

Academic Stress among Chinese Adolescents: Can Psychological Stress Theory Explain This Tragedy?

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Abstract

Mental health problem and maladaptive behavior, such as suicidal behavior, are prevalent among Chinese students, which can be significantly triggered by their high levels of academic stress. Underutilization of mental health services among Chinese adolescents have also been identified by researchers. In this paper, an attempt has been made to utilize Psychological Stress Theory (PST) to help explain the culture-specific phenomenon of academic stress associated with poor mental health and related suicidal behavior. This paper is a first step to increasing awareness of the mental health needs of adolescent students and greater understanding of preventable deaths by suicide among Chinese students affected by academic stress. This paper also proposes the further development of macro, mezzo and micro level changes as a culturally suitable approach to preventing additional loss of lives to suicide behavior.

Keywords: academic achievement driven cultures, academic stress, mental health problems, Chinese students, suicidal behavior

1. Introduction

Chinese students experience high levels of psychological distress associated with multiple academic challenges (Sun, Dunne, Hou, & Xu, 2013). Existing knowledge demonstrates a strong relationship between stress and suicidal behavior (Grover et al., 2009). According to researchers, suicide is the leading cause of death for Chinese youths, ages 15-34 (Li & Fei, 2001; Phillips, Li & Zhang, 2002). High school completion and college entrance exams are acknowledged by students as factors that contribute to psychological distress and suicide behavior for Chinese students, clearly demonstrated in the words of a student who wrote his last words before terminating his young life. Both my parents are rural migrant workers, and our monthly family income is 3000 RMB. The tuition for my off school training is 200 RMB for English, 200 RMB for Math, 200 RMB for Chinese, and 400 RMB for Physics, totally 1000 RMB. My academic performances are not bad, but my parents wish me to earn quite a good score on the university entrance examination and be enrolled in a tier one university. So I am the only person in my family who has the privilege to eat meat. My mother always picks meat for me, while they only eat potatoes. Now I have grown up. I am not a kid anymore, so how can I eat all the meat and let my parents eat the left over? However, in order to please my parents, I have to pretend that I am happy every day... However, I am not happy at all! Teachers, I hate you all!! (Xuzhouan, 2014).

This tragedy of suicidal behavior as a result of academic stress is not rare in China. A prominent triggering stressor is the college entrance examination which routinely occurs annually on June 6th and 7th. A high level of performance on this examination is generally treated as a symbol of academic achievement, which implies financial success and improvement in social status according to longstanding Chinese cultural values (Hesketh & Ding, 2005). In addition, being successful on the college entrance examination has been given collectivist social meanings, such as family glory, role modeling for peers and siblings, and a favorable reputation for the attending high schools (Chen, 2012). This ideology imposes pressure of high levels of academic achievement and as a result, Chinese adolescents may experience psychological stress from multiple levels ---self, family, schools, and society.

Chinese high school students have high self-inflicted expectations and put extreme efforts into studying to gain academic excellence. National statistics indicate that almost 50% of surveyed adolescents (N=5,040) report studying two or more hours daily, outside of prescribed school hours (All-China Women's Federation, 2008). Additionally, nearly 70% of Chinese youth consider academic pressure as their greatest source of stress especially during the transition from middle to high school and from high school to college, marked by two important transitional examinations, the eleven-plus and the college entrance (China Youth Social Service Centre' Report, 2008). Family cultural values, including obedience to seniority and parents adds a second dimension of pressure for students to excel. Finally, collectivism (defined as moral emphasis on groups' outcomes) and respect for hierarchical power and social structures further compounds the pressures experienced by Chinese adolescents to excel academically (Dello-Iacovo, 2009).

Collectively, these academically-driven values may exacerbate symptoms of stress experienced by Chinese students' and result in the worsening of mental health problems (Hesketh et al., 2005). Nationally, Chinese adolescents' mental health problems have become a pervasive and severe public health concern (Sun, 2012; Xie, 2007). In a convenience sample recruiting from two middle schools and two high schools from Beijing, China, over 50% of adolescents were diagnosed with co-occurring mental health disorders (Chen, Fang, Liu, Hu, Lan, & Deng, 2014). Yet, despite the prevalence of mental health problems and high level of suicidal ideation associated with poor academic performance and examination pressure (Li, Li, & Cao, 2012), less than 5% of Chinese adolescents have ever used professional mental health services (Wu et al., 2012).

In this paper, we have made an attempt to utilize Psychological Stress Theory (PST) to help explain a culture-specific phenomenon. This is a first step to increase awareness of the mental health needs of Chinese students and have greater understanding of preventable deaths by suicide among affected Chinese adolescent students. We have focused on mental health problems associated with psychological academic stress and thoroughly discussed PST in order to increase understanding of the socio-cultural context of student mental health issues. Finally, we have argued for further development of macro, mezzo and micro level changes.

1. Psychological Stress Theory

1.1 Person-Environment Relationship

Lazarus (1993) regarded stress as a bi-directional relationship between individuals and the environment and between the environment and individuals. Earlier research by Lazarus and Folkman (1986) introduced the idea that people's appraisal or evaluation of an event (reward or punishment) determines their emotional response to psychological stress and determines their use of coping skills and overall well-being. There are four main components of the stress and appraisal process: (1) a causal external or internal agent, which can be viewed as a trigger; (2) an evaluation conducted within the mind or physiological system that distinguishes benefits from threats; (3) the coping process produced within the mind or body in response to the causal external or internal agent, and (4) a complex pattern of effects on the mind (Lazarus, 1993). In line with PST, academic pressure can be viewed as the psychological stressor, and a Chinese adolescent's response will be determined by his relationship with himself, as well as the attitudes and behaviors of parents, schools, and even the policies towards academic achievement.

Figure 1 shows this bi-directional relationship, illustrating how society, Chinese adolescents' parents, schools, and the adolescents themselves are all influenced by Chinese academic achievement-driven values. As depicted, this specific cultural value system emphasizes the importance of academic achievement. Academic achievement is highly endorsed by the society, for example, having a tier one University diploma is often cited as the requirement for attaining a decent job position. Thus, Chinese parents consider academic achievement as the most accessible path for both their children and their family to achieve higher status, glory and overall well-being within the strict hierarchical social structure, especially for adolescents with low socio-economic status and those living in remote rural areas (Choi & Nieminen, 2013; Sun et al., 2013). Moreover, high schools will also receive pressure on transition rate from Department of Education.

Therefore, high schools and teachers will place academic pressure on Chinese students. Gradually, poor performance is internalized and accompanies punishment and shame for both themselves and families. Socialization to this ideology may begin early, with grades and examinations encompassing much of the topic of conversation amongst adolescent peers.

Consequently, Chinese students' mental health problems have been tested to have close association with these multiple sources of academic pressure, and increase the risk of suicide behavior (Lee, Wong, Chow, & McBride-Chang, 2006; Sun, 2012; Sun, et al., 2013).

Applying the main components of PST and the conceptual model represented in figure 1, the following four steps will occur when Chinese students are challenged by multi-leveled academic pressure: (1) academic pressure from multiple levels (internal, familial and societal) may be viewed as the external and/or internal agent that triggers a behavior; (2) the Chinese student will evaluate the benefits of academic achievement (e.g. family glory) as well as the threats of academic failure (shame on family reputation); (3) healthy or poor coping actions will be taken based on the student's evaluation; (4) the Chinese students will adjust their attitudes and evaluations towards their coping actions according to the feedback.

1.2 Appraisal and Coping

In 1960, cognitive theory was developed by Magda Arnold, an emotions researcher; she specified that an appraisal of situation is the first step in emotion (Scherer, Schorr, & Johnstone, 2001). Her research laid the groundwork for Lazarus' psychological stress theory which asserts that appraisal is mediated by cognitive activity centered on the active process of evaluating between one's environmental demands and one's goals and beliefs (Lazarus, 1993). Coping is the other main concept in psychological stress theory. According to Selye's stress model, General Adaptation Syndrome (GAS), coping is the body's physiological defense and it is triggered by external forces to which the body responds with fight or flight (Krohne, 2001).

Since psychological stress is defined as an unfavorable person-environment relationship, coping processes are individuals' ongoing efforts in thoughts and actions to manage specific demands appraised by the individuals to change the unfavorable relationship more favorable (Lazarus, 1993).

According to Lazarus (1993), there are two orientations of coping: problem-focused coping and emotion-focused coping. The former implies an individual will take actions to change his/her relationship between the environment and him/herself for the better. The other one means an individual will change the ways he/she interprets the surroundings, such as avoiding thinking about the threats, reappraising the threats in a nonthreatening direction.

The application of this appraisal and coping construct would mean that first, a Chinese adolescent will evaluate the importance of academic achievement for herself and her environment (family and school) based on her own expectations as well as those established within the achievement-driven value system. Based on this evaluation, a Chinese student will then determine if the environmental requirements are congruent with his own goals and beliefs. For example, a Chinese adolescent student's high value of academic achievement is expected to result in a successful career in the future. Therefore, the student has appraised this outcome to be worth the sacrifices, despite the academic stress and the mental health challenges that accompany emotional imbalance and poor coping.

Whereas some students may pursue emotion-focused coping (reframing and reappraising the situation), others may opt for problem-focused coping (seek professional mental health service or seek help from their parents or peers), and still others may even adopt more permanent methods, such as dropping out of school or even tragically, choosing suicide.

2. Multi-leveled Psychological Stress: An Academically-Driven Chinese Construct

2.1 Historical Perspective of Examinations in China

Existing literature revealed that traditional Confucian attitudes, marked by a broad belief system including ethics, rituals, principles of loyalty and responsibility, as well as interpersonal and inter-group interactions, has informed dynasties, and has great impact on the structure of Chinese students' education (Choi et al., 2013). Relatively, students have little power since Confucian philosophy endorses the belief of obeying emperor, power, seniorities (including parents and teachers), and the hierarchical social structure (Choi et al., 2013).

College entrance examinations can be traced back to the Sui Dynasty, when imperial examination was first adopted as a tool for emperors and power-holders to select civil-servants every year (Li & Li, 2010). The contents of the imperial exams mainly focused on classic Confucianism, and the champion of this examination each year can be nominated to the Royal Palace, additionally, his family members and relatives would all have better well-beings because of his success in this examination (Li et al., 2010).

In order to have a good performance in this examination, numerous people took the exam repetitively, because this was the only way to acquire a better life. Families invested heavy pressures on children's education success motivated by the practical and economic worth, as well as family glory brought by education's success (Choi et al., 2013). As a result of thousands year of prevalence, Confucianism has been deeply rooted in Chinese society. Even though this imperial examination system was abandoned in 1903, Confucianism values continued to be central components in current education values and systems (Thomas and Postlethwaite, 1983; Huang & Gove, 2012).

2.2 Societal Perspective of Examination in China

Beside the direct influences from historical heritages, two other mandates implemented by Chinese government also had effects on strengthening Chinese academic achievement-driven values. First, the One Child Policy implemented from 1979 to 2015, where a couple was only allowed to have one child, was intended to control the population expansion. Since the implementation of the One Child Policy, millions of families throughout the 70s and 80s only had one child. This generation had no siblings and so they were the sole decedents responsible for continuing the family's line and bring honor to their family. Li et al. (2010) conducted a study on one-child families, and the results revealed five problems regarding their children's education: (1) extremely high expectations; (2) excessive indulgence; (3) excessive interference; (4) low quality of parental education, and (5) educational supports from elderly grandparents who helped with child-rearing.

Second, the Open Door Policy mandate transformed the Chinese planned economy to a free market economy which has intensified competition for employment in China. The Open Door Policy has made it more difficult for Chinese workers to find decent employment, especially without a college degree (Dello-Iacovo, 2009; Li et al., 2010). Additionally, after the Chinese economy recovered due to the free market economy, expectations for Chinese children to be successful surged, because the majority of the older generations had limited access to higher education because of poverty. These older generations placed higher expectations on their grandchildren to fulfill their dreams of educational success and financial prosperity (Li et al., 2010).

2.3 Transition Rate Pressure from Schools

For high schools, better transition rate (i.e. the percentage of students enrolled by high prestige universities) is a fundamental measurement of reputation. Moreover, education pressures will also be placed on local governments by central government since the transition rates were treated as an indicator of the political performances, some local governments even treated the transition rate as important as GDP (Li et al., 2010). Normally, the teachers will make a guess of the content of the exam paper, assign more homework, and prolong school time for training students to get better scores in university entrance examination. The results of "China Report 2009" conducted by Peking University cited by Li et al. (2010) indicated that students in Beijing City studied 14.4 hours per day, followed by students in Shanghai City (13.2 hours) and Guangdong City (11.9 hours). Beyond that, Chinese high school students will attend extra off school trainings for university entrance examination as well, a study conducted in Tangshan City in China showed that 70% of high school students attended extra-curricular training (Li et al., 2010).

2.4 The Families' Investment in Education

From a family's perspective, one important indicator of a family's success is the type of university to which the children are admitted (Choi et al., 2013). Attaining a stellar score on the university entrance examination has become the ultimate goal for most students. Chen (2012) found that, under the traditional ethical influences, family glory and filial piety are valued greatly by Asian people; moreover, they deeply believe that effort and hard work would bring them success. This ethical notion that within the Chinese culture, family glories and material success, significantly impacts students and provides additional pressure from parents to achieve academic success (Chen, 2012; Chen & Lan, 1998; Lee et al., 2006). Chinese families normally invest a large amount of household income into their children's education, focusing greatly on academic achievement (Li et al., 2010). Students rely on their parent's financial support, which is a heavy burden for families, especially poor rural families. Such expenses include tuition fees, after-school training fees and expenses of living away from home, such as in an urban area (Reagan, 2000). Li et al. (2010) found that since 1990, educational expenditures have increased at an average rate of 29.3% annually, and this is greater than that of the family's income increases. For example, in 2005, an urban family spent up to 1098 RMB annually for each student's educational expenditures, which represents about 13.8% the family's total annual expenditures (Li et al., 2010).

2.5 Pressure from Chinese Students

The families' investment into education is a major factor for Chinese youth to have high priorities to perform well academically (Chen, 2012). Such an endeavor is one major way a Chinese student repays her parents and shows her filial piety (Chen, 2012). In other words, the Chinese student not only studies for herself, but also for her family's reputation. Research conducted among Chinese single-child households affirmed that 77% of respondents reported that repaying their parents was their motivation for learning, and that only 33% of the respondents selected "cognitive needs" as their motivation for learning (Chen, 2012). The adoption of the idea that only academic achievement brings bright futures and greater familial reputation contributes to a more competitive society and adds another dimension of pressure for the students. Consequently, traditional Confucianism values and policies factors gradually formed the atmosphere that highly valued academic achievement. Afterwards, in order to survive in the competitive society, the schools and teachers had to train their students much more sternly for an outstanding transition rate. Afterwards, after evaluating the environment related to academic achievements, Chinese parents began to adopt the idea that only academic achievement can bring their children bright futures and their family's reputations. Even many studies mentioned that Chinese traditional values emphasize on academic achievement, there is little literature exploring the formation of Chinese academic achievement driven values comprehensively.

3. Chinese Adolescents' Mental Health Problems

Lee et al. (2006) stated that overemphasis on academic achievement may trigger stress and other mental health problems. Even though the academically-driven culture can positively influence Chinese students, for example, they usually experience high academic outcomes with intensive educational strategies such as "sea of exercise" where students are loaded with massive homework exercises (Sun et al., 2013). Mervis (2010) stated that the results of the International Student Assessment (PISA), which was conducted by Organisation for Economic Cooperation and Development (OECD) Programme in 2009, indicated that Chinese students had better academic performance in reading, mathematics, and science when compared to their counterparts from 60 nations. However, such high academic achievements come at a cost to the students. In fact, trainings in preparation for university entrance examinations were called "Purgatory-style" study by many schools, teachers, parents, and students themselves (Li et al., 2010, p.212).

Stress has been identified as a significant contributor to the development of psychopathology in children and adolescents, and academic issues have been found to be an essential source of stress among young students (Sun, 2012). Research indicates that high academic stress among high school students is significantly related to mental health problems (Brown, Teufel, Birch, & Kancherla, 2006). A recent national survey conducted in 10 provinces in China showed that 66.7% of the adolescents who participated in this survey perceived "too much academic pressure" as the most stressful experiences, besides, 83.5% of participated students endorsed "to improve academic achievement" as their "most desired thing" (Sun, 2012). Mental illness is generally associated with suicidal ideation. Among a sample of 1362 rural Chinese adolescents, 19.3% reported having suicide ideation in past 6 months (Liu, Tein, Zhao, & Irwin, 2005). These high rates of suicidal behavior are positively related to poor academic performance (Liu et al., 2005). There is a positive correlation between age and depressive symptoms reported by Chinese students, parents, teachers, and the students themselves, and that as age increased, especially after age 12, depressive symptoms also increased (Tepper, Liu, Guo, Zhai, Liu, & Li, 2008). Significant increases in depressive symptoms at age 12 can be explained by the sharp increase in academic pressures experienced at the middle school level which continuously increase through high school (Liu et al., 2005; Tepper et al., 2008). It has been established that Chinese adolescents perceive that parents place great emphasis on academic achievement and that this pressure is positively associated with adolescents' depression and anxiety (Quach, Epstein, Riley, Falconier, & Fang, 2015). Furthermore, adolescents' perception of parents' dissatisfaction with academic performance has been attributed to suicidal ideation and depressive symptoms, with poorer ratings being associated with more severe depressive symptoms and greater intensity of suicidal behavior (Lee et al., 2006). Familial factors (parents' competing, shaming due to poor grades, levels of connectedness and bonding), school factors (pressure to enter a high prestigious university, excessive homework, shaming due to poor grades), and even social factors (policies, intensive competition, future career expectations) are highly related to academic stress (Sun et al., 2013; Zhao & Yuan, 2006). Given the evidence, to date, there are no studies that include all these compounding factors and explore the effects on Chinese students' mental health problems. This gap in the literature leaves many unanswered questions.

Among them are, “How do Chinese families respond to these mental health needs including treatment for depression and suicidal behavior? And, is there an attempt to seek help among Chinese families?”

4. Underutilization of Professional Mental Health Services

Help seeking behavior has been defined by Nadler and Fisher (1986) as an interpersonal process that involves deciding whether or not receiving help threatens one’s sense of self. According to psychological stress theory, individuals will first appraise the potential costs and benefits of soliciting help before making a decision to seek help, and this process is highly influenced by cultural beliefs (Lazarus, 1993). Chang (2008) indicated that among 995 Chinese adolescents, 21.3% of them experienced academic stressors during the past month; however only seven of them sought help from counselors; one reported seeking help from a doctor, and one adolescent used a community mental health service. The majority of the adolescents who experienced academic stressors sought help from their relatives and social network. Another research also supports this phenomenon and reveals a negative relationship between severity of mental health problems and attitudes on help-seeking behavior, meaning that more serious mental health problems are associated with underutilization of help (Chang, 2008; Chen et al., 2014).

Chinese students and their families experience high levels of academic pressure and yet services are not utilized (Chang, 2008). One possible explanation for Chinese students’ underutilization of professional psychological services is the conflict between Chinese cultural values and psychotherapy values (Tata & Leong, 1994). Previous research identified that Chinese cultural values—emotional restraint, self-reliance, close family ties, and avoidance of shame—encourage Chinese people resolve psychological difficulties on their own before seeking help from others (Chang, 2008). Repressing feelings and not being emotionally vulnerable are highly regarded values within the Chinese culture (Kung, 2003). However, in addition to relying on one’s self, seeking help from social supports, such as friends, parents, and relatives, emerged as an important factor (Boey, 1999); whereas, seeking mental health services was a last resort. Other research has shown that people with higher levels of external locus of control have greater negative attitudes towards help-seeking behaviors (Fisher, Turner, & Holzberg, 1970). In contrast, individuals with high levels of internal locus of control are more motivated to seek help because they perceive help seeking behavior as an instrument of gaining power and control within their lives (Kung, 2003). Given that Chang (2008) found that Chinese individuals have shown evidence of higher levels of external locus of control (i.e. firmly believe in respect; are compliant towards authority, and accepting of fate), this may in part explain some of the underutilization of mental health services.

There is also evidences that Chinese students with higher levels of family cohesion are less likely to engage in mental health services (Ta, Holck, & Gee, 2010). In order to deeply understand cultures’ influences on Chinese students’ help seeking behaviors, a comparison studies among different generations of Chinese American’s help seeking behaviors were conducted, the results show that the strength of the correlation between family cohesion and usages of mental health service decrease along with generations in USA, specially, family cohesion had fewer impacts on third or later generation Chinese Americans compared to first and second generation Chinese Americans (Ta et al., 2010). Thus, it is reasonable to infer that Chinese students are heavily influenced by close family cohesion with regards to help seeking behaviors. A factor that has consistently been associated with being a barrier to help seeking behavior among Chinese adolescents and their families is stigma (Chen et al., 2014). Chen and colleagues (2014) found that among a sample of 251 middle and high school students, the relationship between internalizing problems and willingness to seek help was mediated by public stigma, self-stigma, and attitudes towards help seeking. Evidence suggests that higher levels of self-stigma may lead to lower levels of self-esteem, seeking professional help was perceived as a threat among those individuals with lower levels of self-esteem (Nadler et al., 1986; Kung, 2003). In Chinese and East Asian cultures, males are given more social responsibilities and provided a message that they should be stronger than females (Kung, 2003). Sullivan, Ramos - Sánchez, and McIver (2007) revealed that gender played an important role in Chinese students’ help-seeking behavior, and that Asian female students were almost two times more likely to use services when compared to their male counterparts. Kung (2003) also found an interaction effect between gender and self-esteem when analyzing help-seeking behavior among individuals with high self-esteem, and results indicated that men were more reluctant to seek help than women. The emphasis on societal norms within the Chinese culture also means that Chinese adolescents usually don’t make mental health decisions on their own, while their parents, teachers, and significant others play the roles of identifying their mental health needs and as well make the determinations of whether these youth will be connected to professional treatment (Wu et al., 2012).

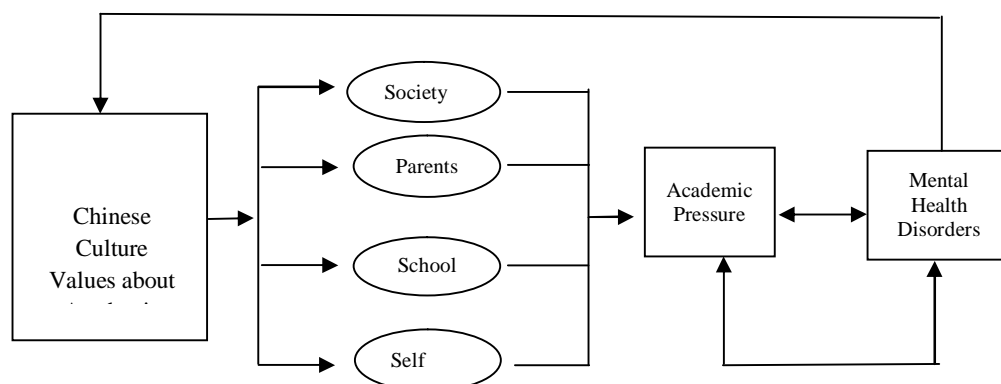
It has been suggested that Chinese parents and teachers underestimate Chinese students' internalization of problems (Leung et al., 2006; Tepper et al., 2008). Tepper et al. (2008) showed that among 6220 Chinese students, the prevalence rates of self-reported depression in Chinese students were 5.9%; whereas, parents and teachers reported prevalence of Chinese students' depression as 0.9% and 0.8%, respectively. These scores were significantly lower than those reported by the students. Moreover, the researchers found that when compared to American parents and teachers, Chinese parents and teachers were less likely to identify Chinese students' less prominent psychological symptoms and were also less likely to seek professional help for them (Tepper et al. 2008). This phenomenon may be in part be explained by a lack of mental health knowledge in addition to limited professional resources in China (Tepper et al. 2008). In fact, Hesketh et al. (2005) found that there were few trained psychotherapists and counselors in China, and almost none in rural areas.

5. Implication

Chinese adolescent students experience high levels of academic pressure that is associated with mental health problems and more tragically, suicidal behavior. In China, academic stress is a widespread phenomenon and young lives are lost to suicide as a result of extreme psychological distress and the underutilization of mental health services. Generally speaking, four aspects of academic pressures were identified through inspecting previous research: (1) individual aspect: including gender, age, self-esteem, and internal locus of control; (2) family aspect: including family closeness, perceived parents' expectation and pressure; (3) school aspect: including study loads and transition rate pressure; and (4) society aspect: including influences of Confucianism and social policies. It has been widely accepted that Chinese students' mental health problems and their underutilization of professional mental health services are partly explained by the above four resources of academic pressures. Moreover, early on, the Chinese multi-leveled academic achievement driven atmosphere was formed gradually. Chinese traditional cultural values including filial piety and hierarchy are woven into the social and familial structures. Chinese students' mental health problems are influenced greatly by levels of identification with these values that influence academic expectations.

Using psychological stress theory, this paper identifies the need for multi-level changes to mitigate the phenomenon of academic stress among Chinese adolescents. First, major policy must focus less on academic prestige and instead hold all communities accountable for creating pathways for all children to have safe and health environments, regardless of intellectual status. Second, mezzo level interventions must support major media efforts and community programs which educate Chinese families about the benefits of help seeking behaviors. Third, micro level interventions that teach parenting and communication skills will aid families and alter the relationships, thereby healing families and saving young lives. Collectively, these efforts will begin to reshape Chinese appraisal of academic achievement and promote a society that values overall, well-being. Future research must focus on identifying how this specific cultural value influences Chinese students' mental health, and as well reveal barriers to their underutilization of professional mental health services. This can inform interventions that may help improve these adolescents' mental health status and thereby prevent the loss of additional lives.

Figure 1: Conceptual Framework for Chinese Adolescents Academic Stress Under Academic Achievement-driven Value System



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