Psychiatry Research 248 (2017) 48–55

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

Effect of personal characteristics, victimization types, and family- and school-related factors on psychological distress in adolescents with intellectual disabilities

Yu-Lung Chiu[a,b], Senyeong Kao[b,*], Shao-Wen Tou[b], Fu-Gong Lin[b,*]

[a] Graduate Institute of Medical Sciences, National Defense Medical Center, No. 161, Min-Chun E. Rd., Section 6, Taipei 114, Taiwan
[b] School of Public Health, National Defense Medical Center, No. 161, Min-Chun E. Rd., Section 6, Taipei 114, Taiwan

ARTICLE INFO

Keywords:
Adolescent
Intellectual disability
Bully
Victimization
Psychological distress

ABSTRACT

The purpose of this study was to determine the prevalence of bullying victimization among adolescents with intellectual disabilities and the influence of victimization experience on their mental health in Taiwan. Data on 706 adolescents from the 2011 Special Needs Education Longitudinal Study were analyzed. Multivariate regression analysis was applied to variables comprising 7 items of psychological distress, 4 types of bullying victimization, and family-, school-, and peer-related factors. Approximately 70% of the survey respondents had experienced at least one type of victimization, and 44% of them had experienced at least two types of victimization. Exclusion (50%) and verbal bullying (70%) were the most commonly reported types. In addition, exclusion and verbal bullying were found to be significantly associated with psychological distress in these adolescents. Our findings suggest that victimization is a common experience among adolescents with disabilities, and a notable risk factor for the psychological well-being of adolescents with intellectual disabilities. However, a good relationship with parents and peers can relieve psychological distress and its effect on mental health.

1. Introduction

In recent years, the number of people with intellectual disabilities (ID) has increased steadily (Boyle et al., 2011). In Taiwan, the number of children and adolescents with ID has also been increasing. According to the Ministry of Education, 24,772 school-aged children and adolescents with ID, or 28% of all students with disabilities, received special education services in 2014 (Ministry of Education, Taiwan, 2014).

The prevalence of victimization of students with disabilities is approximately 1.5 times higher than those without disabilities (Blake et al., 2012). In addition, studies have found that adolescents with ID are more vulnerable to bullying than those without ID (Sheard et al., 2001; Zeedyk et al., 2014). Various types of school bullying have been reported, including social exclusion, extortion, verbal bullying, and sexual harassment (Clear et al., 2014; Zhang et al., 2014).

Children and adolescents with ID experience substantially impaired learning ability and social adaptation (Hartley et al., 2008; EMbregts and van Nieuwenhuijzen, 2009; Goharpey et al., 2013). Magnetic resonance imaging and neuropathological findings indicate that people with ID have neurophysiological impairment and pathopsychological defects (Soto-Ares et al., 2003; Spencer et al., 2005; Moorhead et al., 2013). Furthermore, adolescents with ID have been observed to be vulnerable to associated mental health problems because of biological and social factors and cultural environments (Honey et al., 2011; Matson et al., 2012; Lake et al., 2014). Salvador-Carulla et al. reported that approximately 32% of people with ID were diagnosed with psychiatric morbidity (Salvador-Carulla et al., 2000). Nevertheless, approximately 50% of adolescents with ID and mental health needs were unidentified and received no treatment (Hassiotis and Turk, 2012). This phenomenon suggests that a stronger emphasis should be placed on promoting the optimal mental health of adolescents with ID.

Previous study found that peer victimization was associated with psychological distress (PD) among adolescents (McGee, 2015). In addition, bullying in school is significantly associated with mental health problems (Gini and Pozzoli, 2013; Yen, 2014). Children who were bullied have been found to be more likely to have mental health problems in adolescence and to even develop psychiatric symptoms (Kumpulainen et al., 1998, 2000; Arseneault et al., 2010). Recent longitudinal studies demonstrated that being bullied in childhood increases the risk of self-harm in later adolescence (Fisher et al., 2012; Lereya et al., 2013). Researchers have reported that prior experience of victimization by peers was associated with lower mental

* Corresponding authors.
E-mail addresses: kao@ndmctsgh.edu.tw (S. Kao), fugong@ndmctsgh.edu.tw (F.-G. Lin).

http://dx.doi.org/10.1016/j.psychres.2016.12.015
Received 11 April 2016; Received in revised form 2 November 2016; Accepted 8 December 2016
Available online 16 December 2016

health functioning in college students (Holt et al., 2014; Wolke et al., 2014). Multiple episodes of bullying could lead to internalized psychological symptoms (Boyes et al., 2014).

However, studies of the relationship between bullying and mental health among adolescents with ID are still rare. The aims of this study were to investigate the prevalence of various types of bullying victimization among adolescents with ID and the influence of victimization experience on the mental health of adolescents with ID with a nationally representative sample.

2. Methods

2.1. Study sample

The current study sample was taken from the database of the Special Needs Education Longitudinal Study (SNELS), which was released in 2011 by the Survey Research Data Archive, Academia Sinica (https://srda.sinica.edu.tw/group/view/2). In the SNELS, nationally representative samples of adolescents with ID were randomly selected from the list registered by the Ministry of Education, Republic of China. The students with ID included in the SNELS investigation were identified from hospital records or by the Identification of Special Education Needs Committee in the local government as described in a previous study (Huang, 2013). Collected data were primarily from questionnaires designed for adolescents, parents, and teachers. The questionnaires for adolescents and teachers were carried out by the online system, while for parents were executed by face-to-face interviews. Adolescents with ID independently filled out the self-administered electronic questionnaires through the online system. Students with ID who could not answer the questionnaire alone were excluded. The collected data were checked carefully for the reasonable data range and the consistency in answers to the closely related questions by the SNELS team to verify the validity of data. The SNELS team incorporates 27 experts, including special educators, sociologists, survey experts, statisticians, and data analysts who were sponsored by the National Science Council of Taiwan (Wang, 2013). In this study, we analyzed 706 adolescents with ID, namely 271 seventh graders, 265 tenth graders, and 170 twelfth graders who received special education services in 2011. This study was approved by the Institutional Review Board of the Tri-Service General Hospital of the National Defense Medical Center (Approval Number 1–103-05–085).

2.2. Victimization

The adolescents were asked whether they had experienced any of the following types of bullying in school: social exclusion, verbal bullying, extortion, and sexual harassment. Special needs teachers were on hand to help the students answer the questions. The items of bullying victimization in this study were originated by special education teachers based on domestic and review literatures. Previous studies indicated that adolescents with special education experienced more social exclusion, verbal bullying, and sexual harassment compared to their peers (Duh and Hsin, 2009; Rose et al., 2010). The impact of extortion bullying on students was high severity even if the frequency was low (Chen, 2015). To assess social exclusion, the students were asked the question, “Have you felt left out by classmates during this semester?” To assess verbal bullying, the students were asked, “Have you felt insulted or teased by classmates during this semester?” To assess extortion, the students were asked, “Have you been extorted for money during this semester?” To assess sexual harassment, the students were asked, “Has anyone touched your body inappropriately and made you feel uncomfortable during this semester?” Each item was written by the student. In addition, each item was evaluated on a 4-point scale (1=*never*, 2=*seldom*, 3=*occasionally*, and 4=*frequently*) to measure the frequency of the bullying during the past semester according to Chinese version of the School Bullying Experience Questionnaire (C-SBEQ) (Yen et al., 2012).

2.3. Psychological distress

PD of the participants was measured using a self-reported 7-item short version subscale adapted from the Symptom Checklist-90-revised scale (SCL-90-R), which was originally used for a broad range of psychological symptoms (Derogatis, 1983). The items were extracted according to the most frequent symptoms of students receiving special education services (Wang and Wu, 2003). Of the 7 items (SCL-7), 2 items (feeling blue and feeling lonely) covered the dimension of depression, and the following 6 dimensions each comprised 1 item: obsessive-compulsion (trouble in concentrating), insomnia (restlessness or disturbed sleep), anxiety (feeling tense or uptight), psychoticism (never feeling close to another person), and anger/hostility (experiencing the urge to break or smash objects/experiencing the urge to beat, injure, or harm). The frequency of each item was rated on the same 4-point scale used to assess victimization frequency. The scores of the items were then summed to give a PD index, ranging from 7 to 27; the higher the score, the higher the level of PD. The Cronbach's alpha of the SCL-7 for PD was 0.78.

2.4. Measurement of covariates

Variables of personal-, family-, and peer-related characteristics associated with adolescent mental health were collected and used as covariates for controlling the possible confounding effect between victimization and PD. According to previous investigation, female, older age, overweight, or obese were risk factors of mental health problems among adolescents (Borges et al., 2010; Viner et al., 2006). Bedtime may be an indicator for short sleep, which was correlated to depression and mental health problems among adolescents (Roberts and Duong, 2014, 2016). And sleep was as moderators of the association between peer victimization and mental health (Tu et al., 2015). In addition, family factors, including parents’ education, living status, and communication and relationship with parents were related to mental health among students (Benjet et al., 2016; Estevez et al., 2005). Moreover, perceived peer support was a protective factor for adolescents’ mental health (Levendosky et al., 2002). The mentioned related risk factors for adolescent mental health were then collected and analyzed in this study.

The demographic variables were measured by gender, grade level, and usual bedtime (10 pm, 10–11 pm, 11 pm–12 am, and after 12 am). Body mass index (BMI) was calculated as weight/height^2 (kg/m^2). The BMIs of the adolescents were categorized as underweight, normal, overweight, or obese according to the definitions of the Taiwan Department of Health.

The family-related variables included the following: the parents’ reported family income, the parents’ education (if > 9 years), living with one or two parent(s), conflicts with parents, and relationship with parents (*very good*, *good*, *not good*, and *very bad*) during the current semester.

Peer-related variables were as follows: the adolescents’ experience of joining a social networking platform that enables interaction with classmates, such as Facebook or bulletin boards; whether the adolescents liked going to school (*like very much, like, dislike,* and *dislike very much*); and how the adolescents interacted with classmates (*very well, well, poorly,* and *very poorly*) during the past semester. Three levels of special education class placement were used to characterize the students with ID: level 1, attendance in an ordinary education class; level 2, part-time attendance with time spent in a resource room; level 3, full-time attendance in a special education class.