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Hidden School Disengagement and Its Relationship to Youth Risk Behaviors: A Cross- Sectional Study in China

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Abstract

School dropout has become a serious problem in many places around the world. However, before students actually dropout from school, they normally exhibit some symptoms of disengagement from the social life and emotional involvement of school. Thus, hidden school disengagement or avoiding school psychologically may be an early stage of school dropout. This article examines the phenomenon of hidden school disengagement among students aged 12-16 in China. 14,563 students in 11 provinces and 2 administrative regions participated in a Youth Health Behaviors Survey conducted in 2010. Based on the Index of Hidden Disengagement, 2,854 students (19.6%) were identified as having multiple symptoms of disengagement. Further analysis suggested that students who were identified as hidden disengaged students had a significantly higher ratio of being involved in health-related risk behaviors, suffered from psychosomatic symptoms, and had a pessimistic outlook of their health and their lives. Personal and contextual factors, such as students with one or more siblings in the family, non-intact families, low family economic background, migrant families, left-over children, schools located in rural areas, and non-model schools, all contributed to a higher prevalence of hidden school disengagement.

Keywords: *school disengagement; risk behaviors; health behaviors*

1. Introduction

School dropout has become a widespread problem in many education systems around the world. However, well before students actually dropout from school, they normally exhibit some symptoms of disengagement from the social life and emotional involvement of school. Some of them, such as frequent tardiness to school (Taras, 2005) and truancy (Henry, 2007), are overt symptoms, but some of them, such as authority avoidance (Loeber et al., 1993), alienation from school (Osco, 2004) and school avoidance (Regner & Loose, 2006), are covert symptoms. Overt signs of disengagement are relatively easy to spot and dealt with from a policy perspective, but hidden or covert symptoms of school disengagement, which is likely to be more prevalent, is perhaps much more difficult to identify and to handle.

In the education literature, many scholars have used different names to describe the phenomenon of hidden school disengagement. Some of them are school disengagement (Vaughn et al., 2010), psychological disengagement (Strambler & Weinstein, 2010), emotional disengagement (Fredricks, Blumenfeld & Paris, 2004) and hidden dropout (Rosenblum, Goldblatt & Moin, 2008). It is an issue that deserves much attention by researchers and educational professionals. It has been suggested that the consequences of hidden school disengagement are far reaching, resulting in many negative consequences for society (Fantuzzo, Grim & Haxan, 2005). For example, Sum et al. (2003) found that the high school dropout rate in the US may be almost three times higher than government estimates, and that those who are not reported may be in the hidden school disengagement category. Also, hidden school disengagement is predictive of maladjustment (Balfanz, Herzog & MacIver, 2007; Reid, 1984), poor academic performance and school dropout (George & Alexander, 2003; Kandel, Ravels & Kandel, 1984; Wehlage et al., 1986), substance abuse (Hallfors et al., 2002; Miller & Plant, 1999), antisocial behaviors (Juvonen, 2006; Kaplan, Peck & Kaplan, 1994) and teenage pregnancy (Hibbert & Fogelman, 1990; Manlove, 1998). There is also evidence to suggest that the effect of hidden school disengagement persists past adolescence, predicting violence, job instability and adult criminality (Catalano et al., 1998; Dryfoos, 1990).

Despite the growing number of research endeavors pertaining to the issue of hidden school disengagement, we do not have much knowledge about its nature, prevalence, correlates and predictors in the Asian population. The present study is an initial attempt to investigate the phenomenon of hidden school disengagement in China. One objective is to evaluate the prevalence of hidden school disengagement in China. The second objective is to examine the construct in relation to the health-related risk behaviors among the adolescent population.

2. Literature Review

Within the academic engagement literature, the term *disengaged from school* is used to characterize students who do not feel they belong at school and have withdrawn from school activities in a significant way (Willms, 2003). Hidden school disengagement is closely related to lack of motivation in learning and poor attitude towards school since they often co-occur and possibly share similar risk factors (Lan & Lanthier, 2003; Vitaro et al., 2001). It has been

conceptualized as a multi-dimensional construct consisting of behavioral, emotional and cognitive domains (Fredricks, Blumenfeld & Paris, 2004). Behavioral disengagement refers to students' frequent absences, resistance to rule-following and lack of participation in extracurricular activities, cognitive disengagement refers to students' reluctance to learn beyond the classroom and to take up challenging learning tasks, and emotional disengagement refers to students' affective responses to school, including feeling alienated towards school, disliking school, and having a poor perception about personal academic ability. In the present paper, our main focus is on students' emotional response to school.

2.1 Conceptualization of Hidden School Disengagement

Theories behind hidden school disengagement can be traced to structural-strain theory which focuses on the social and cultural environment in which adolescents grow up. Structural-strain theory posited that a mismatch between personal standards and wider societal standards could produce alienation and lack of legitimate aspirations (Durkheim, 1951; Osco, 2004). Fordham and Ogbu (1986) and Ogbu (1991) asserted that students' alienation from and lack of interest in school is, in part, a result of responses to historical events and to the current social experiences of ethnic minority students. According to Ogbu (1991), one of the ways ethnic minorities protect themselves from self-devaluation inflicted by the dominant group is through rejecting the values of the dominant group. Among ethnic minorities, African Americans in particular, who have historically been unfairly denied opportunities in education, this defensive action has resulted in some of them dismissing education as a 'White' thing, and has often translated itself into attitudes and behaviors which Ogbu referred to as a low-effort syndrome, of low academic engagement, negative attitudes towards school, and lack of perseverance in school work.

Steele (1992) theorized that the stereotype associated with the dominant values of the society could lead to psychological disidentification with school as a means to protect self esteem against confirming the negative stereotype. Osborne (1997, 2004) further asserted that students who are not identified with academics have little motivation to succeed because of the weak connection between academic outcomes and their self-esteem. According to Osborne, those students who are disidentified with academia are frustrated at being forced to remain in the school setting. Also, the unattainable goals and peer derogation push students along the path of identification with deviant peers.

Since the early work of Ogbu (1991), Steele (1992) and Osborne (1997), other researchers have advanced the theory of school engagement and have conceptualized hidden disengagement into two main types, namely, a chronic type and a situational type (Crocker & Wolfe, 2001; Nussbaum & Steele, 2007). The chronic type of hidden disengagement has its theoretical root in school bonding theory (Maddox & Prinx, 2003), school engagement theory (Janosz et al., 2008; Willms, 2003) and self-concept theory (Marsh, 1993). This type of disengagement, in which disidentification plays a major role, involves the devaluation of academic performance. The concept of identification with academic is rooted in the symbolic interactionist perspective, which holds that people receive feedback from their environment, and this feedback, if attended to, is perceived and interpreted. If the feedback is deemed

accurate or valid, it is incorporated into the self-concept. Thus, if academic is viewed as central to the self-concept (i.e., a student is identified with academic), then the resulting changes in the self-concept will affect the student's self-esteem (Marsh, 1993). Hence, among students who are not identified with academics, they should have little motivation to succeed in academics because there is no contingency between academic outcomes and self-esteem (Osborne, 2004).

The situational type of hidden disengagement has its theoretical root in social control theory (Hirschi, 1969) and social identification theory (Hogg & Abrams, 1988; Stets & Burke, 2000). This type of disengagement, in which interpersonal relationship plays a major role, involves discounting feedback from peers as a means of protecting self-esteem. It assumes that group identity and interpersonal relationship is another source where students can base his or self-esteem on. Even if students have disidentified from academics, given the developmental stage of adolescents, they may still need to be attached to some groups, such as peers or romantic relationships, in order to satisfaction the need for identification. Hence even when students may dislike school, the fact that their friends are still at school gives a compelling reason for them to remain there (Finn, 1989). Therefore, students who have poor social skills and who are frequently ridiculed and bullied by their peers are likely to be disidentified with peer groups and interpersonal relationship.

2.2 Risk Factors for Hidden School Disengagement

Prior research on school disengagement shows that it is typically a gradual process of disengaging and disconnecting from school physically, mentally and emotionally. Available evidence suggests that the process of disengagement may start as early as the kindergarten years and throughout the primary and secondary years, with the fourth, seventh and tenth grades being most prevalent sufferers (Balfanz, Herzog & MacIver, 2007).

Understanding the nature and significance of hidden school disengagement is an important first step in supporting students who are at-risk of dropping out of school. A number of risk factors for school disengagement have been identified and these risk factors are also expected to be relevant for hidden school disengagement. Some of these risk factors are poor academic performance, i.e., poor grades stemming from low literacy or verbal ability (Alexander, Entwisle & Kabbani, 2001); risk factors related to family support, i.e., inadequate family functioning and weak social bonding (Harachi, Abbott, Catalano, & Haggerty, 1996; Hawkins, Catalano, & Miller, 1992; Maguin & Loeber, 1996); risk factors related to the community i.e., negative peer influence, such as affiliation with deviant friends (Hymel et al., 1996; Gilmore et al., 1992) and dispositional factors e.g., limited personal goals and sense of future, lack of positive experience in school (Cairns, Cairns & Neckerman, 1989; Janosz et al., 1997).

2.3 Hidden School Disengagement Indicator

In the present paper, hidden school disengagement is seen as an educational problem. It is a condition caused by stress or social factors which may lead to a student dropping out of school. It is conceptualized as students' affective responses to school which includes four

dimensions grouped into two domains, namely, the academic identification domain and interpersonal relationship domain. Within the academic identification domain are poor academic achievement and school disaffection. Within the relationship domain are social isolation and victimization. Hence, students who suffer from hidden school disengagement are those who feel that they are alienated from the schooling process, and that they are isolated from the social network of the school. Furthermore, it is hypothesized that students who feel disengaged from school have a higher chance of engaging in health-related risk behaviors or suffering from mental health issues (Paulhus, Fridhandler & Hayes, 1997).

The above conceptualization of hidden school disengagement has a clear advantage because as an educational problem, a set of simple but accurate indicators for identification is important. The existing methods of assessment are seen as either clumsy to administer or overly subjective. For example, the method used by Strambler & Weinstein (2010) to identify students who are emotionally disengaged from school has seven dimensions and its assessment is based on a 15-item self-administered questionnaire. Also, the method used by Rosenblum, Goldblatt and Moin (2008) to identify hidden school dropout is based on teacher's subjective judgment.

Investigating the phenomena of hidden school disengagement among Chinese is an important step towards improving education quality in Chinese societies. It has been reported that Chinese students are experiencing high levels of stress in the school environment and are exposed to a high frequency of victimization because of competition within the education system (Hesketh et al., 2010; Tam & Taki, 2007). Also, it has been suggested that study stress and high-stake examinations are the main reasons behind the low self concept and high psychological distress among Asian students (Lee, 2009; Liu & Lu, 2011).

3. Methods

3.1 Sampling

The China Youth Health Behavior Survey was conducted by the China Youth University of Political Science in May, 2010. The target population in this study is students studying in year 6 (primary), year 8 (junior secondary) and year 10 (senior secondary) in China and a stratified random sampling procedure was employed. The survey was conducted in two administrative regions (Beijing and Chongqing) and 11 provinces in China (Fujian, Gansu, Guangdong, Hainan, Helongjiang, Hubei, Hunan, Jiangsu, Neimenggu, Shanxi and Sichuan). These provinces and regions are highly diversified in terms of economic development, geographic locations, natural resources, and demographics. Through a multistage, random cluster process, a total of 86 schools were chosen to participate in the survey. Among the 86 schools, 37 were primary schools and 49 were junior or/and senior secondary schools. 25 of these schools were located in municipalities or major cities, 38 in middle cities, and 23 in counties or villages. The researchers made a request through writing to the school principals asking them to allow all students from year 6, year 8 and year 10 to complete a survey within their schools. A total of 14,563 students provided useful information for the survey, representing 0.0072% of the total student population in China (Ministry of Education, 2012). Table 1 gives the demographic descriptions of the student sample.

Table 1: Demographic descriptions of the samples

	Boys	Girls	Total	Average age
Year 6	2,584	2,627	5,211	12.3
Year 8	2,254	2,185	4,439	14.4
Year 10	2,369	2,544	4,913	16.5

3.2 Measures

Most of the instruments used in the present study were adapted from the 2005/06 version of the Health Behaviors of School-aged Children (HBSC) Survey which is an international survey auspiced by the World Health Organization and conducted in North American and European countries every four years. The instruments were originally written in English and they were translated into Chinese, following the established protocol for the translation of international surveys (Harkness, Villar, & Edwards, 2010).

Demographic information of the participants and the schools is collected in the survey. This include information about gender, year and month of birth, year of schooling, family structure (whether the household has both parents [intact family], one parent or no parent [non-intact family]), number of siblings, migrant status, and left-behind-child status, location of the school (whether the school is located in municipalities, middle cities and small counties or villages), type of school (whether it is a model school or normal school).

Hidden school disengagement is a 4-item scale which describes the students' degree of emotional withdrawal from school based on the following four indicators. (1) Poor academic achievement–students were asked to rate what their class teacher think about their school performance as compared to their classmates on a four-point scale with descriptors "Very good," "Good," "Average," and "Below average," if students indicated that they were below average, they would be considered to have fulfilled the first criteria of hidden school disengagement. (2) Disaffection at school–students were asked how they feel about their school at the time of the survey on a four-point scale with descriptors "I like it a lot," "I like it a bit," "I don't like it very much," and "I don't like it at all," if students indicated that they didn't like it very much or didn't like it at all, they would be considered to have fulfilled the second criteria. (3) Social isolation – students were asked how many close male or female friends they currently had. If male students indicated that they had no close male friend or female students had no close female friend, they would be considered to have fulfilled the third criteria. (4) Victim of violence–students were given a one paragraph explanation of the meaning of bullying and then asked whether they had been bullied at school in the past two months. On a five point scale with descriptors "I have not been bullied at school in the past couple of months," "It has only happened once or twice," "2 or 3 times a month," "About once a week" and "Several times a week," If students indicated that had been bullied 2 or 3 times a month or more, they would be considered to have fulfilled the fourth criteria.

Family affluence scale contains four items which assess the material wealth of a family. These items include (1) "Does your family own a car, van or truck?" Response categories were: No (=0); Yes, one (=1); Yes, two or more (=2); (2) "Do you have your own bedroom for yourself?" Response categories were: No (=0); Yes (=1); (3) "During the past 12 months, how many times did you travel away on holiday with your family?" Response categories were: Not at all (=0); Once (=1); Twice or more (=2); (4) "How many computers does your

family own?" Response categories were: None (=0); One (=1); Two or more (=2). A composite score was calculated for each student, and a three-point ordinal scale was composed for the analysis, in which 0–3 indicated low affluence, 4–5 indicated middle affluence, and 6 or higher indicated high affluence.

Youth health behavior scales are a collection of nine instruments used to assess the health status and extent of involvement of respondents in a variety of health behaviors, some of which may have serious consequences to their health. These behaviors include drinking, smoking, internet addiction, bullying others, fighting, psychosomatic symptoms, perceived health and life dissatisfaction. With the exception of internet addiction, which was a 10-items scale created for this study, all the other scales had been validated in previous HBSC studies.

A. Drinking is a 5-item scale intended to measure the frequency that students engaged themselves in drinking any of the following alcoholic beverages: beer, wine, spirits, Chinese wine, or other alcoholic drinks. Respondents are asked whether they had tried the drinks on a five-point scale ranging from 'never' (1), 'rarely' (2), 'every month' (3), 'every week' (4), and 'every day' (5).

B. Smoking is a 2-item scale intended to assess the frequency that students smoke cigarettes. Respondents are asked the following questions (i) How often do you smoke? The responses are: 'never' (1), 'less than once a week' (2), 'more than once a week' (3) and 'everyday' (4); (ii) How many cigarettes did you smoke in the past 30 days? The responses are: 'none' (1), 'less than once per week' (2), 'at least once per day' (3), 'one to five per day' (4), 'six to ten per day' (5), 'eleven to twenty per day' (6) 'more than twenty per day' (7).

C. Problematic internet use is a 10-item scale. Respondents are asked whether they are suffering from the following symptoms: (i) I have strong desire or impulse in surfing the net; (ii) I will feel uneasy, irritated, easily angry, or lack of concentration when I reduce or stop surfing the net; (iii) I continuously increase the time on surfing the net to satisfy myself; (iv) I tried to control the time and hours spent on surfing the net, but didn't succeed after various trial; (v) I know that long hours of net surfing may affect learning and living, but I still find it hard to stop; (vi) I once forgo other interest, entertainment or social activity due to net surfing; (vii) When I am not happy or encounter troubles, I wish to get rid of the feeling through net surfing; (viii) I had the experience of forgetting to do my homework or skipping classes due to net surfing; (ix) I had concealed my true situation of net surfing to my parents or friends; and (x) I had had confrontations with parents and teachers due to net surfing. The responses are 'no' (1) and 'yes' (2).

D. Bullying others is a 9-item scale. Respondents are first given a short paragraph to explain the meaning of bullying, and then they are asked how often they bully others in the following ways in the past two months: (i) called others using a bad name'or laughed at them in a hurtful way; (ii) isolated other students intentionally, excluded or neglected him/her in a group of friends; (iii) hit, kicked, pushed, crashed or locked others in a room; (iv) spread rumors or lies about other student to make others hate him/her; (v) gave others names or harsh comments out of their race or my skin color; (vi) gave me names or harsh comments out of their religious belief; (vii) joke on others about sex, had

discussion about sex, or did sex-related movement to them; (viii) bullied others through computer, e-mail messages or photos; and (ix) bullied others through cell phone. The responses are: 'I have not bullied another student in this way in the past couple of months' (1); 'Only once or twice' (2), '2 or 3 times a month' (3), 'About once a week' (4) and 'Several times a week' (5).

E. Fighting is a 1-item scale. Respondents are asked how many fights they were involved in the past 12 months. The responses are: 'I was not involved in any fight in the past 12 months' (1); 'once' (2), 'twice' (3), '3 times' (4) and '4 times or more' (5).

F. Frustration symptom is a 7-item scale which describes students' bodily reaction to stress. The scale starts by asking "In the last six months, how often have you had the following complaints: headache, stomach-ache, back ache, feeling low, irritability or bad temper, difficulties in getting to sleep, and feeling dizzy." Respondents are asked to rate each of the above complaints separately on a five-point scale with the descriptors 'Rarely or never' (1), 'About every month' (2), 'About every week' (3), 'More than once a week' (4), and 'about every day' (5).

G. Perceived health is a 1-item scale which assess the extent that students feel their health is in poor condition. Respondents are asked whether they think their health is in (1) very good; (2) good; (3) average; and (4) poor condition.

H. Life dissatisfaction scale also called a Cantril Ladder (Cantril, 1965), which is a 1-item scale with the shape of a ladder with 10 steps. Respondents are asked which part of the ladder they feel they were at, with 0 at the top of the ladder represents the best life, and the 10 at the bottom represents the worst life.

The properties of these instruments, their means and standard deviations, number of items, number of response categories, and reported reliability are summarized in Table 2.

Table 2: A summary of the descriptive properties of the survey instruments

Instrument	No. of items	Response categories	Mean			Reported reliability
			Primary 6	Secondary 2	Secondary 4	
HSD *	4	varied	0.72 (0.80)	0.83 (0.90)	0.87 (0.89)	0.246
Family affluence	4	varied	1.74 (0.75)	1.67 (7.45)	1.55 (0.67)	0.665
Drinking	6	1 – 5	4.63 (0.50)	4.50 (0.59)	4.44 (0.53)	0.803
Smoking *	1	varied	-0.23 (1.42)	0.01 (1.81)	0.29 (2.34)	0.839
Bullying others	9	1 – 5	1.18 (0.41)	1.15 (0.38)	1.09 (0.28)	0.829
Fighting	1	1 – 4	1.60 (1.09)	1.44 (0.96)	1.24 (0.75)	--
Problematic internet use	10	1 – 2	1.91 (0.17)	1.86 (0.22)	1.85 (0.22)	0.802
psychosomatic symptoms	8	1 – 5	0.93 (1.15)	1.37 (1.28)	1.60 (1.23)	0.858
Perceived health	1	1 – 4	1.97 (0.85)	2.10 (0.81)	2.31 (0.79)	--
Life dissatisfaction	1	0 – 10	6.06 (2.13)	5.69 (1.99	5.34 (1.91)	--

* Reported values are z scores.

4. Results and Discussion

Table 3 presents the distribution of students who are exposed to different levels of risk of hidden school disengagement. The result shows that more than half of secondary students were identified with one or more risk factors of hidden school disengagement, and the higher the grades, the higher the prevalence. Thus, it appears that the longer the students remain in the education system, the more likely they will feel disengaged from it. In the present study, it is assumed that students who are exposed to two or more of these factors will be considered as being suffered from multiple symptoms of hidden school disengagement. Based on this criterion, 2,854 students (19.6%) in China were identified as having multiple symptoms of hidden school disengagement. This percentage is in similar magnitude as the reported 25% of students who claimed to be unhappy with their school experience in the PISA study (Willms, 2003), and is slightly higher than the reported 16% of truancy among 10th graders in Henry's (2007) study of truancy.

Table 3: Percentages of students who are exposed to different levels of risk of hidden school disengagement

Risk factors	Primary 6	Secondary 2	Secondary 4	Total
0	46.1%	44.4%	41.1%	43.9%
1	38.5%	34.0%	36.6%	36.5%
2	12.5%	16.4%	17.4%	15.3%
3	2.6%	4.7%	4.6%	3.9%
4	0.2%	0.6%	0.3%	0.4%

Confirmatory factor analysis was conducted in order to demonstrate the construct validity of the hidden school disengagement scale. Result of the confirmatory factor analysis (shown in Figure 1) suggests that the construct validity of the hidden school disengagement scale is good ([Y6] χ^2=4.50, df = 2, p = 0.106, GFI = 1.000, CFI = 0.988, RMSEA = 0.016; [Y8] χ^2=1.31, df = 2, p = 0.519, GFI = 1.000, CFI = 0.999, RMSEA = 0.000; [Y10] χ^2=6.33, df = 2, p = 0.042, GFI = 0.999, CFI = 0.997, RMSEA = 0.021). In addition, in terms of the ranking of factor loadings, there appears to be a diminishing contribution of the factor loadings of academic achievement, social isolation and victim of violence, and an increasing contribution of the factor loading of school disaffection on hidden school disengagement as students move up the grades. Although the hidden school disengagement scale has acceptable construct validity, its reported reliability of 0.246 is relatively low (see Table 2). The low reliability is probably due to the diverse nature this scale and the diverse population being measured.

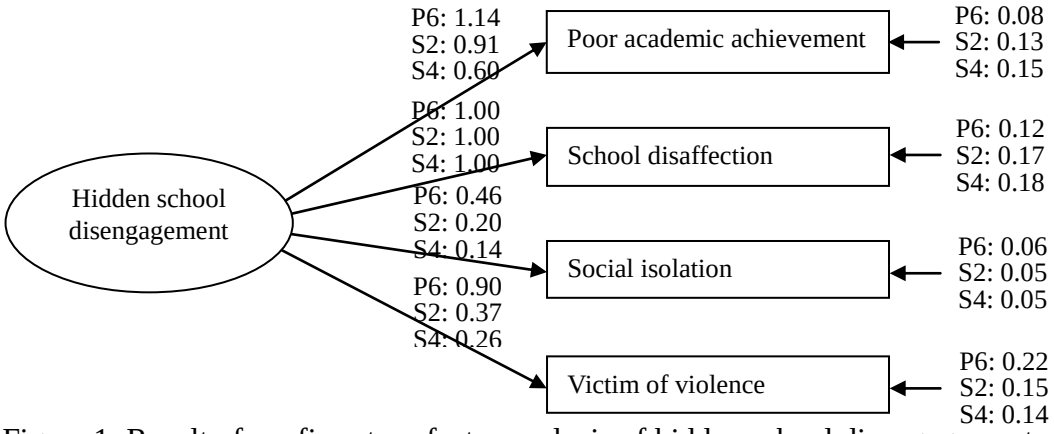
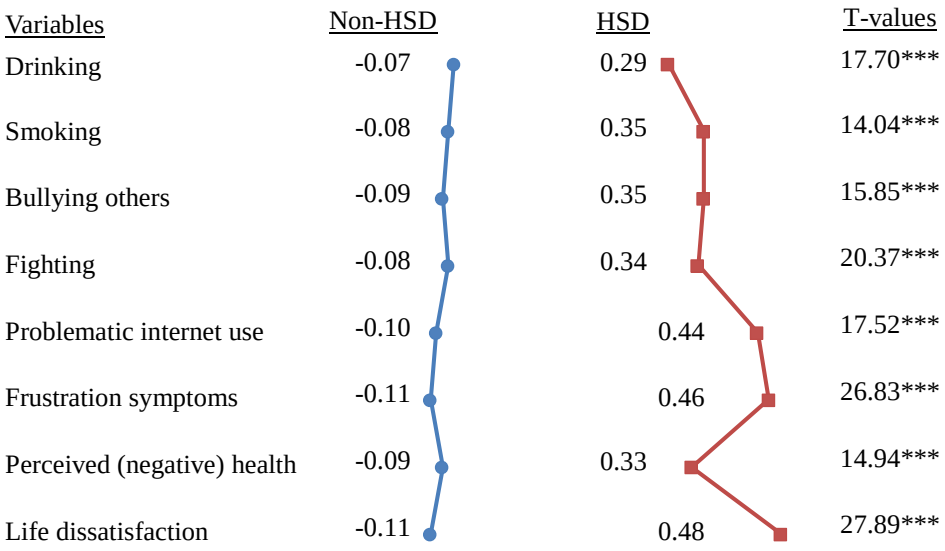


Figure 1: Result of confirmatory factor analysis of hidden school disengagement scale

(Model statistics: [Y6] χ^2=4.50, df = 2, p = 0.106, GFI = 1.000, CFI = 0.988, RMSEA = 0.016; [Y8] χ^2=1.31, df = 2, p = 0.519, GFI = 1.000, CFI = 0.999, RMSEA = 0.000; [Y10] χ^2=6.33, df = 2, p = 0.042, GFI = 0.999, CFI = 0.997, RMSEA = 0.021).

In order to understand the characteristics of students who are identified as having multiple symptoms of hidden school disengagement, independent samples T-test was conducted on the health behaviors of HSD students against those who are non-HSD, and the result is shown in Figure 2. Among the eight health behaviors, drinking and smoking are substance abuse behaviors that are considered deviant and are hazardous to health (Goldstein, 2001). Problematic internet use is a widespread problem in school that affects a person's social and academic outcomes (Capland, 2007). Bullying others and fighting in the school setting are considered deviant behaviors and have serious consequences (Tam & Taki, 2007). Psychosomatic symptoms are signs of frustration of a person in life and are related to the state of mental health of the person (Hesketh, et al., 2010). Perceived health is an individual's general assessment of his/her health status (Idler, & Benyamini, 1997). Life dissatisfaction is a subjective assessment of the general well-being of a person (Cantril, 1965).



*** p < 0.001

Figure 2: Health risk behaviors of secondary students who are identified as HSD (rectangle) and the normal population (circles)

The comparison of HSD students and those who are not shown in Figure 2 shows that HSD students have significantly higher scores in all eight health behaviors than students in the non-HSD counterparts. Their contrast, based on the result of T-test conducted on the two populations, were all significant ($p<0.001$). What this implies is that students who are identified as having two or more symptoms of hidden school disengagement are more likely to drink and smoke more frequently than students than the remaining population. In addition, they have a higher chance to be engaged in problematic internet use, and more likely to be a bully and involved in fighting. Moreover, these students have a larger likelihood of suffering from psychosomatic symptoms, have a poorer perception of their health status, and poorer view of their own well-being.

It has been suggested earlier that hidden school disengagement may be seen as an indication of a state of disorganization within a person and is likely an indication of the person whose energy is not being utilized for productive purpose. Results of the present study confirms evidences from self-determination theory which suggests when adolescents lack intrinsic aspirations in life (such as aspiration for growth, relationships, and community), they tend to find excitement by engaging themselves in various types of health-related risk behaviors, and tend to adopt a pessimistic view of their own health and their future (Williams et al., 2000). Also, according to personality systems interactions theory, discrepancies between external demands and internal achievement motives may lead to reduced subjective well-being and increased psychosomatic symptoms (Baumann, Kaschel & Kuhl, 2005).

The social characteristics of HSD students and non-HSD students are compared and the result is shown in Table 4. The social characteristics include gender, size of city and type of school, family structure, family affluence, whether the child is the only child of the family, whether the child belongs to a migrant family, and whether the child's two parents are both working in remote places. Type of school and size of city are contextual factors that have implications on quality of education and availability of resource. Family structure is a contextual factor that has implications on the availability of social capital within the family. Family affluence has implications on material resource availability within the family to support the child. The only child policy is unique in China in that it stipulates that families in the cities are allowed to give birth to only one child, but families in remote villages are not included in this policy. This policy has implications on the attention and resources given to the child. Migrant status is also somewhat unique in China in that some families in the rural areas migrate to large cities to find jobs, and the children of these families normally are not allowed to attend the public schools. This status has implications on the quality of education and availability of resource. Left-behind children is the situation where both parents of the family leave their villages to work in the cities, but leave the children behind to be taken care of by relatives.

Table 4: Social backgrounds and hidden school disengagement

Social backgrounds	Categories	Percentages	%HSD	Test of significance χ^2
Gender	Male	49.5%	22.2%	63.1***
	Female	50.5%	17.0%	
Size of city	Municipalities	25.1%	16.9%	51.2***
	Middle cities	47.2%	19.0%	
	Towns & villages	27.7%	23.1%	
Type of school	Model school	28.7%	18.0%	9.4**
	Ordinary school	71.3%	20.2%	
Family structure	Intact family	73.6%	17.4%	87.0***
	Single/absent parents	26.4%	24.5%	
Family affluence	High	15.1%	13.5%	144.5***
	Medium	35.5%	16.8%	
	Low	49.4%	23.4%	
One-child family	Only child	58.1%	17.9%	34.5***
	Not the only child	41.9%	21.8%	
Migrant status	Migrant children	10.1%	24.7%	26.2***
	Non-migrant children	89.9%	19.1%	
Absent parents	Left-behind children	15.4%	24.4%	40.8***
	Living with parents	84.6%	18.5%	

** $p < 0.01$; *** $p < 0.001$

Results in Table 4 shows that boys (22.2%) have a higher prevalence of being identified as HSD than girls (17.0%), which is in alignment with findings of similar studies (Strambler & Weinstein, 2010; Fredricks, Blumenfeld & Paris, 2004; Rosenblum, Goldblatt & Moin, 2008). Attachment theory and research from developmental psychology suggest that disruptions in attachments to primary caregivers in early childhood may result in long-term consequences and the effect may be more pronounce among boys, and one of the consequences is that boys have a higher tendency to be detached from their surroundings than girls (Hayslett-Mccall & Bernard, 2002).

Five family contextual backgrounds are related to hidden school disengagement. These include family structure, family affluence, only child in the family, migrant children and left-behind children. Among them, families of different economic background (assessed by the family affluence scale) appears to have the largest contrast (t-value=144.5, $p<0.001$), with students from more affluent families being less likely to be identified as hidden school disengagement than those coming from less affluent backgrounds. Children from families with inadequate structure, where one or both parents are not present in the household, also tend to have a high prevalence of hidden school disengagement. It has been reported that children who live with single parents, stepparents or grandparents during adolescence receive less encouragement and less help with school work, and are more likely to dropout from school than children who live with both parents (Astone & McLanahan, 1991). Thus, these relationships point to a strong association between hidden school disengagement and a

number of family-related social factors, such as family structure, socioeconomic status, human, social and cultural capitals of the families (Brooks-Gunn, Duncan, & Maritato, 1997; McLanahan & Sandefur, 1994).

Children who have one or more siblings, migrant children and left-behind children also have higher prevalence of hidden school disengagement. There are perhaps two reasons why children from only child families have lower prevalence of hidden school disengagement. First, the one-child policy is implemented mainly in the cities, which are often more economically developed and their schools are better staffed (Lu & Treiman, 2008). Second, when the student is the only child in the family, he/she will probably receive more attention and educational recourse than students with siblings (Downey, 2001). Migrant families put their children in low cost private schools which are normally poorly staffed and badly equipped. Hence the high prevalence of hidden school disengagement among migrant families has its root in resource scarcity (Chen, 2010; Wu, Palinkas & He, 2011). Left-behind children normally attend village schools which are often poorly staffed and they are taken care of by grandparents or close relatives. In a 4-year longitudinal study in rural areas of seven provinces in China, it was discovered that left-over children of these areas had far higher percentages of stunted and underweight than children in urban areas (Chang, 1994). Therefore, the high prevalence of hidden school disengagement may be due to the poor education quality of the village schools or the lack of adult supervision of the children.

Schools' contextual backgrounds appear to be related to hidden school disengagement as well. Among the schools being sampled, schools located within municipalities and large cities, plus schools which were labeled as "model schools", appear to have a lower percentage of HSD students than schools located in counties and villages and normal schools. In China, every city or county, depending on their tax income, has its autonomy to determine salary level of teachers in public schools. Because of this, major cities, such as Beijing and Chongqing, may be able to pay much higher salary to teachers than small counties, and this enables them to attract more qualified teachers and attain better quality in their education system (Hannum, 2003). In addition, each city will select some schools of high professional standard to be model schools so that other schools can learn from their practices. Because of their model school status, these schools can normally attract more resource from the government and from parents than other schools (Phelps, 2005). Thus the fact that schools located within municipalities and large cities and model schools have a lower percentage of HSD students is probably the consequence of better quality and more resource.

5. Conclusion

The present paper suggests an empirical model to explore the phenomena of hidden school disengagement in China. The model consists of four simple measures: poor academic performance, school disaffection, social isolation and victim of violence. Results suggest that approximately one-fifth of students are identified as having multiple symptoms of hidden school disengagement, and that these students have significantly higher chances of engaging in health-related risk behaviors, suffering from higher level of psychosomatic symptoms, and have poorer outlook of life.

The composition and factor loadings of the hidden school disengagement construct suggest that identification with academic and social relationship are proximal reasons behind hidden school disengagement, and these reasons are more related to personal issues, such as personality or developmental problems of the students. More distal reasons could include pressure from learning, pressure from parents and teachers, insufficient support from the environment, etc. In the Chinese culture, competitiveness and success are taught in the schools, glamorized in the media, and encouraged by the values that are passed along from generation to generation (Lee, 1991). However, cultural emphasis on achievement in the education system needs to be matched by a social supportive system in the family, school and community (Wildschut, Insko & Gaertner, 2002). The existing education system in China, which still places heavy emphasis on large class teaching, teacher-centered instruction and competition despite its current reform efforts, is likely to put huge pressure on the students and causes hidden school disengagement (Tam, 2009). But the mechanism of how pressure in the education system actually leads to hidden school disengagement is perhaps an agenda for future research.

Results of the present study also allude to the fact that there are many sources of inequality within the system of education in China. Inequalities between urban and rural schools, model and ordinary schools, and public and private schools all contribute to the problem of hidden school disengagement in China. The origins of these inequalities could perhaps be traced to the gap between urban and rural household income, the job market, the household registration system, and the system of school financing in China, yet the fact that these are all intertwined with the political system and economic policies makes them difficult to tackle. Government policy statements on education in the 1980s did acknowledge the urban-rural and regional economic disparities, but they are tolerated in order to achieve universal basic education by mid 1990s (Tsui, 1997). Now that all children can have a chance to enter the public schools, the problem of hidden school disengagement has gone unnoticed and is expected to worsen. Nevertheless, the deeper reason of how the social structure of the society, the economic and the political system is related to hidden school disengagement is another agenda for future research.

There are, however, a few limitations in the present findings. Firstly, the present study has not controlled the socioeconomic background of the students. Hence, it is possible that there may be a social class difference in the parent-child interaction as well as stress experienced by students. Secondly, the present study considered the psychosocial variables behind hidden school disengagement, but has neglected classroom level factors, school level factors, and cultural factors that may also contribute to this problem. It is suspected that there are social and cultural contexts affecting the emotional functioning of students and these should be further explored in order to gain a more holistic picture of hidden school disengagement. Thirdly, the present study uses a cross-sectional survey method to study hidden school disengagement, but has neglected other methods of investigation. In light of the fact that hidden school disengagement may be partly a process that involves children's psychological defense mechanism triggered by external stress, more in-depth investigations employing qualitative approaches may be necessary to probe the dynamic of the inner being

when it responds to external stress. Finally, the hidden school disengagement construct assesses the general psychological disengagement of students, and contains four items to assess the four dimensions of the construct. It is foreseeable that more items included in the construct can improve the reliability and validity of the measurement.

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