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Research Article

Psychological and Developmental Disturbances among High-Risk Juveniles in an Approved School in Japan

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Abstract

Although "Japanese Approved Schools" are facilities for children and youths who have not been cared for appropriately by their parents, little is known about them and no research undertaken to characterize them. These facilities prevent youth from committing delinquent acts, and protect juveniles from maltreatment as social welfare facilities for children and youths. This is the first study to clarify what Japanese approved schools are and what traits the juveniles have. This current study examined main hypothesis that the subject group would have particular psychological traits and developmental disturbances. Participants were thirty-six juveniles (male=24, female=12) between ages11-18. Many of them have been exposed to parental abuse severely and exhibited serious antisocial behavior. The results of self-report questionnaires suggested that they have a low self-esteem and serious depressive symptoms. In addition, they showed AD/HD symptoms such as inattention, impulsivity, and hyperactivity. Our findings suggest that the subjects have negative emotional traits and multidimensional developmental disturbances. Findings and limitations in current study were discussed. Future research should focus on examining the efficacy of such facilities and utility of these services for juveniles.

BACKGROUND AND STUDY AIM

"Japanese Approved Schools" are facilities for children and youths who have not been cared for appropriately by their parents. Those admitted to such facilities have committed crimes and/or may show a high risk of deviant behavior. In addition, children who have an early family history of parental abuse are supported and educated in these facilities. Namely, Japanese approved schools have two important roles, that is, they prevent youth from committing delinquent acts, and protect juveniles from maltreatment as social welfare facilities for children and youths. They are sent to these facilities based on the decision of child consultation offices, and one dormitory usually consists of no fewer than 6 and no more than 15 persons. Moreover, an approved school usually has about 5 dormitories.

Japanese approved schools have two major characteristics discriminating other social welfare facilities. Firstly, married couples usually manage a dormitory as resident directors, who are actually called housefathers and housemothers. They live with children and youths under the same roof, because they believe that those who have brought up in broken homes need "family lessons" in a warm and private area, allowing sufficient time for bonding. That is, housefathers and housemothers play three crucial roles as a parent, professional educator, and social welfare expert. Second, these facilities have been well-organized nationwide for more than 60 years. All approved schools are managed as public institutions, not private schools.

As welfare facilities like Japanese approved schools are rarely seen worldwide, little is known about them, and no research has been undertaken to characterize them. The term "approved school" is synonymous with "community home" in Western countries. Previous studies on approved schools and community homes for juveniles have revealed their effectiveness [1-4], although empiric and scientific evidence is limited.

Most juveniles admitted to an approved school have exhibited serious antisocial and delinquent behaviors. In addition, most of their parents could not cope with their inappropriate behaviors, and abused them repeatedly. Therefore, in many cases, family courts and child consultation offices have needed to make a decision regarding sending them to an approved school.

A number of studies regarding relationships between antisocial behavior and maltreatment have been conducted [5,6]. Recent attention has been drawn to the possibility of uncovering familial contexts and psychological and neurodevelopmental factors underlying delinquent behaviors [7-9]. Previous evidence has clarified the complex interactions (i.e. biological ×environmental) which aggravate antisocial behavior and/or depressive symptoms [10]. Therefore, it is very important to investigate the psychological and developmental disturbances of those in such facilities.

Juveniles sent to this type of facility have been chronically exposed to family adversity, poor parenting, and high levels of conflict, are overwhelmed by strong negative emotions and receive little help to manage them from stressed and unskilled parents [8]. Therefore, they are at risk of failing to develop adequate strategies for coping with their negative emotions [11-13]. Consequently, they are prone to a low self-esteem, high aggression, and depressive symptoms.

The importance of preventing child abuse by high risk parents has been the subject of enormous research efforts and repeated discussions in recent years [14,15]. Similarly, intervention for delinquency among high-risk juveniles is becoming one of the most important social issues [16-18]. Many preventive programs have been suggested, although their effectiveness has not been well established. For example, family therapy, such as systemic family therapy, parent management training and family teaching are effective treatments among various types of dysfunctional family [19]. However, it has been well documented that problems with poor parenting are very hard to improve [20]. Thus, approved schools have been established to protect juveniles from parents with seriously inadequate parenting skills. In approved schools, housefathers and housemothers are professional therapists as well as part of the family.

Although these facilities have provided intensive services for a long time, little is known about the actual practices and characteristics of juveniles receiving such problems. Further, less attention has been paid to the fact that it is important to clarify their growing up and developmental disturbances. That is, empirical research should be conducted to share evidence with practitioners and professionals. This is the first study to clarify what Japanese approved schools are and what traits the juveniles have.

The present study examined the following hypotheses: 1) the subject group would show particular psychological traits and developmental disturbances; 2) the subject group would have been exposed to serious adverse childhood experiences such as physical and psychological abuse; 3) these factors would be associated with each other negatively, and sex differences would be specifically associated with the mental status and developmental disturbances. These hypotheses were tested in a sample of juveniles admitted to a facility.

METHOD

Participants

Thirty-six juveniles (male=24, and female=12) admitted to approved school "A" During the August 2009 were analyzed. Participants were aged 11-18 years, with a mean age of 14.8 (SD=1.43) years. All juveniles underwent all tests and were assessed with all instruments as follows.

Instruments

Self-esteem scale (Rosenberg version): The 10-item self-esteem scale prepared by [21] and translated into Japanese by [22] was used. Rosenberg considered self-respect and a positive evaluation of the self rather than a feeling of superiority or inferiority in comparison with others to constitute self-esteem. He also considered that one has a high self-esteem when one feels oneself "good enough" rather than "very good". Low self-esteem means self-rejection, lack of self-approval, self-contempt, and the absence of self-respect. In this study, we used the term "self-esteem" in such a sense. Answers to questions were obtained using a 5-point scale of: "true" (5 points), "more true than false" (4), "neither true nor false" (3), "more false than true" (2), and "false" (1).

Japanese version of the Buss-Perry Aggression Questionnaire: A standardized Japanese version of the Buss-Perry Aggression Questionnaire (BAQ) [23-24]. This questionnaire consists of the 4 scales of verbal aggression, physical aggression, hostility, and anger. There is no consensus as to a precise definition of the concept of aggression, but this questionnaire is considered to allow the comparison of internal aggressiveness between subjects and normal samples.

Confirmed the high internal consistency and reliability of their aggression questionnaire. This questionnaire was converted by Ando et al. into scales with internal consistency and stability, and its validity has also been established [23-24].

Standardized Japanese version of the Birleson Depression Self-Rating Scale forChildren (DSRS-C): In this study, the Birleson Depression Self-Rating Scale for Children (DSRS-C) [25] was used. The DSRS-C consists of 18 questions for the evaluation of depression in children designed to be answered by children themselves regarding their state during the past week using a 3-point scale (2, 1, and 0), with a full score of 36. The Japanese version prepared by Murata has been confirmed to be reliable and valid [26]. Recently, [27] performed a large-scale survey of elementary and junior high school children in Hokkaido using this questionnaire.

Determined the cutoff of the DSRS-C as 15, but [26,28] reported that 16 was appropriate by applying the Japanese version of the DSRS-C to Japanese children and adolescents. They also set the cutoff as 16 in their recent study [27]. Therefore, we also set it as 16, and classified the subjects with a DSRS-C score of ≥16 as a depression group.

According to Birleson's report, the DSRS-C is designed to be applied to children aged 7-13 years (Birleson 1981), but the scale was subsequently reported to also be applicable to adolescents [29-30]. We selected the DSRS-C because it is simple and easy to answer, and some of our subjects were junior high school students.

AD/HD-youth self report (AD/HD-YSR): AD/HD-YSR consists of 9 items regarding attention deficit and 9 regarding hyperactivity/impulsivity (total, 18 items). This questionnaire

asks subjects to answer questions "whilst recalling themselves until the 3rd-4th year of primary school". The answer is selected among: (1) never, (2) sometimes, (3) often, and (4) I do not know, and 0 points are given for (1) and (4) and 1 point for (2) and (3). Therefore, the total score ranges from 0 to 18.

Applied this questionnaire to 1,540 general high school students and male and female inmates in juvenile correctional facilities, and, after standardization, confirmed its high internal consistency. Based on the results of the survey in general high school students, they determined the cutoff point to be 11 for female students (14 for male students) [31].

Pervasive Developmental Disorders Autism Society Japan Rating Scale (PARS): PARS has been standardized by [32] as a brief and useful screening scale which can be used to evaluate the features and severity of pervasive develo0070mental disorder. In addition, it has been confirmed as fully satisfactory and reliable by [32-33]. In the present study, the housefathers or housemothers were semi-structured interviewed conducted by us, although it mainly should be rated by parents. All screening by PARS used cutoff points for identifying PDD. However, a definitive diagnosis should be made by a professional doctor.

Adverse childhood experiences questionnaire (ACE questionnaire): The ACE Study was conducted primarily by the Health Insurance Union of the United States and the CDC on childhood abuse and state of health later in life based on answers to questionnaires by 17,737 affiliates to the above union [34-37]. The ACE Study emphasizes the number rather than categories of ACE that one has been subjected to [38,39]. The number of the nine items of ACE that one has experienced (0–9) is regarded as the ACE score. This questionnaire was translated into Japanese by [40,16], and has been widely used [41-43].

Informed consent

The approved school performs multiple questionnaires and screening tests for all juveniles at the time of their admission in order to understand and evaluate their psychological, cognitive, and behavioral characteristics. The above questionnaires are some of them. The results are used for the planning of individual programs for education (similar to Individual Educational Plan) and the understanding of juveniles. In addition, all persons in parental authority gave their informed consent to the study.

Statistical analyses

For statistical analyses, the Mann-Whitney U-test, Fisher's exact test, and Spearman's correlation analysis were performed. The level of significance was <0.05. The statistical package SPSS 13.0J for Windows was used.

RESULTS

Results of WISC and psychological traits

The mean scores of WISC were VIQ=84.9 (SD=11.80), PIQ=87.5 (SD=9.90), and FIQ=84.1 (SD=10.90) in males and VIQ=86.9 (SD=9.52), PIQ=87.2 (SD=9.43), and FIQ=85.8 (SD=9.06) in females, respectively (Table 1). There were no significant sex differences. This suggested that the subject group had a low IQ (approximately 15) compared with the standard indicator.

The results for the mean score of self-esteem were 28.3 (SD=6.44) for males and 26.0 (SD=9.06) for females. The mean score of aggression were 84.2 (SD=22.27) for males and 83.8 (SD=19.00) for females.

Emotional traits

The mean scores for depression were 12.3 (SD=3.46) for males and 15.8 (SD=9.24) for females (Table 1). The DSRS-C test resulted in a suspected depression rate of 20.8% for males and 58.3% for females. This suggested that a number of subject had depressive disorders or significant depressive symptoms. On Fisher's exact test, there were no significant sex differences in the suspected depression rate.

Developmental disturbances

The total AD/HD YSR score revealed inattentive, hyperactive, and impulsive traits. The percentage of subjects with a total score of ≥14 was 50.0% for males, and that score of ≥11 was 75.0% for females. On Fisher's exact test, there was no significant sex difference in the rate of high scores. The total PARS score showed the overall autistic characteristics. Those who were strongly suspected to have autistic disorder had a score of more than 20 points with the rate in males being 91.7% and that in females being 58.3%, showing a significant difference (p=.029).

Results of ACE and ACE score

Nine items of the ACE questionnaire and prevalences in

Table1: Psychological and emotional traits in subjects.

		male				female				
		N	M	SD	More over cut off	N	M	SD	More over cut off	Percentage of more than cut offs
W ISC-III	VIQ	24	84.9	11.80		12	86.9	9.52		
	PIQ	24	87.5	9.90		12	87.2	9.43		
	FIQ	24	84.1	10.90		12	85.8	9.06		
Seif-esteem score		24	28.3	6.44		12	26.0	9.06		
Aggression score		24	87.2	22.27		12	83.8	19.00		
Depression		24	12.3	3.46	20.8%	12	15.8	9.24	58.3%	P=.058(a)
Total AD/HD YSR score		24	13.0	4.28	50.0%	12	23.6	3.83	75.0%	P=.282(a)
Total PARS score		24	43.8	16.59	91.7%	12	33.4	31.54	58.3%	P=.0029(a)
ACE score		24	3.2	1.69		12	3.7	2.90		
Note;Mann-Whitney test,no significant differences in between male and female (a): Fisher's exact test										

Table 2: ACE Questionnaire.

		male		Female	
		N=24		N=12	
No	Grouping up (prior to age 18)in a house hold with:	experienced	%	experienced	%
1	Recuurrent physical abuse:" ex, push grab , slap, kick	11	45.8	7	58.3
2	Recurrent emotional abuse; ex, called you things like "lazy" or "ugly"	13	54.2	6	50.0
3	Sexual abuse	1	4.2	1	8.3
4	An alcohoi or drug abuser	4	16.7	4	33.3
5	Mother being treated violently	6	25.0	7	58.3
6	Someone who is chronically depressed, suicidal, institutionalised or mently ill	5	20.8	4	33.3
7	One or more biological parents.	21	87.5	10	83.3
8	An incarcerated household member	6	25.0	3	25.0
9	Naglected by parents; ex, can't have enough to eat, had to wear dirty clothes	10	41.7	2	16.7
Note:Fishers extract test, no significant difference between male and female					

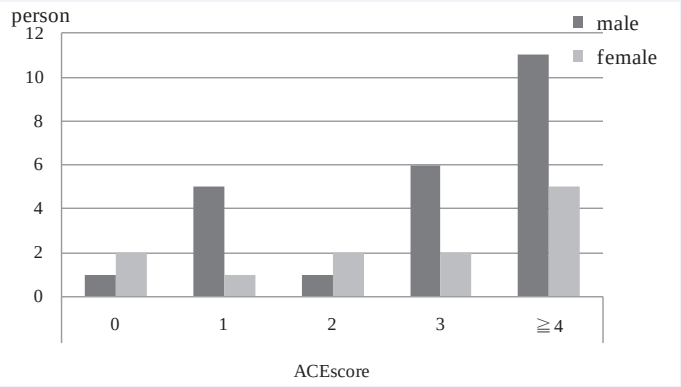

Figure 1 ACE Score in subjects.

subjects are described in (Table 2). The results of the ACE questionnaire revealed that physical, psychological, and sexual abuse had been experienced by 45.8% and 58.3%, 54.2% and 50.0%, and 4.2% and 8.3% of male and female, respectively. There were no significant sex differences in any items. ACE scores of subjects are presented in (Figure 1). Those with no ACE comprised only 3 persons (male=1, female=2), which suggested that most had serious ACE.

Correlation among measures in subject group

The correlation coefficients among factors observed in this study are shown in (Table 3). The aggression score was markedly associated with the total AD/HD YSR score in males ($r=.47$, $p<.05$), whereas the aggression score was positively correlated with the total AD/HD score ($r=.70$, $p<.05$), and the ACE score was also significantly positively correlated with the PARS score ($r=.73$, $p<.05$) in females.

DISCUSSION

Results of WISC and psychological traits

According to the results of WISC, half of the subjects showed borderline intellectual functioning (IQ ranging from 71 to 84). This suggested that they might have various kinds of risk factors related to cognitive development. To add to their neuropsychological factors, they experienced intensive parental maltreatment. These complex interactions can impact on their deviant and inappropriate behavior. In addition, there is strong evidence that low IQ increases the risk of developing psychological disturbances [44,45]. Our findings show that subjects have a low IQ and negative psychological traits.

Emotional traits

Showed that more than 40% of Japanese inmates of juvenile correctional facilities had higher levels of depressive symptoms. In particular, more than 50% of female subjects in this study exhibited serious depressive symptoms, suggesting marked differences compared to a previous study [46]. It is widely known that those who have internalizing problems such as depression and withdrawal tend to have externalizing problems as well [47-50]. These results suggested that special attention should be paid to such young people with multidimensional risk factors.

Table 3:

		1.	2.	3.	4.	5.	6.
1.	self-esteem score	-	-.13	-.34	-.08	-.04	-.09
2.	aggression score	.08	-	-.06	.47	.32	.04
3.	Depression score	-.34	.48	-	.23	.08	-.16
4.	total AD/HD YSR score	-.38	.70	.56	-	-.02	.02
5.	total PARS score	-.18	.35	.12	.23	-	-.11
6.	ACE score	.01	.40	.10	.17	.73	-
note; above male, below female, $^{*}p<.05$							

Developmental disturbances

There have been a large number of studies on deviant youths with developmental disturbances [51,52]. These empirical results suggest that those with developmental disabilities often exhibit internalizing and/or externalizing problems [53,54]. Our results show that more than 50% of the subjects are classified as having AD/HD and/or PDD. Caution should be exercised in an interpretation of these results because questionnaires are self-reported, and so high score often results from a combination of the juvenile's personality, immediate circumstances, and abnormal behavior. However, we should address their possible multidimensional developmental problems as well as psychological disturbances. This may guide further comprehensive support and therapeutic efforts.

Results of ACE and ACE scores

There are serious problems regarding the child-raising environment. In the subjects of this study, the results of the ACE questionnaire showed that most of them had suffered physical, psychological, and sexual abuse and been exposed to serious maltreatment. [55] surveyed about 350 average high school students using this questionnaire, and reported that the percentages of those who had experienced these abuse types comprised 0–1.2%. In addition, subjects with an ACE score ≥4, indicating serious cases, constituted about 45%. [56] concluded that ACE still have a marked effect 50 years later, although they are transformed from a psychosocial experience to an organic disease, social malfunction, and mental illness. Accordingly, we should address the fact that serious ACE has a long-term negative impact on psychological and mental health.

Correlation among measures in subject group

For the results of correlation analysis, sex differences were found. Among males, the total AD/HD-YSR score was positively correlated with the aggression score. Additionally, among females, the ACE score was positively correlated with the total PARS score. This suggested that the severity of ACE more strongly impacted on interpersonal relationships in females than in males. Although most subjects showed marked depressive symptoms, we cannot confirm that a low self-esteem is correlated with the depression score.

Examination the three hypotheses

The three hypotheses have been arguably supported by these studies. Our data suggest that subjects have negative emotional traits such as a low self-esteem and serious depression symptoms. In addition, they show multidimensional developmental disturbances such as a low IQ, AD/HD, and PDD. However, distinguishing cause from effect is often difficult. Although we identified some sex differences on correlation analysis, all factors are not correlated with each other negatively.

LIMITATIONS

Three limitations need to be addressed. First, all questionnaires beside PARS which were conducted in this study were completed by subjects based on retrospective recall. Although there are known limitations in the reliability of self-reported questionnaires, self-report methods are generally considered valid in assessing the psychological and developmental status. Second is small sample size and limited statistical power. Even though generalization based on these findings is limited by the small sample size, additional research involving Japanese approved schools concerning young high-risk populations might be useful. Third, it was not a comparative study because it is the first investigation of Japanese approved schools. Therefore, it is not clear whether such findings are unique to this facility or not. We should conduct future research to reveal whether other individuals housed in such facilities show similar psychological and developmental disturbances.

CONCLUSION

Japanese approved schools have played an important role in social welfare, in particular, protecting maltreated children and preventing youth delinquency. The subjects of this facility showed various emotional and developmental disturbances because of their history of maltreatment. It is possible that these problems will negatively impact on their emotional and mental health status after adolescence. Therefore, we should carry out a longitudinal assessment of mental and behavioral symptoms and symptom progression. In addition, future research should focus on examining the efficacy of facilities and utility of these services for juveniles.

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