, Inc. This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

Medicine (2019) 98:6(e14483)

Received: 23 February 2018 / Received in final form: 12 November 2018 /

Accepted: 20 January 2019

<http://dx.doi.org/10.1097/MD.00000000000014483>

1. Introduction

Children with learning disability (LD), intellectual disability (ID), attention-deficit/hyperactivity disorder (ADHD), and autism spectrum disorder (ASD), have all shown to have higher risk of being bullied compared to their peers.^[1–4] With respect to ASD, deficit in theory of mind ability and the difficulty in forming and maintaining positive peer relationship puts children with ASD at risk of being bullied.^[4] Previous studies have shown adolescent with ASD were victimized more frequently than their ID or typically developed peers.^[4] For instance, a previous study found that children with ASD, ID, and ADHD-Combined type had higher victim and bully maternal ratings than children in the ADHD-Inattentive, depression, anxiety, eating disorders, and control groups.^[5] Although Montes and Halterman found that children with ASD were 4 times more likely to be bullied than children in the general population.^[6] However with the co-morbidity of ADHD controlled, children with ASD who did not have ADHD/ADD diagnosis were not at greater risk for bullying compared with the general population.^[6] Therefore, it is important to control co-morbidity in investigating the frequency of bullying in different diagnoses.

Besides psychiatric diagnosis, children of bullying victimization were found to have psychosocial maladjustment.^[7] Van der

Ploeg and colleagues found an intensity effect in victims of frequent and multiple victimizations.^[8] In victims who were victimized by several bullies, had higher levels of psychosocial adjustment problems compared to those of less frequent and non-multiple victimization.^[8] In general, disabled adolescents have reported lower levels of happiness, lower global life satisfaction and higher rates of suicidal ideation compared to their peers.^[9] However, children with ADHD and their families were found to experience reduction in quality of life.^[10] Nevertheless, whether the reduction in quality of life and wellbeing is caused by the diagnosis alone, or due to higher possibility of being bullied,^[11] which may also impact their wellbeing, has not been investigated.

Although previous studies have investigated the impact of bullying on children with psychiatric diagnoses,^[7–10] the relationship among children diagnosed with ASD, ID, ADHD, or LD diagnosis, bullying, and its impact on their psychological wellbeing and social adaptation has not been investigated together. In summary, using the dataset from a national birth cohort pilot study, this study aimed to investigate the pathway relationship of adolescents' psychiatric diagnoses (including LD, ID, ADHD, and ASD), with being bullied, self-perceived psychological well-being (PWB) and social adaptation status (SAS) in 12-years-olds.

2. Methods

2.1. Participants

The fifth stage dataset of when participants were 12-years old from the Taiwan Birth Cohort Pilot Study (TBCS-P) was used for this study. The TBCS-P aimed to build a sample that would be representative of the children in Taiwan using a national household probability sampling method. Two-stage stratified random sampling method was used to select babies born in November and December of 2003, with no exclusion criteria. The primary sampling unit in the first stage was cities and towns. Eighty-five townships were selected from the 369 townships in Taiwan by systematic random sampling. These were later grouped into 12 strata according to 4 levels of size of the settlement and 3 levels of total fertility rate. Newborns were proportionally selected according to the rate of births from the 85 selected settlements in the second stage.^[11] The sample selected at the first stage, at when the children were 6-month-old, included 2048 families, resulting in a selection rate of 9.51%. The parents were contacted at each stage. If the parents were willing to participate in the study at that stage, the research assistant interviewed the families in their homes. Information regarding parental and children's health conditions was collected at the same time. The study protocol was approved by an institutional review board of a teaching hospital in Taiwan and is in accordance with the Declaration of Helsinki. Written informed consent was obtained from the parent of the children at each stage of the study after a detailed explanation of the study. At the fifth stage, 1561 families were followed-up of when children were 12 years old, which is the dataset used in this study. Data were collected from June to October of 2016.

2.2. Materials

The demographic information of the adolescents and their parent were collected. All information was either parent- or adolescent-report. The psychiatric diagnosis of the adolescents was parent report, by asking the parent whether their child had ever been diagnosed with LD, ID, ADHD, or ASD. Every parent and

adolescent was asked if the adolescent had ever been bullied. The adolescent-report of bullying was the factor used in the structural equation model (SEM).

The 8 items Oxford Happiness Questionnaire developed by Hills and Argyle was double-translated into Mandarin Chinese.^[12] Instead of the original 6-point Likert scale, a 4-point Likert scale of "does not agree at all" to "agree very much" was used. Within the 8 items, 3 were reversed in scoring. Higher scores represented better-perceived happiness. The reliability analysis of the 8 items resulted in a Chronbach's alpha of 0.499. However, item statistics showed that if item number 7 "I feel fully mentally alert" was deleted, the Chronbach's alpha would increase to 0.629. Exploratory factor analysis showed the 8 items could be separated into 2 dimensions, as shown in the supplementary table. With items over 0.60 grouping into the same factor, items 1, 3, 4, and 6 could be grouped into the first dimension of SAS; items 2, 5 and 8 in the second dimension of PWB. Item 7 did not fit into either of the 2 dimensions. Since reliability analysis also suggested deleting item 7 resulted in better Chronbach alpha, therefore, item 7 was deleted from the scale. The SAS dimensions resulted in a Chronbach's alpha of 0.76, and PWB resulted in Chronbach's alpha of 0.57. Content validity was investigated using structural equation modeling, as shown in the supplementary figure., <http://links.lww.com/MD/C818> The SAS and PWB dimensions resulted in a good correlation of 0.17 ($P < .001$). Items 2, 5, and 8 showed good content validity of 0.69, 0.53, and 0.46 (all with P value less than .001). Items 1, 3, 4, and 6 also showed good content validity with the SAS dimension, with β s of 0.63, 0.81, 0.70, and 0.53, respectively, and P value less than .001. Showing that with 1 item deleted, the Chinese version of the Oxford Happiness Questionnaire can be separated into 2 dimensions of SAS and PWB, and shows good psychometric properties in community adolescents in Taiwan.

2.3. Statistical analysis

The demographic distribution, chi-squared and regression analysis were analyzed using Statistical Package for the Social Sciences (SPSS) 20.0 for Windows software (SPSS Inc., Chicago, IL). Bayesian analysis was used to replace missing values. It is a multiple imputation methods based on item response theory, accounting for multiple sources of correlation to replace missing data. Bayesian analysis uses a full information maximum likelihood approach to implement the algorithm, which uses all the available information to produce a maximum likelihood estimate in the SEM.

Chi-square was used to investigate the differences in the rate of bullying among different diagnoses. SEM was used to investigate the pathway relationship of these adolescents' LD, ID, ADHD, and ASD diagnosis, their association with being bullied, PWB, and SAS of these adolescents. The SEM was analyzed using the Analysis of a MOment Structures 7.0 statistical software package (SPSS Inc., Chicago, IL). SEM models with a P value greater than .5, and adjusted goodness-of-fit index (AGFI) greater than 0.9, comparative fit index (CFI) greater than 0.95, root mean square error of approximation (RMSEA) less than 0.08, implies that the null model approximates the real structure.

3. Results

Demographic distribution showed of the 1561 adolescents in our study, approximately half were male (54.7%), and a quarter reported to have been bullied before (25.4%). Twenty-five

Table 1
Demographic distribution of the children and parents (N = 1561).

Variable	n, %
Boy	854 (54.7)
Parents married and lives together	1253 (80.3)
Parent report child have been bullied before	43 (2.8)
Self report have been bullied before	396 (25.4)
Child diagnosed with	
Learning disability	25 (1.6)
Intellectual disability	11 (0.7)
Attention deficit/hyperactivity disorder	33 (2.7)
Autism spectrum disorder	8 (0.5)
Maternal education:	
Elementary school	58 (3.7)
High school	865 (55.4)
University/college	591 (37.9)
Graduate school	47 (3.0)
Paternal education:	
Elementary school	27 (1.7)
High school	864 (55.3)
University/college	563 (36.1)
Graduate school	107 (6.9)
Maternal age at childbirth	
20–29	302 (19.2)
30–39	1068 (68.4)
40–49	190 (12.2)
≥50	1 (0.1)
Paternal age at childbirth	
20–29	86 (5.5)
30–39	911 (58.3)
40–49	532 (34.1)
≥50	32 (2.1)

(1.6%) reported to have been diagnosed with LD, 11 (0.7%) with ID, 33 (2.7%) with ADHD, and 8 (0.5%) with ASD. Other demographic distribution is presented in Table 1.

Table 2
The likelihood of being bullied in adolescents' diagnosis compared to those not diagnosed.

Adolescents' diagnosis	n, %	χ^2	P
Learning disability	13 (25.0%)	9.52	.002
Intellectual disability	7 (63.6%)	8.57	.008
Attention deficit/hyperactivity disorder	13 (39.4%)	3.50	.052
Autism spectrum disorder	5 (62.5%)	5.86	.029

Frequency of being bullied and those diagnosed with LD, ID, ADHD, and ASD were compared to their same-aged cohort in Table 2. Results showed those with ID reported to have the highest rate of bullying (63.6%), followed by ASD (62.5%), ADHD (39.4%), and LD (25.0%). Chi-square analysis showed all diagnoses showed statistically significant difference in the rates of being bullied compared to their controls (LD: $\chi^2=9.52$, $P=.002$; ID: $\chi^2=8.57$, $P=.008$; ADHD: $\chi^2=3.50$, $P=.052$; ASD: $\chi^2=5.86$, $P=.029$).

SEM was used to investigate the pathway relationship of these adolescents' LD, ID, ADHD, and ASD diagnosis, and their association with being bullied, and the perceived PWB and SAS of these adolescents. The model resulted in a p of .286 (>.05), AGFI of .994 (>.9), RMSEA = .011 (<.08), and CFI = .989 (>.95) showing a good fit, as shown in Figure 1. There were gender differences in ADHD diagnosis and the rate of being bullied, with more boys diagnosed with ADHD and experiences of being bullied ($\beta = -.07$, $P = .006$; $\beta = -.05$, $P = .051$). Regardless of gender, adolescents diagnosed with ID and ASD reported a higher rate of being bullied compared to those without diagnoses ($\beta = .07$, $P = .008$; $\beta = .05$, $P = .039$). In the aspect of happiness, those who have not been bullied perceived better PWB ($\beta = -.14$, $P < .001$). Those with better PWB, have not been bullied, and without diagnosis of

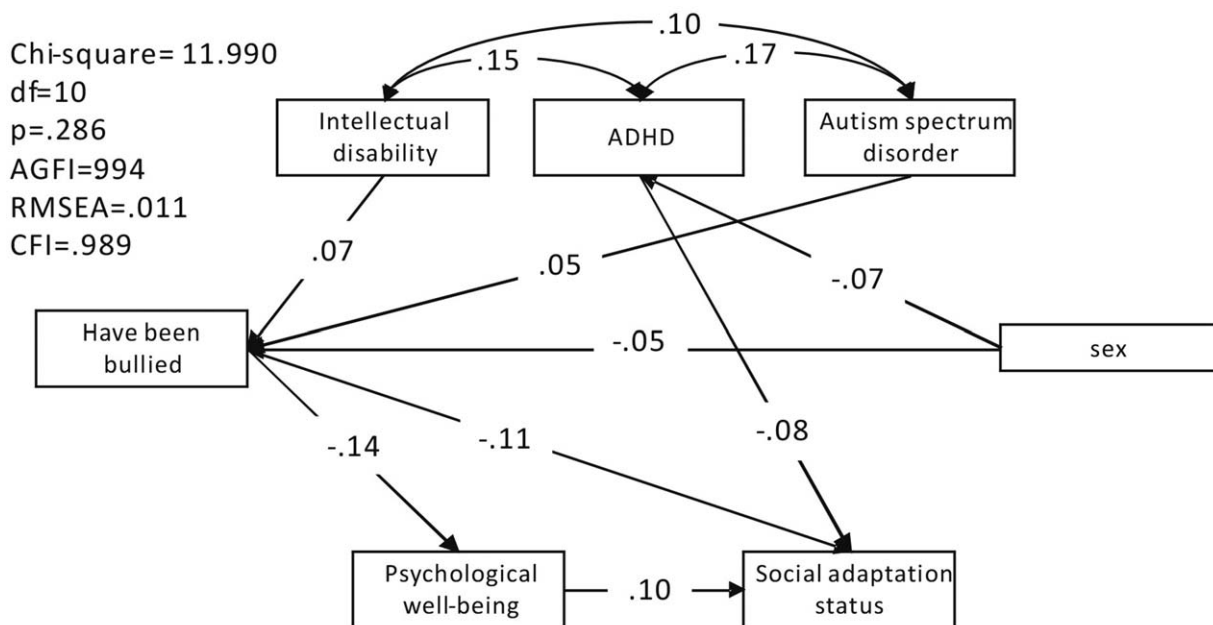


Figure 1. The pathway relationship among intellectual disability, ADHD, autism spectrum disorder, reported bullying and the perceived happiness of 12-year-olds. AGFI=adjusted goodness-of-fit index, RMSEA=root mean square error of approximation; sex (dummy variables: 1= male; 2=female); intellectual disability, ADHD, autism spectrum disorder (dummy variables: 1=have been diagnosed; 0=never diagnosed); Have been bullied (dummy variables: 1=yes; 0=never). ADHD= attention deficit hyperactivity disorder.

ADHD perceived better SAS ($\beta = .10, P < .001$; $\beta = -.11, P < .001$; $\beta = -.08, P = .002$).

4. Discussion

This is the first report of bullying reported in a population-based nationally representative dataset in Asia. Almost a quarter of the adolescents reported having been bullied. Gender differences were found in reported rate of bullying, with diagnoses controlled, boys reported higher rate of bullying than girls (as shown in Fig. 1). Regardless of gender, adolescent-reported rate of bullying was 25.4%, while only 2.8% of the parents reported knowing their child had been bullied. Adolescents diagnosed with ID, ASD and ADHD all reported having statistically significantly higher rate of being bullied compared to their peers, with a 63% rate of bullying in adolescents diagnosed with ID and ASD reported (as shown in Table 2). Pathway analysis further showed that with associating factors controlled, ID and ASD were the only diagnoses which had direct association with being bullied. Furthermore, adolescents who have been bullied perceived lower level of happiness (i.e., PWB and SAS).

The adolescent-reported rate of bullying is 25.3% in this study, which is similar to the 22.4% in the United Kingdom^[13] and 30% reported in the United States.^[14] Surprisingly, there was a big difference between parent-report and adolescent-reported rates of bullying, with only 2.8% of parents reporting that their children had been bullied before, showing that of those adolescents that had experienced bullying, approximately only 10% of the parents know of their children's bullying experience. A previous Australian nationally representative adolescents' study found over half of youths who have experienced bullying do not seek help;^[15] however an even higher rate is found here. Therefore, encouraging adolescents to seek adult protection and support maybe important. Additionally, a gender difference was found in the self-report of bullying, with boys reporting higher rate of bullying compared to girls (of those bullied, 59.3% were boys and 40.7% girls). This result was consistent with that found in the World Health Organization cross-national finding in 11-, 13-, and 15-year-old boys being 2 to 3 times more likely than girls to have been bullied.^[16]

Adolescents diagnosed with ID and ASD reported a rate of over 60% of bullying, followed by ADHD and LD. In the pathway analysis, with the confounding factors controlled, ID and ASD were the only diagnoses associated with bullying. Students with disability are 1.5 times likely to experience victimization compared to those without disabilities.^[2] Christensen et al also reported a 62% of victimization of bullying in adolescents with ID.^[17] Cappadocia et al noted an even higher rate (77%) of parent-reported bullying in ASD children aged 5 to 21 years.^[18] Having friends or supportive peers is a protective factor for bullying, however since children with ID show reduced social competence and conflict resolution skills, they are more vulnerable to bullying. In a similar line, the ASD core feature of deficit in theory of mind makes it more difficult for them to understand social cues, increasing their likelihood of marginalization and conflict in peer relationships.^[19] Children with ASD struggles to understand the thoughts of others and monitoring feedback from others about how their behavior is perceived also increases the likelihood of misunderstanding and becoming a target of victimization.^[19]

In the pathway analysis, with the confounding factors controlled, ADHD was not associated with bullying but perceived lower SAS compared to their peers. This is consistent

with a previous study which found ADHD to be associated with a substantial reduction in the quality of life of patients, including lower health, lower subjective well-being, less sleep and elevated bullying compared with children who did not have ADHD.^[10] Confucianism has a strong influence in Asian traditional culture, and obedience is seen as an essential value to harmony and functioning.^[20] In the Confucian value system, respect of hierarchy and concern for collective well-being is the key,^[21] therefore obedience and behaving properly is important. Delinquent behavior that breaks the harmony is regarded as "non-moral", in which the individual and the group to which the individual belongs should feel shame. Adolescents diagnosed with ADHD are aware of their difficulties, including being more disorganized, disruptive, impulsive, poorer self-perception and social communication skills, and are able to report them.^[22] The symptoms of ADHD being more inattentive, impulsive and the tendency towards risk and sensation seeking, increases the possibility of them being less liked by their peers and having fewer close friends.^[23] The disruptive behavior caused by ADHD symptoms is thus even less acceptable in the Asian culture, causing greater stress and wish for adolescents with ADHD to fit in.

Furthermore, regardless of whether they have been diagnosed or not, adolescents that have been bullied have perceived lower levels of PWB, which is associated with their SAS. This result is similar to that found in Scottish adolescents, which showed those who have been bullied were more likely to report lower levels of confidence and happiness and higher levels of psychological symptoms.^[24] Positive peer relationships and friendships are especially important for adolescents, for these relationships help them deal with developmental tasks such as forming identity, developing social skills and self-esteem, and establishing autonomy.^[16] Furthermore, adolescents who participate in social networks are found to have better-perceived health, perceived well-being, and take part in more healthy behaviors.^[25] The association between PWB and SAS can be explained by cognitive information processing theory, which proposes that targeted children show cognitive processing patterns by attributing hostile and harmful intentions to peers, causing them to fear and avoid all kinds of social situations, and develop maladaptive social anxiety.^[26] This social avoidance further prevents adolescents from learning the social skills they need through peer interaction.^[27]

This study was limited due to the use of self-reports. The diagnosis of the adolescents was of parent-report, and experience of bullying and perceived happiness from the adolescents' self-report. The information collected in this study regarding bullying were dichotomous variables of whether they have been diagnosed or not. However, victimization type, intensity, and frequency of bullying have all been found to have a different impact on children.^[3] Therefore the lack of these data are a limitation of our study. Although the prevalence of bullying reported, and perceived level of PWB and SAS maybe biased, however since the aim of our study was to increase our knowledge of the relationship between bullying and the observed psychological effects of this phenomenon, self-report method is recommended.^[28] Additionally, nationally representative surveys of parents have produced ASD-prevalence and demographic patterns that are comparable with estimates from population-based studies that relied on medical and special education record abstraction in defined communities.^[29] Follow-up on the internalized mood and externalized conduct of these children may provide us with more information regarding the psychological process of these adolescents.

The present study makes important contributions to the research as it investigated the prevalence of bullying in adolescents with LD, ID, ASD, and ADHD, and its association with the adolescents perceived happiness in a population-based nationally representative dataset in Asia. Over 60% of the adolescents diagnosed with ID and ASD reported experience of being bullied. Those who have been bullied perceived lower level of happiness and regardless of having been bullied or not, adolescents diagnosed with ADHD perceived lower SAS compared to their peers. It should be noted that the adolescent-reported rate of bullying was 25.4%, while only 2.8% of the parents reported knowing their child had been bullied. Adult support is crucial when a child is being bullied, especially for a child with disability.^[18] Adults can help children develop social skills, such as adaptive emotional and behavioral regulation strategies and coping skills, ignoring peer provocation, identifying and engaging with supportive peers, problem-solving, and communicating assertively.^[30] Thus it is important to encourage adolescents to seek help, including finding an adult who is willing to listen or offer protection and support. This assistance will reduce the effect of bullying on the PWB and SAS of the victimized adolescent.

Author contributions

Conceptualization: For-Wey Lung, Bih-Ching Shu, Tung-Liang Chiang, Shio-Jean Lin.

Data curation: Bih-Ching Shu, Tung-Liang Chiang.

Formal analysis: For-Wey Lung, Bih-Ching Shu.

Funding acquisition: Tung-Liang Chiang.

Investigation: Bih-Ching Shu, Tung-Liang Chiang, Shio-Jean Lin.

Methodology: Bih-Ching Shu, Tung-Liang Chiang, Shio-Jean Lin.

Project administration: For-Wey Lung, Tung-Liang Chiang.

Supervision: Bih-Ching Shu, Tung-Liang Chiang, Shio-Jean Lin.

Writing – original draft: For-Wey Lung.

Writing – review & editing: Bih-Ching Shu, Tung-Liang Chiang, Shio-Jean Lin.

Bih-Ching Shu orcid: 0000-0001-7697-1493.

References

- [1] Benedict FT, Vivier PM, Gjelsvik A. Mental health and bullying in the United States among children aged 6 to 17 years. *J Interpers Violence* 2015;30:782–95.
- [2] Blake JJ, Lund EM, Zhou Q, et al. National prevalence rates of bully victimization among students with disabilities in the United States. *Sch Psychol Q* 2012;27:210–22.
- [3] Maïano C, Aimé A, Salvas MC, et al. Prevalence and correlates of bullying perpetration and victimization among school-aged youth with intellectual disabilities: a systematic review. *Res Dev Disabil* 2016;49:50:181–95.
- [4] Zeedyka SM, Rodriguez G, Tiptona LA, et al. Bullying of youth with autism spectrum disorder, intellectual disability, or typical development: victim and parent perspectives. *Res Autism Spectr Disord* 2014;8:1173–83.
- [5] Mayes SD, Calhoun SL, Baweja R, et al. Maternal ratings of bullying and victimization: differences in frequencies between psychiatric diagnosis in a large sample of children. *Psychol Rep* 2015;116:710–22.
- [6] Montes G, Halterman JS. Bullying among children with autism and the influence of comorbidity with ADHD: a population-based study. *Ambul Pediatr* 2007;7:253–7.
- [7] Reijntjes A, Kamphuis JH, Prinzie P, et al. Peer victimization and internalizing problems in children: a meta-analysis of longitudinal studies. *Child Abuse Negl* 2010;34:244–52.
- [8] van der Ploeg R, Steglich C, Salmivalli C, et al. The intensity of victimization: associations with children's psychosocial well-being and social standing in the classroom. *PLoS One* 2015;10:e0141490.
- [9] Savage A, McConnell D, Emerson E, et al. Disability-based inequity in youth subjective well-being: current findings and future directions. *Disabil Soc* 2014;29:877–92.
- [10] Peasgood T, Bhardwaj A, Biggs K, et al. The impact of ADHD on the health and well-being of ADHD children and their siblings. *Eur Child Adolesc Psychiatry* 2016;25:1217–31.
- [11] Lung FW, Chiang TL, Lin SJ, et al. Developing and refining the Taiwan Birth Cohort Study (TBCS): five years of experience. *Res Dev Disabil* 2011;32:2697–703.
- [12] Hills P, Argyle M. The Oxford Happiness Questionnaire: a compact scale for the measurement of psychological well-being. *Pers Individ Dif* 2002;33:1073–82.
- [13] Hennig T, Jaya ES, Lincoln TM. Bullying mediates between attention-deficit/hyperactivity disorder in childhood and psychotic experiences in early adolescence. *Schizophr Bull* 2017;43:1036–44.
- [14] Nansel TR, Overpeck M, Pilla RS, et al. Bullying behaviors among US youth: prevalence and association with psychosocial adjustment. *JAMA* 2001;285:2094–100.
- [15] Thomas HJ, Connor JP, Lawrence DM, et al. Prevalence and correlates of bullying victimisation and perpetration in a nationally representative sample of Australian youth. *Aust N Z J Psychiatry* 2017;51:909–20.
- [16] Inchley J, Currie D. Growing up unequal: gender and socio-economic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO, 2016 Health Policy for Children and Adolescents. Available at: <http://www.euro.who.int/en/health-topics/Life-stages/child-and-adolescent-health/health-behaviour-in-school-aged-children-hbsc> [access date September 1, 2017].
- [17] Christensen LL, Fraynt RJ, Neece CL, et al. Bullying Adolescents With Intellectual Disability. *J Ment Health Res Intellect Disabil* 2012;5:49–65.
- [18] Cappadocia MC, Weiss JA, Pepler D. Bullying experiences among children and youth with autism spectrum disorders. *J Autism Dev Disord* 2012;42:266–77.
- [19] Schroeder JH, Cappadocia MC, Bebeko JM, et al. Shedding light on a pervasive problem: a review of research on bullying experiences among children with autism spectrum disorders. *J Autism Dev Disord* 2014;44:1520–34.
- [20] Cheng CK. Familism the foundation of Chinese social organization. *Soc Forces* 1944;23:50–9.
- [21] Dalton RJ, Shin DC. Weber's Theory of Capitalism in Confucian East Asia. In: Dalton RJ, Shin DC, eds. *Citizens, Democracy, and Markets around the Pacific Rim: Congruence Theory and Political Culture*. Oxford, UK: Oxford University Press; 2006.
- [22] Klimkeit E, Graham C, Lee P, et al. Children should be seen and heard: self-report of feelings and behaviors in primary-school-age children with ADHD. *J Atten Disord* 2006;10:181–91.
- [23] Normand S, Schneider BH, Lee MD, et al. How do children with ADHD (mis)manage their real-life dyadic friendships? A multi-method investigation. *J Abnorm Child Psychol* 2011;39:293–305.
- [24] Cosma A, Whitehead R, Neville F, et al. Trends in bullying victimization in Scottish adolescents 1994–2014: changing associations with mental well-being. *Int J Public Health* 2017;62:639–46.
- [25] Moreno C, Sánchez-Queija I, Muñoz-Tinoco V, et al. Cross-national associations between parent and peer communication and psychological complaints. *Int J Public Health* 2009;54(suppl. 2):235–42.
- [26] Ziv Y, Leibovich I, Shechtman Z. Bullying and victimization in early adolescence: relation to social information processing patterns. *Aggress Behav* 2013;39:482–92.
- [27] Camodeca M, Caraita S, Coppola G. Bullying in preschool: the association between participant roles, social competence, and social preference. *Aggress Behav* 2015;41:310–21.
- [28] Bouman T, van der Meulen M, Goosens FA, et al. Peer and self-reports of victimization and bullying: their differential association with internalizing problems and social adjustment. *J Sch Psychol* 2012;50:759–74.
- [29] Centers for Disease Control and Prevention. Prevalence of autism spectrum disorders: Autism and Developmental Disabilities Monitoring Network, 14 sites, United States, 2002. Autism and Developmental Disabilities Monitoring Network Surveillance. *MMWR Surveillance Summaries*. 2007;56:12–28.
- [30] Cummings JG, Pepler P, Mishna F, et al. Bullying and victimization among student with exceptionalities. *Except Educ* 2006;16:193–222.