Attitudes towards suicide among Master's degree students: a cross-cultural comparison between China and Finland

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Tiivistelmä – Referat – Abstract

Attitudes towards suicide among Master's degree students in Chang Sha (China) and Helsinki (Finland) were compared in order to explore possible cross-cultural differences. The sample included 206 Master's degree students, 101 Chinese and 105 Finnish. Data were collected using the 30-item Multi-Attitudes Suicide Tendency Scale (MAST) and a demographic information form. According to the results, both Chinese and Finnish students held positive attitudes towards life, they held contradictory attitudes towards suicide, with Finnish students having more permissive and liberal attitudes towards suicide than their Chinese counterparts. In addition, three socio-demographic characteristics, namely religion, family structure, and economic status, associated with attitudes towards suicide among the Chinese Master's degree students; meanwhile, all socio-demographic characteristics, including gender, religion, major subject, family structure, economic status, and received social support related to attitudes towards suicide among the Finnish Master's degree students. However, after examining the interaction effect between socio-demographics and cultural backgrounds on attitudes towards suicide, the attitudes of Chinese students were more related to gender, marital status, family economic status, and received social support, whereas Finnish students were more influenced by religion. These findings suggest that culture plays an important role in shaping country-specific differences in attitudes towards suicide and their association with socio-demographic characteristics. Understanding individual attitudes towards suicide could help in intervention to prevent the development of suicidal ideation and in providing appropriate psychological counseling to reduce mental problems. Therefore, these cross-cultural differences may provide indications on how to conduct suicide prevention programs while considering culture-specific contexts.

Avainsanat – Nyckelord – Keywords

Attitudes towards suicide, Master's degree students, China, Finland, Culture, Suicide prevention.

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1. INTRODUCTION

With the continuous economic developments and social transformations, increasing people are suffering from mental problems (Seipel, 1999). Depression, anxiety and other emotional problems may lead to a loss of confidence, and the extreme manifestation of this is suicide (Pelkonen, Karlsson & Marttunen, 2011). According to the World Health Organization (WHO), "every year, almost one million people die from suicide. In the last 45 years suicide rates have increased by 60% worldwide. Suicide is among the three leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years age group." Although suicide rates have traditionally been highest among elderly males, the rates among young people have been increasing to such an extent that they are now the group at highest risk in a third of countries, including both developed and developing countries. (WHO, 2009.) Choron(1972) noted that 'suicide among young people shocks and disturbs us more than any other kind of death, because it cannot be blamed on nature or fate and it because it takes place at a period of life which is supposed to be the happiest, when the vital force is at its peak and when one has the whole life before him'. Suicide influences people who commit suicide and their family, moreover, the influence can extend to impact on social attitudes about life and death (Hendin, 1982).

During the past two decades, researchers have become substantially more concerned about the topic of suicide. Culture influences timing, development, and shape of one's concept about life and death, and especially for suicide (Zemaitiene & Zaborski, 2005). Accordingly, suicide is a culturally sensitive phenomenon, Zemaitiene & Zaborski (2005) conceptualized suicide as 'a struggle among various conflicting attitudes towards life and death'. Various authors have postulated that suicidal behaviors differ in diverse countries and cultures, and it is widely accepted that the differences in suicidal behavior cannot be sufficiently explained by variables such as living conditions or individual level (Neeleman, 1999; Zhang & Jin, 1996; Etzersdorfer et al., 1998; Range et al., 1999). Therefore, the number of studies with a cross-cultural

perspective is increasing, but most of them focus on suicide rates (Hijern & Allebeck, 2002; Vijayakumar et al., 2005) and suicidal ideation (Zhang & Jin, 1996; Redsch et al., 2006).

In a recent review of the literatures, the need for a more standardized and direct evaluation tool to study suicide from a cross-cultural perspective was raised. Research on attitudes towards suicide has not focused at special groups of suicide attempters, but it has been directed to healthy people and explored their views and attitudes towards life and death. Lester (1987) regarded person who commit suicide as a non-socialized individual, 'one who has failed to learn the normal cultural value, especially towards life and death'. Gutierrez et al. (2000) also emphasized attitudes towards life and death played an independent role in college suicidal phenomenon. More specifically, previous studies on attitudes towards suicide have showed that suicide attitudes have a significant impact on suicidal ideation and suicidal behavior. An individual who has greater suicidal ideation is more likely to hold positive attitudes towards suicide, while an individual who has more negative attitudes towards suicide has a smaller risk of suicide (Eshun, 2003); the approving attitude towards suicide among young people is an important predictor of suicidal ideation, and a confirmed correlation between positive attitudes towards suicide and high suicide risk (Zemaitiene & Zaborski, 2005); area with high suicide rates will shared a rather positive attitude towards suicide, and the receptive attitudes towards suicide may facilitate suicide behavior (Oyama, 2003).

Suicide prevention among young people mainly concentrates on eliminating suicide ideation and protecting them from suicidal behaviors (Gutierrez et al., 2000). Thus, early identification of those students with suicide ideation will result in better use of suicide prevention resource and can reduce suicide risk in their later life. Nevertheless, we cannot easily identify suicide ideations in the group of young people compared to high risk group, so attitudes towards suicide are employed here to investigate the suicidal tendency of young people. Changing people's attitudes towards suicidal behavior and people who commit suicide is an efficient way in suicide prevention. This has been applied in practice in many countries, especially for the group of young people, because, to a large extent, they have a greater plasticity, and their attitudes can more easily be changed compared to older people (e.g. Sakamoto et al., 2006). In addition, some

socio-demographic factors associated to suicide prevention activities (Sakamoto et al., 2006), in order to further enrich the effectiveness of these suicide prevention measures, socio-demographic characteristics need also be considered. Accordingly, this study further investigates socio-demographic factors, and examines the relationship between attitudes towards suicide and socio-demographics in different cultural backgrounds.

As in other areas of research, very few studies exist that assess attitudes towards suicide from a cross-cultural approach. Such comparison studies provide a new version on attitudes towards suicide in different countries, and are of importance in understanding the relationship between cultural matrix and suicide phenomenon. In this study, two countries were selected to comparison analyses, namely, China (Changsha) and Finland (Helsinki). The reasons for selecting these two countries as one aspect of understanding the association between cultural matrix and attitudes towards suicide are as following. First of all, in China, 287,000 people commit suicide every year，and around 2.5 million to 3 million people required medical treatments because of attempted suicide. Suicide has become the fifth leading cause of death in China, and the most important cause of death in the 15-34 years age group. (Yin, 2000.) By comparison, in Finland, according to WHO (1992), the suicide rates among 15-24 year old males was highest in Europe, and young females also had the high suicide rate in the world. Although a slight decrease has been noted in recent report (WHO, 2009), 89 males and 31 females commit suicide among 100,000 inhabitants in the 15-24 years age group each year, Finland still belongs to the countries that have high suicide rates among young people. Both countries are suffering from heavy lose of suicide among young people. However, the rates of suicide in the whole population differ between China and Finland that the WHO (2009) reported the higher suicide rate in Finland (18.3 per 100 000 people in Finland compare to 6.6 per 100 000 people in China). Then, Finland and China are representatives of Western and Asian cultures respectively. Such different cultural backgrounds provide an appropriate condition to explore potential differences of attitudes towards suicide from a cross-cultural perspective. Furthermore, most researches on attitudes towards suicide have focused largely on samples from the U.S. population. Stack (1992) noted that ‘cross-national research is needed to

ascertain whether American findings will be replicated for other nations; especially ones with very different cultural and institutional frameworks: It may be that a given relationship in the Untied States will not replicated in other nations because the United States has several unique contextual conditions such as relatively high unemployment, religiosity, and ethnic heterogeneity. Comparatives research allows us to see whether or not a relationship is contingent on a relatively unique contextual configuration of socioeconomic conditions.' Consequently, employing Finnish and Chinese sample can fill the gap and enrich the previous studies as another point of view. Last but not least, China and Finland were selected for this study also for practical reasons, such as availability of volunteer samples, only for these two countries have available samples with comparable age, marital status and gender categories; a common language, the author have lived in both cities and understood both cultures as well as could access a vast suicide literatures and articles in both countries. From above standpoints, China and Finland are in a better region than other countries to undertake this study.

At present, many studies on attitudes towards suicide from a cross-cultural perspective have tended to focus on physicians (Willems et al., 2010), undergraduate students (Etzersdorfer et al., 1998; Hjelmeland et al., 2008), and high school students (Peltzer et al., 2000; Dervic et al., 2006). In this study, Master's Degree students were selected as the subjects. Theoretically, the age of Master's Degree students ranges from 21 to 28 (between later adolescence and early adulthood), which is a complicated and important transition phase in one's life (Ma, 2007). They can be regarded as a special group, generally receiving good education. They are the 'hope of nations', and the impact of their suicide is deep, bringing heavy loss to their families. Meanwhile, Master's Degree studies are a vulnerable phase, investing much time and energy in their studies, and they bear heavy pressures. Therefore, this thesis examines the general status of attitudes towards suicide in the group of Master's Degree students and explains the potential differences between China and Finland, and further explores the relationship between attitudes towards suicide and socio-demographic characteristics under these two cultural backgrounds, which hopes to fill the gap in current studies on attitudes towards suicide from the cross-cultural perspective, broaden understanding of attitudes towards suicide and of its

significance within different cultures, as well as provides a scientific basis for suicide prevention programs and crisis interventions in culture-congenial ways.

2. LITERATURE REVIEW

This chapter focuses on two concepts and related studies, one is suicide and the other is attitudes towards suicide. Firstly, it introduces the development of research on suicide from the general perspective. It begins with the definition and classification of suicide, and then examines the risk factors for suicidal behaviors, finally reaching the core of the study: the relationship between suicide and culture. Next, it considers the concept of suicide attitude, beginning with the definition, classification and measurement of suicide attitudes, followed by previous studies on suicide attitudes from both single-cultural and cross-cultural perspectives.

2.1 Suicide

2.1.1 Definition of suicide

People always put suicide with violence and injurious act. Historically, this English word ‘suicide’ came from sui (self) and caedre (kill) in Latin. However, people has undergone long period of exploration in order to clearly understand what suicide is. In the early centuries, the peculation and superstition with the moral, religious, philosophical fallacies occupied studies of suicide. Until the 19th century, a relatively precise definition of suicide emerged after French sociologist Emile Durkheim published his work *Le suicide*. Durkheim (1952) explained ‘suicide is applied to all cases of death resulting directly and indirectly from a positive or negative act of the victim himself, which he knows will produce this result’. This publication provides a theoretical basis for subsequent suicide researches, and is also considered as the beginning of modern suicidology (Hatton & Valente, 1984).

During the next century, researchers from different disciplines such as philosophy, sociology, psychology, and medicine continued to study suicide, and explored diverse definitions of suicide. For instance, American psychologist Shneidman (1971) defines suicide as ‘the human act of self-inflicted, self-intended cessation’; O'Carroll (1996) regards suicide as ‘a death by self-inflicted means where there is evidence that the intent was to cause death’; According to

American Psychiatric Association (2003), suicide is defined as a self death with evidence (either explicit or implicit) that the person intent to die; The definition of suicide from World Health Organization (2004) emphasizes any deliberate action that has a life-threatening consequences, and the result of action can be entirely predictable. This study employs last definition, because it is comprehensive that stresses both the self-destructive outcome and the predictable precondition.

2.1.2 Classification of suicide

Similar to the definition of suicide, there are many different classifications of suicide. Traditionally, suicide is one of the four patterns of death (NASH), and the other three types are natural death, accident and homicide, but this classification reflects a mechanical world view of death, which ignores individuals' psychological factors (Shneidman, 1971). Therefore, Shneidman(1971) proposes that the NASH classification need to be added three conscious states, namely, intentional, unintentional and subconscious.

From the perspective of social integration, Durkheim (1952) classifies three categories of suicide: firstly, egoistic suicide, people who commits suicide results from lack of integration into the society. Individual loses constraints and contacts with the society, and indifference towards community and society, which will raise a sense of loneliness and then commit suicide. Egoistic suicide is also to be considered, according to Durkheim (1952), ‘the stronger the force throwing the individual onto his own resources, the greater the suicide-rate in the society in which this occurs’. Secondly, altruistic suicide, people who commit suicide governed by social custom, habit or group pressure, that is, it results from individual pursuit higher commandments, such as religious sacrifice or unthinking political allegiance. Thirdly, anomie suicide, people who live in a modern society, commit suicide because of lack of regulation of the individual by society. More specifically, individuals lose an inherent relationship with the society and experience a sudden change in their societal status (e.g., unemployment, divorce, death of family or friend). In addition to the above three types, the fourth group which would be

opposite to anomic suicide, mentioned by Durkheim in a footnote of his chapter ‘anomic suicide’, namely, fatalistic suicide, people who commit suicide due to excessive control from outside world, individuals found their future were blocked and unpredictable.

Many authors use suicide as a general term to describe a singular phenomenon and ignore the outcome of act and its different level of intent. Actually, the outcome of suicide and individuals' intention of action is different; we should not use ‘suicide’ to refer to all suicidal behaviors. (Hatton & Valente, 1984.) Therefore, according to the result of suicide, suicide can be divided into three groups: (1) suicidal ideas, which defined as individuals who have thoughts and wishes of suicide, but they have not taken action; (2) attempted suicide, which defined as a self-injurious behavior with a nonfatal outcome accompanied by evidence (either explicit or implicit) that the person intend to die; and (3) completed suicide, which defined as individual destroy themselves intentionally, and who end in death (Valtonen, 2007). In the year of 1970, American National Institute of Mental Health Suicide Prevention Research Center introduced this macro-classification of suicide to the public in the conference in Phoenix, which had received international recognition and applied to worldwide.

2.1.3 Suicide and risk factors

Suicide is a complex phenomenon, which always associated with more than one risk factor. Choron (1972) argued that no single motive or cause could adequately explain suicide and that social circumstance and, many psychic forces predispose individual towards suicide behavior.

Some studies had provided portfolios about the high risk group of suicide. One study by Mäki and Martikainen (2007), they found that various socioeconomic indictors influenced suicide mortality such as basic education, blue-collar occupations, as well as low income, and high suicide rates appeared in male group with lower socioeconomic classes, practically among manual workers. In addition, in Hong Kong, the most risk group is that men over 60 years old

have never been married with low income, while is less true for their female counterparts (Lloyd & Yip, 2001).

Other researchers had also conducted many studies to examine the risk factors of suicide, including mental illness, unemployment, low income and a family history of suicide (Ruuhela, Hiltunen, Vanäläinen, Pirinen & Partonen, 2009), young age, gender, and low education(Suokas et al., 2010), loneliness, hopelessness, depression, relationship problems, helplessness, academic problems, and financial concerns (Gutierrez, osman, Kopper, Barrios & Bagge, 2000), multiple high-lethality suicide attempts, alcohol abuse, lack of social supports, disorientation and hostility (Hatton & Valente, 1984).

Marital status is stronger predictors of the risk of suicide than age. In early work *suicide* by Durkheim (1952), suicide and marital status had presumed to be interrelated. Then, in Dubilin (1963) work *suicide*, he argued that married status afforded against the hazards of suicide in both sexes. A recently comparison study of suicide patterns in Australia and Hong Kong confirmed that marriage protected both males and females from the risk of suicide, and the sequence of divorced, widowed, never married and married reflected a rank of suicide rate from high to low (Lloyd & Yip, 2001).

Family is another key factor to the cause of suicide. Lester (1987) indicated that families influenced the behavior of their suicidal members, and their early family experience play a critical role in shaping individual's suicidal behavior. As Hatton and Valente (1984) points out, not being appreciated or understood by ones family seems to contributed to unhappiness and the suicidal youngster's life, the failure to live up to the parental expectation, followed feelings of frustration and loss of express freedom in front of strict parents drive young people into further isolation and increased the likelihood of suicidal behaviors. Furthermore, separation from parents may arouse a particular sense of loss and abandonment, thus, the loss or absence of parents in early life was associated with a tendency to suicide (Hendin, 1982).

2.1.4 Suicide and culture

Suicide is a personal mode of behavior but also a social phenomenon. On the one hand, various factors trigger the thought of suicide behaviors from individual aspect, such as poverty, physical and mental disease, unemployment, loss of honor, position, freedom and love, as well as failure. On the other hand, external circumstance exerts a significant influence on individual's character and molds his life. Culture as one part of external circumstance, produces group pressure by unifying social moral judgments and affects the likelihood of suicide. (Dublin, 1963.)

In middle of the nineteen century, publishing of Durkheim's *Le suicide* advanced studies of suicide and pushed the issue from clinic interests to socio-cultural realm. Durkheim (1952) studied suicide from an international perspective, focused on interpreting the process of social integration in suicide and analyzing superordinate cultures, and suggests people who commit suicide were poorly socially integrated and poorly socially regulated. Followed Durkheim, Lester (1987) considered people who commit suicide failed to socialize into traditional non-suicide culture on a basis of the social learning theory. Furthermore, he applies the concept "subculture" in teenage peer group suicide, and noted that 'it sharpen our awareness of what the values and attitudes are that accompany participation in a particular type of behavior, and it draws our attention to the social shaping of behavior that can take a place, facilitating the entry of people into the subculture and maintaining their presence in the subculture after entry'.

In Hendin's (1982) work *Suicide in America*, he argued cultural exceptions triggered the motives for suicide by means of how individual incorporate and fulfill them. Although people who commit suicide share a common predicament of unhappiness in different cultures, what makes them unhappy and why they willing to take their own lives are to a large extend culturally determined and relative (Hendin, 1982). Therefore, sociocultural norms and cultural differences are of importance in understanding the phenomenon of suicide among different cultural groups. Orbach (1997) had evidenced this finding in his research, and indicated sociocultural norm could either inhabit or facilitate suicide behaviors.

Both Lester (1987) and Range et al. (1999) pointed out that different cultures had very different suicide rates and suicide patterns, which contributes to ‘a characteristic of the culture rather than an artifact of the reporting practices’. Durkheim (1952) noted that suicide rates higher in central and northern Europe than southern Europe, while the neighboring countries in Scandinavia remain stable during the last century. In addition, people with high socioeconomic standing had high suicide rates among medium Human development Index countries (Vijayakumar, Nagaraj, Pirkis, & Whiteford, 2005).

In terms of gender and age, Cirard (1993) pointed out ‘almost universally, men have a greater risk of suicide than women. Furthermore, in economically developed countries, the risk tends to be highest for men in old age and for women for middle age. Age pattern of suicide in some Third World countries are fundamentally different than this’. Thus, gender and age pattern of suicide evidenced remarkable cross-cultural and historical stability.

In Asian countries (e.g. China), male and female suicide rates were approximately the same (Vijayakumar, Nagaraj, Pirkis, & Whiteford, 2005). Sometimes, female suicide rates were even higher than male in developing countries, various reason have been provided, including significant relationship issues (e.g. arranged marriage) and low social and economic burden of being female (Vijayakumar, Nagaraj, Pirkis, & Whiteford, 2005).

In western countries, the male suicide rates were around 2 to 4 times higher than female suicide rates. For example, the suicide rates in Australia (16.2 per 100 000 people) were considerably higher in Hong Kong (13.5 per 100 000 people), and the ratio of rates for Australian males were larger compared with Australian females than in Hong Kong. (Lloyd & Yip, 2001.)

In Finland, suicide mortality changes the pattern between male and female in different areas since the 1970s that highest female suicide rates show in the south of Finland, while highest male suicide rates show in the northern and northern-eastern areas (Partonen, Haukka &Lönnqvist, 2003).

In sum, the significant differences of suicide rates among males and females commonly exist in western culture but not so in Asia, and also the female suicide rates in western countries were lower compared to Asian countries, which have been argued that might be associated with the low social and economic status of Asian females (Diekstra, 1992).

In terms of religion, religious faith and affiliation influences individual's habit, thought, and action (Dublin, 1963). Durkheim (1951) suggested that religion played an important role in suicide, including religious values and proscriptions. Furthermore, Neeleman et al. (1997) conducted a study in 19 different Western countries and indicated that personal religious beliefs and exposure to a religious environment could protect individual from suicide behaviors by means of reducing its acceptability. Range et al. (1999) also mentioned 'religion can provide cognitive belief that could act as a buffer against suicide. Religion can provide social support, moral prohibitions, specific cognitive beliefs, and a sense of purpose, all of which can buffer the stresses experienced by members of minority racioethnic groups and thus lessen the likelihood of suicide'.

According to the raw rates of suicide among most countries in the world, the generally trend is that the suicide rates were higher for Protestant compared to for Catholics or Jews (Hatton &Valente, 1984). Moreover, the Roma Catholics faith is stronger opposed to suicide than others, which have the lowest suicide rates in the world (Dublin, 1963).

Durkheim (1951) brought an interpretation on high suicide rates among Protestant countries:

> It is not to the particular characteristics of religious ideas that the beneficial influence of religion is due. If religion protects one from the desire for self-destruction, it is not because it preaches to him, with argument s of religious origin, respect for one's person; it is because it forms a social group. What holds this group together is the existence of a certain number of beliefs and practices common to all its members, traditional, hence obligatory. The more numerous and the stronger these beliefs and practices are, the more compact is the religious community; also the greater is its preservative influence. The details of dogmas and rites are secondary. What is of fundamental importance is that they foster a collective life of sufficient intensity. It is

because the Protestant church has nit the same degree of integration as the others that it has not the same moderating influence on suicide.

Dublin (1963) further explained that ‘Protestantism tends to develop the reflective powers of the mind and to exaggerate the inward struggles of the conscience’, and the Catholic or Jewish faiths were much greater degree compared to the protestant in both religions and systems of social organization.

Lester (1987) interpreted the protective effect of religion against suicide that religion could provide a disapproving set of values of suicide and facilitate individual’s process of social integration, to a certain degree, religious membership can be a sign that individual has been adequately socialized.

Suicide is less taboo in Lutheran religion. Lutheran concept of an afterlife and idea of reunion after death are universally introduced in the schools and churches (Hendin, 1964). Finland is ethnically homogeneous that most of population is members of Evangelical Lutheran Church (Stack, 1992). Therefore, Finnish people may more accept suicidal behaviors than some other Catholic countries.

When comes to the relationship between Buddhism and suicide, Dublin (1963) provided the following interpretations of the relationship:

The concept of Nirvana is fundamental in Buddhist teachings. It may be described as a state marked by the extinction of craving or passion. The chief purpose of life is the acquisition of knowledge which culminates in mystic meditation. Both Brahmanism and Buddhism are religious of resignation and despair; the latter especially tends to encourage suicide. Voluntary death has, therefore, held an honorable place in various Buddhist countries.

Meanwhile, Dublin (1963) further descried the Buddhism and suicide in China, and concluded that Buddhism has a greater following, which may contribute to the prevalence of suicide in

China:

The Chinese considered certain motives for suicide especially honorable, such as that of generals who killed themselves after defeat; of tyrants who thus escaped impending doom; dethroned rulers and statesmen who hereby pretested against political policies; wives who refused to survive their husbands; persons who committed suicide in memory of a dead father ancestor.

In terms of family structure, Hendin (1964) used a psychoanalytic approach to explore the relationship with family and suicide tendency in Scandinavian culture. Parental rearing was of importance in shaping the character differences between Norwegians and Swedes and in determining the different reasons for the high suicide rates in Sweden and comparatively low suicide rate in Norway. Strong parent who overvalued performance and achievement in raising their child, they how their children compared with others, while the majority of Norwegian parents are not this kind of ambitious father and mother, they demands for success and achievement are far less rigid than Swedish parents, thus, Norwegians have less need to consider suicide as a self-punishment for failure, while Swedish parents regard suicide as an act of weakness and failure. The Norwegian child is given much both physical freedom to play and verbalizing freedom to express openly anger, they can free to reveal their inner feelings and less necessary to internalize negative emotions, even boys are permitted to cry. Both sexes are outgoing than Swedish people. Norwegian woman transfer their exceptions of man to their children and therefore reduces dependence frustrations and less likely feel vulnerable and express disappointment in loss a man. (Hendin, 1964.)

In terms of marital status, Durkheim (1952) was first to mention marriage was protective factor against suicide risk. According to a comparison study of suicide pattern by Lloyd and Yip (2001), protective effects of marriage against the risk of suicide were stable and stronger in Australia, but changing the pattern in Hong Kong. Furthermore, protective effects of marriage were similar for both genders in Australia, while females seem to be less protected by marriage factor in the risk of suicide compared with their male counterparts in Hong Kong.

In terms of alcohol abuse, it is also an important factor for suicide rates on national-level (Ramstedt, 2001). Hendin (1964) indicated that suicide and alcoholism overlap considerably in Norway. Hintikka, Saarinen and Viinamäki (1999) found a liner relationship between male suicide rates and alcohol consumption in Finland in the period of 1985 to 1995.

In addition to the cross-cultural difference of suicide rates on the above levels, there are two researches explored the specific cultures and their differences of suicide phenomenon.

Hendin (1964) in her work *Suicide and Scandinavia* mentioned a 'Scandinavian suicide phenomenon' that the comparatively low suicide rate in Norway and the remarkable high suicide rate in Sweden. Although Norway and Sweden, to a certain degree, share the Scandinavian culture, their own unique cultures play independent roles and contribute more to the difference of suicide rates. Hendin (1964) was based upon his experience in Scandinavian countries and his immersion in their culture in an attempt to explain the 'Scandinavian suicide phenomenon' by specifically national character. He argued that study culture effected on individual character was more important than just simply described social institution, individual's inner feelings is indicative of certain social values present in the culture, and 'suicide is used in a society as an expression of personal dissatisfaction and unhappiness' when individual cannot find homogeneousness in his traditions, institutions and attitudes. However, he followed Freud and studied the psychodynamics of suicide and based on previous experience without quantitative evidence, which one way or another is subjective, limited and outdated from current perspective of research.

Another study by Range et al. (1999) was further evidenced the subtle relationship between culture and suicide. They selected four different ethnic groups in the United States, including African American, Hispanic American, Native American, and Asian American, and discussed the differences of suicide rates under the same cultural environment. Among African American group, the highest risk group was male between the ages of 25 and 34, and the male suicide rate was four to six times higher than their female counterparts. Furthermore, even though the suicide rate for African Americans peaked earlier and increased faster than that of European

Americans, the suicide rate of African Americans was still lower. Religious sin, the role of elderly in the family and the extended family network may contribute to the differences of suicide pattern. Among Hispanic American group, a similar situation was shown that men were more likely to commit suicide and culture in terms of family structure, Catholic religion and social support may contribute to low rates for Hispanic Americans than non-Hispanic Americans. Among Native American group, the suicide rate is 1.6 to 4.2 times higher than overall suicide rate and 3 to 4 times higher than that of other ethnic groups in the United States, and the suicidal profile was young and single man who suicide at home after drinking alcohol. Cultural beliefs (e.g. living harmony with nature), poverty, deprivation, and disruption of tribal unity by acculturation such as absence of social integration, loss of identity, intergenerational conflict may affect the high suicide rate among Native American. Among Asian American group, one one hand, the rate of suicide was the lowest compared to other ethnic groups in the U.S., on the other hand, the risk of suicide increased steadily with age and the gap between male and female suicide rates were narrowed down that the suicide rate of Asian American males ranked the last place while that of women were higher than their African American counterparts. The principles of religion including Confucianism, Buddhism and Taoism, as well as family name and face may explain the lower overall suicide rates among Asian Americans. (Range et al., 1999.)

At last, look back to the subjects of this study — suicide and two cultures. For one thing, the traditional Finnish cultural, to a large extent, associated with Finnish high suicide rate in the world. Historical condition such as dominate d by Sweden and Russia for several centuries created a unique Finnish culture, which is witnessed in interpretation of the *Kalevala*, the Finnish national epic, contends the suicide and death are often-reaped theme. More specifically, Finnish hold positive attitudes towards suicide and more accept suicide than many other industrial nations. (Stack, 1992.) For another, voluntary death in oriental attitudes towards suicide was a ‘surest passport to heaven’. The scheme of Oriental mysticism was the divorce of body and soul and abandoned the body, and then the soul can eventually occupy itself solely with supersensual realities. In addition, the ceremonial sacrifice of widows was common in India and China, they believed that the voluntary death will free her husband from punishment

and families and relatives could also benefit from her sacrifice. (Dublin, 1963.) Although both culture view suicide as less taboo and an approval act, the suicide rates in China were lower than in Finland according WHO (2009). Thus, the deep reason needs to combine with specific socio-demographic status to explore in this study.

To wrap up, more and more researchers believe that suicidal behavior has significant differences in different countries and cultures after several decades study on suicide. Therefore, study on attitudes towards suicide emerge because of needing a more standardized and direct evaluation way to measure and compare individual's suicidal ideation and behavior on cross-cultural level.

2.2 Attitudes towards suicide

2.2.1 Definition of attitudes towards suicide

For the first half of the 20th century, attitudes towards suicide received little research attention. Since the 1950s, researchers have begun to explore the field of attitudes towards suicide, which opened a new research project in suicidology, and enriched the study of suicide intervention and prevention. However, the development time is short, and it has not formed into a mature theoretical system. Thus, there is no strict definition or concept of attitudes towards suicide.

A comparative comprehensive definition of attitudes towards suicide is from Tang (2003), he regards suicide attitudes as a persistent and consistent tendency towards suicidal behavior which individuals hold. Furthermore, Wang (2008), based on Hovland and Rosenberg's three-component model of attitude (attitude as a predisposition to some class of stimuli with cognitive, affective and behavioral responses), conceptualizes suicide attitudes as persistent positive or negative emotion and approach-avoidance behavior towards suicidal behavior and people who commit suicide. In this study, Wang’s (2008) definition was applied, because which emphasized cognitive, affective and behavioral tendency at the same time.

2.2.2 Classification of attitudes towards suicide

People are changing their attitudes towards suicide in time. Up until now, suicide as a controversial topic is still disputed in field of ethic, law, medicine, and value. Zao (2007) classified five common attitudes towards suicide. The first view regards suicide as an immoral behavior that coward people abandon their social responsibility and leave greater pain to others. It will bring a negative impact on family members, adolescent and the whole society, which should be subject to moral condemnation. The second view considers suicide as a crime. Before the French Revolution, suicidal behavior was punished by law in accordance with relevant provisions in some European countries. Fortunately, the discipline of suicide decreased in modern legal systems. Also, suicide was sentenced as a sin, which is cursed and conspued in Moslem and Christian cultures. The third view believes that suicide is a performance of mental disease. Most people think that suicide people have mental illnesses, although some studies had indicated that suicide was clinical manifestations of depression and other mental illnesses as well as a certain proportion of suicide people suffer from mental illnesses, but the actual situation is also evidence that a considerable number of suicide people are in their right minds. The fourth view shows that suicide is a personal freedom. People who hold this view believe that the value and significance of life consists of a person's freedom of choice, and individuals have the right to take their own lives. There is no sense if life can not play social functions, so it is not worth to deliberately maintain. The last view is that suicide is an honorable and meaningful behavior. For instance, people who sacrificed for their country are regarded as heroes of their nation in Chinese culture, and suicide is considered as responsible behavior to offer an apology for a failure in Japanese culture. (Zao, 2007.)

2.2.3 Measurement of attitudes towards suicide

With the development of study on attitudes towards suicide, researchers have created different methods to measure it, but those tools are based on different theories, evaluative dimensions,

structures or other factors, and the result from different studies cannot be compared (Leenaars & Domino, 1993).

Up until the 1980s, Domino selected 100 items out of 3000 items to complete a questionnaire, namely, suicide option questionnaire(SOQ), then applied it to a group of students (Knight, et al., 2000). Then, standardizing measuring tools of suicide attitudes started to rise. Subsequently, Diekstra (1985) developed a 22-item Suicide Attitudes Questionnaire (SUIATT) from three dimensions in terms of emotion, cognition and method, and Jenner (2000) created a 15-item Semantic Differential Scale Attitudes towards Suicidal Behavior (SEDAS) from the perspective of semanteme.

The Multi-Attitude Suicide Tendency Scale (MAST), which was developed by Orbach et al. (1991), is another important scale in the study of attitudes towards suicide. The MAST consists of four subscales, including Repulsion by Life (MAST-RL), Attraction of Life (MAST-AL), Repulsion by Death (MAST-RD), and Attraction by Death (MAST-AD). This 30-item scale is a theory-based instrument designated to assess the tendency towards and repulsion of life and death (Osman et al., 1994). Meanwhile, Orbach (1988) noted that it is based upon the phenomenological assumption that conflicting attitudes towards life and death mediate suicidal behavior.

According to Obrach (1991), the meanings of each subscale are described as follows:

Repulsion by Life (MAST-RL) reflects individual experiences with psychological pain and stress, and those experiences may come from a broken family, death of relatives, rejection by others, loneliness, and physical and mental abuse. Individual who hold these attitudes tends to think problems cannot be resolved, and give rise to a motivation of self-destructive behaviors. The MAST-RL consists of 7 items, including items 2, 9, 14, 15, 16, 21, and 30.

Attraction to Life (MAST-AL) reflects a willing to live, which is based on the degree of life satisfaction and self-esteem as well as influenced by individual's feeling of security from family,

friends and lovers. An individual, who holds this attitude, tends to distance from self-destruction behaviors. The MAST-AL consists of 7 items, including items 1, 5, 6, 13, 18, 25, and 28.

Repulsion by Death (MAST-RD) reflects fear of death. Individual, who holds this attitude, tends to see death as a frightening and undesirable behavior and people who take their lives should be punished; this forces an individual far away from suicide behavior. The MAST-RD consists of 9 items, including items 3, 4, 7, 10, 11, 12, 20, 24 and 29.

Attraction to Death (MAST-AD) reflects a religious belief that death is superior compared to life. Individual who hold this attitude tends to believe that death can help people from painful life and reunite with deceased family members or lovers, which motivates individuals suicidal behaviors. The MAST-AD consists of 7 items, including items 8, 17, 19, 22, 23, 26 and 27.

A Chinese version of the MAST has also been developed by Wong (2004), which was tested on a sample of 415 Chinese adolescents. The results indicated good consistency and convergent validity with the Depression Self-Rating Scale and Suicidal Behaviors Questionnaire among non-suicidals, suicidal ideators, and suicide attempters.

Many researchers had applied the MAST to different groups, especially to the group of students from different countries or cultural backgrounds, and obtained a number of data to inspect its reliability and viability (e.g. Osman, Barrios, Grittmann & Osman, 1993; Gutierrez, Osman, Kopper &Barrios, 2004; Wong, 2003). In this study, the MAST scale was employed to scale the attitudes towards suicide among Master's Degree students in both China and Finland.

2.2.4 Research on attitudes towards suicide

In this section, previous studies of attitudes towards suicide are separated as two parts. The first

part introduces those researches on suicide attitudes from single cultural perspectives, and the second part focuses on the cross-cultural comparison studies.

2.2.4.1 Single-cultural study on attitudes towards suicide

Research on suicide attitudes begins with overall attitude towards suicide in one certain cultural background. This type of studies takes no account of cultural influence (Leenaars & Domino, 1993).

There are also some researchers who investigate overall attitudes towards suicide in both China and Finland. In China, most studies were conducted on undergraduate students. Wang and Lu (2001) found that most university students held contradictable and neutral attitudes towards suicidal behavior, but expressed positive attitudes towards suicide people and their family as well as towards euthanasia. Furthermore, another study reported that students from rural areas held more negative attitudes towards suicide than those from urban areas, and also they less accepted euthanasia (Tang, 2003). In addition to the group of students, Chinese researchers also examined attitudes towards suicide among people from different occupations, such as lawyers, and medical staff (Yang, 1999). Compared with studies in China, fewer studies on suicide attitudes were conducted in Finland, and most of them focus on the group of medical staff. For instance, Suokas, Suominen and Lonnqvist (2007) studied emergency personnel's attitudes towards suicide attempters, and found a general tendency among emergency room staff to view attempted suicide patients positively and sympathetically; Ryynänen, Myllykangas, Viren and Heino (2002) investigated the attitudes of physicians, nurses and the general public to physician-assisted suicide (PAS), active voluntary euthanasia (AVE) and passive euthanasia (PE), and who concluded that PE was largely accepted among Finnish medical professionals and the general public, while only a minority favored AVE and PAS. In conclusion, the contemporary attitudes towards suicide, they can be shortly described as against suicidal behavior but in favor of euthanasia.

Based on the previous data, many correctional studies on attitudes towards suicide came to the fore later. Most researchers focus on the relationship between attitudes towards suicide and suicidal ideation, which had accumulated a wealth of data. A series of studies have evidenced that individuals, who express a tolerant attitudes towards suicidal behavior tended to have higher risk of suicide, while the negative attitudes towards suicide could protect vulnerable individuals from suicidal behavior (e.g. Ramsay & Bagley, 1985; Lester & Akande, 1994, Peltzer & Cherian, 2000).

Stein, et al. (1992), who conducted a study among Israeli young people and investigated their attitude towards suicide from the perspective of psychosocial background, found that there was a positive correlation between increased risk of suicide and positive attitudes towards suicide; at the same time, an individual who had suicidal ideation rarely viewed suicide as a shame behavior, and they performed more risk behavior as well as they were willing to make friends with suicide attempter. Eshun (2003) examined 155 Ghanaian and 220 American undergraduate students, reported that negative attitudes towards suicide correlated negatively with suicidal ideation, and attitudes towards suicide can be regarded as a determining factor of suicidal ideations. A same conclusion was presented by Wang (2001), who studied 379 undergraduate students in China, which, to a large degree, increased the reliability of the relationship between attitudes towards suicide and suicidal ideations even under different cultural backgrounds.

In a recent review of literatures, most researchers reach a similar conclusion that different groups of people hold different attitudes towards suicide, and attitudes towards suicide plays an independent role on suicidal ideation (e.g. willems, et al., 2000; Redsch, et al., 2006; Eskin, Voracek, Stieger & Altinyazar, 2010). Meanwhile, according to Hatton and Valente (1984), socio-demographic data are used to identify individual's certain vital statistics and sociocultrual characteristics and place all these facts in perspective with the assessment of suicide risk, taken all socio-demographic data in combination, the information they provide will rich and facility the result of assessment. Thus, in order to access suicide attitudes in different group of population, examining the psychosocial factors becomes a good point of penetration.

In terms of age, old people and adults hold similarly negative attitudes towards suicide, regarding suicide as an irresponsible and cowardly behavior, while young people hold comparatively positive attitudes (Parker, et al., 1997). Both Orbach (1991) and Guiterrez (1996)

indicated that attitudes towards life and death greatly influenced the choice of suicide among young students group. Thus, it is important to note that the study of young people has obvious significance.

In terms of gender, a complex and interactive relationship between gender and attitudes towards suicide were evidenced by many researchers (e.g. Yu, 1997; Tang, 2003; Eskin, 2004). Generally speaking, males tend to hold neutral or negative attitudes towards suicide compared to females in China (Tang, 2003). In Turkey, men are more likely hold positive attitudes towards suicide decision than women and view it as a personal choice, and women tend to express more positive attitudes towards people who commit suicide than man, while both of them regard suicide as an understandable and reasonable behavior (Eskin, 2004). Other researchers put the focus on sexual orientation, and tried to explore the relationship of different sexual orientation (homosexual, bisexual, heterosexual) and attitudes towards suicide, but the result conflicted with the reality that although homosexual and bisexual people had a higher suicide rates than heterosexual ones, they tended to view suicide as cowardly and irrational behavior (Cato, et al. 2003).

In terms of occupation, most studies have focused on medical staff (e.g. practitioners, physicals, nurses, and medicine students) and students. Yang (1999) indicated that medical staff tended to hold negative attitudes towards suicide, while Suokas et al. (2007) brought us an opposite picture, that medical staff viewed attempted suicide patients positively and sympathetically. However, most researchers reach the same conclusion that medical staff expressed positive attitudes towards euthanasia (Yang, 1999; Ryynänen et al., 2002). Among students group, Wang and Lu (2001) found a similar attitude towards suicide among secondary school students and university students that both groups of people had contradictable or neutral attitudes towards suicide in China.

Regarding social culture variable, different religious beliefs, cultural customs and tradition have impact on people's attitudes towards life and death. For example, traditional Catholicism strongly opposes suicides, according to the research by Eskin (2004) that shows that subjects

from a religious group deny the freedom choice of life and death in Turkey.

Despite those studies concerning the influence between single psychosocial factors and attitudes towards suicide, researchers started to examine the effect of multi-psychosocial factors on attitudes towards suicide. Stein (1992) has explored many psychosocial factors including gender, age, place of birth, nationality of father, race of father, received education of father, economic position, religion, contact with suicidal behaviors. According to the result of logistic regression analysis, significant differences existed in gender, religion and contact with suicidal behavior. Up until 2003, a Chinese researcher Qian (2004) presented her work on analyzing psychosocial factors of undergraduates' attitudes towards suicide, which brought a more comprehensive and systematic study to this area. She surveyed 419 Chinese undergraduate students by employing Suicide Attitude Questionnaire, Eysenck Personality Questionnaire, Tennessee Self-concept Scale, Social support Questionnaire, Egma Minnen av Bardndosnauppforstran, Adolescent Self-rating Life Even Check List, Self-rating Depression Scale and Self-rating Anxiety Scale, and reported that multiple psychosocial factors, directly or indirectly influenced undergraduate students attitudes towards suicide. There were widely interactional correlations among self-concept, social support, rearing style of parents, depression, anxiety and suicide attitudes, especially in the strongest relationship between self-concept and suicide attitudes, but it could not show a relationship between attitudes towards suicide and daily events. Regression analysis also revealed that self-concept and social support exert directly effect on attitudes towards suicide, and personality, rearing style of parents, depression and anxiety influence indirectly through intervening variable self-concept and social support.

Most importantly, based on the significant positive correlation between attitudes towards suicide and mental health of undergraduate students, it suggests that people with mental health problems who are inclined to show more degree of adaptability towards suicide attitudes, and who also express more negative and repulsive attitudes towards suicide (Ge, 2005). Therefore, understanding individuals' attitudes towards suicide is an efficient way to receive the early sign of mental illness and suicide tendency, which is of great importance for early suicidal prevention work.

2.2.4.2 Cross-cultural study on attitudes towards suicide

With the fast development of suicide research during the past two decades, the number of studies from a cross-cultural perspective is increasing. However, most of them investigated suicide rates (Hijern & Allebeck, 2002; Vijayakumar et al., 2005) and suicide ideations (Zhang & Jin, 1996; Redsch et al., 2006). Only a few researchers concentrated on comparing the attitudes towards suicide in different countries. Additionally, among those previous studies, most of the subjects were physicians and medical staffs, because they are closer to suicide events than normal people, and focus on attitudes towards life-and-death decision and euthanasia.

Willems et al. (2000) conducted a study on comparing attitudes and practices concerning the end-of-life decision between physicians in Netherlands and United States and showed that American physicians less often accept euthanasia compared to their Dutch counterparts, while physicians in both countries hold similar attitudes on increasing morphine and physician-assisted suicide (PAS).

As a part of a European collaborative research project (EURELD), Miccinesi et al. (2004) studied physicians' attitudes towards end-of-life decisions in seven countries, including Belgium, Denmark, Italy, the Netherlands, Sweden and Switzerland. The results showed the differences in the attitudes towards end-of-life decisions between the countries: physicians in the Netherlands and Belgium highly supported euthanasia, while Italy and Sweden ranked lowest in support for euthanasia.

Redsch et al. (2006) designed a questionnaire to examine General practitioners' awareness of suicide and their attitudes towards suicide attempters and suicide ideators in Germany and Japan, and found that German general practitioners were more willing to prevent suicide in their daily practice than Japanese general practitioners.

In addition to suicide attitudes of physicians and medical staffs, some researchers have conducted their studies on people with mental health problems, in order to elaborate and deepen the research findings on attitudes towards suicide.

Leenaars and Domino (1993) used the Suicide Opinion Questionnaire (SOQ) to study on attitudes towards suicide between two samples of community adults from Windsor in Canada and Los Angeles in United States. Five subscales of the SOQ were found statistically significant difference between the Canadian sample and the American sample. Respondents in Windsor were more likely to agree on the subscales of Mental illness, Cry for help and Rights to die, and less likely to agree on the subscales of Religion and Moral evil than their counterparts in Los Angeles. Speculation considered as a reason for those difference existed.

In recent decade, with the rapidly increase of suicide among young people, the target group of research on suicides attitudes are changing to adolescents and university students.

Etzersdorfe et al. (1998), who investigated medical undergraduates' attitudes towards suicide in both Austria and India. There are two noteworthy conclusions: First, medical undergraduates held serious and negative attitudes towards suicide in India, and the pattern came close to a 'medical' or 'disease model' (mental illness, impulsiveness and emotional aspects), while their Austrian counterparts held positive attitudes towards suicide, and the pattern reflected 'theoretical' and 'rational model' (cognitive factors); second, medical undergraduates in both countries had different attitudes towards suicidal behavior on 'themselves' and 'others' that viewed attitudes towards suicide more tolerant for others and even their close relatives and friends, and regarded suicidal behavior rational rather than impulse, whereas viewed suicide as a intolerant behavior for themselves, and they only accept to do self-destruct behavior in non-rational condition.

Peltzer and Cherian (2000) selected the subjects from three cultural groups in terms of blacks, whites, and Asians in secondary school pupils in South Africa, using the MAST scale to measure their attitudes towards suicide. The study found statistical significant differences across cultural groups in suicidal ideation, plants and attempts. Asian and white groups endorsed high level of suicide attitudes and suicide attempts than African group, and suggested they were under a high risk of suicidal behavior in South Africa.

A cross-cultural comparison study by Dervic et al. (2006) concerning suicide risk factors, attitudes towards suicide and help-seeking among New York and Viennese adolescents indicated that Viennese adolescents more attributed suicide as mental illness and also more agree with the attitudes that, 'if depressed it is good to keep feelings to oneself', 'people who

talk about suicide do not commit it', 'suicide is possible a solution to problems', while New York adolescents endorsed attitudes that people need resolve problems by themselves. Furthermore, adolescents in both cities realized that alcohol and drug could be a risk for suicidal behaviors.

A three courtier's compassion study by Hjelmeland et al. (2008) on suicidal behavior and attitudes towards suicide among psychology students reported that there were small difference in own suicidal behavior. Compared to Norway and Ghana, psychology students in Uganda experienced more commonly. The effects of significant differences on attitudes towards suicide were not as stronger as expected, and the most significant difference indicated that both African psychology students in Ghana and Uganda were more likely to show decisiveness of attitudes towards suicide than their Norwegian counterparts.

Eskin et al. (2010) conducted a cross-cultural investigation of suicidal behavior and attitudes in 320 Austrian and 326 Turkish medical students. The results indicated that Austrian students had more permissive and liberal attitudes towards suicide than their counterparts in Turkey. Nevertheless, the Turkish students more accepted an imagined suicidal close friend than those of Austrian medical students. Also, students who reported suicidal ideation or suicidal attempts held positive attitudes towards suicide and viewed suicide as a solution than the non-suicidal group.

In sum, cross-cultural comparison studies are increasing recent years, while most of them just simply presents the comparison of statistics results in different cultures rather than provides a root reason that why and how cultural factors lead to those differences. Furthermore, although socio-demographic characterizes are important factors guiding people's attitudes towards suicide and explain the relationship between suicide attitude and culture, they do not reward when most researchers conducted their cross-cultural comparison. Also, some researchers, on one hand, created their own scales to measure suicide attitudes and directly applied to their studies without pre-tests, on the other hand, employed the English version scale to subjects from different cultures, even who were not familiar with English, which ignores the validity of scales and reduces the reliability of results. Last but not least, when it comes to investigate young people's attitudes towards suicide, researchers tend to select high school students or Bachelor's degree students as subject groups, while the group of Master's degree student was a blank in related studies.

3. AIMS OF THE STUDY

Attitudes towards suicide have a short research history, and there have been even fewer cross-cultural studies on attitudes towards suicide. Most previous studies have been based on a statistical comparison of suicide behavior in different cultures, and no further interpretation has been presented to explain whether and how culture influences people's attitudes towards suicide.

In this study, I measure and compared the attitudes towards suicide among Chinese and Finnish Master's degree students. I also aimed to study the effect of students' socio-demographics on attitudes towards suicide in these two samples and to explore whether this effect is culture-specific. Socio-demographic factors should be examined in order to further enrich and deepen the effectiveness of suicide prevention studies (Sakamoto et al., 2006). Therefore, based previous literature review chapters, I selected seven key factors such as age, gender, religion, major, family structure (marital status, number of children in the primary family, and parental marital status), economic status (family economic status, employment, and source of economic support), and received social supports, in order to explore the relationship between socio-demographic characteristics and attitudes towards suicide, then focused on five specific socio-demographics, including gender, religion, marital status, family economic status and received social supports, and examined their interaction effect with different cultural backgrounds on shaping attitudes towards suicide.

My general research questions are: 1. Are there any differences in the attitudes towards suicide between the Chinese sample and the Finnish sample? 2. What is the relationship between socio-demographic factors and attitudes towards suicide? and 3. Do socio-demographic factors differently predict attitudes towards suicide in the two cultures?

The specific hypotheses are:

1. The Finnish and Chinese Master's Degree students will have different attitudes towards suicide. Chinese students will have more negative attitudes towards suicide than Finnish students.
2. The attitudes towards suicide will reflect differences in students' socio-demographic characteristics, including gender, religion, major, (marital status, number of children in the primary family, and parental marital status), economic status (family economic status, employment, and source of economic support), and received social supports. Female will more likely hold negative attitudes towards suicide than male; individual has a religious belief will more likely view suicide as an unapproved act; individual who is single, or who grew up in a single family, or who is a single child will more likely accept suicide; Individual from a wealth family, or who have a stable job and support one's own live expense will more likely regard suicide as a negative thing; individual who received unsatisfactory social support will more likely hold positive attitudes towards suicide.
3. The interaction effects of between socio-demographic factors and cultural backgrounds on attitudes towards suicide will be different in the Chinese and Finnish samples.

Through this study, the following aims are expected to be achieved:

1. To expand the field of research on suicide attitude. This study supplements related cross-cultural studies. According to Durkheim (1952), suicide is not a simple individual behavior, but rather a response to a certain social and cultural status. In different cultural backgrounds, individual's attitudes towards suicide will be marked cultural characteristics. This study not only can compare with other present studies, but also supply a gap of cross-cultural research on suicide attitude in both China and Finland. Also, this study can provide a theoretical basis for the subsequent studies, which helps other researchers to enrich and deepen the research contents of suicide attitude.

2. To promote suicide prevention and life education practice. Understanding individuals' attitudes towards suicide can, to a large extent, prevent the generation of suicide ideation timely and provide appropriate psychological counseling to reduce the aggravation of psychological

problems. Focus on individuals who hold positive attitudes towards suicide, and regard them as a potential risk group, which is of great importance to carry out suicide intervention and prevention. Furthermore, developing culture-specific life courses to help university students shaping appropriate attitudes towards life and death and reducing the risk of suicidal behaviors. Studying the roles that different cultures play in forming suicide attitudes can guide the practice of life education in different countries, and improve the pertinence of related programs.

4. METHODS

4.1 Subjects

The cross-cultural samples for present study consist of students from the Hunan Normal University in Chang Sha (China) and the University of Helsinki, and both universities are big-sized public universities with similar specialty distribution (see http://www.hunnu.edu.cn/english/infofor/PerspectiveStu/ProspectusesCourses/index.html; http:// www.helsinki.fi/admissions/index.html).

110 students in each university were randomly selected from Master's Degree programs in both the Faculty of Social Science and the Faculty of Biological and Environmental Sciences and designed, to a large extent, to match each sample in gender, age and major. In China, 101 students (45 males, 56 females) filled in the questionnaire, whereas the number of participants in Finland decreased to 105 (41 males, 64 females), and the response rate of each country were 91.8% and 95.5%, respectively. The majority from the Finnish sample was white and native born as well as Chinese respondents were all of Chinese origin.

Table 1 shows the socio-demographic characteristics of the two groups. Both Chinese sample and Finnish sample had more women than men, however, there is still a slight difference in gender distribution between two countries as more females in Finland responded compared to their Chinese counterparts, but there was no statistically significant difference (F = 2.291, p = .132), which reflects the gender enrolment in the total population of Master's Degree students in both countries. Meanwhile, no statistically significant difference was found in terms of major distribution (F = 0.68, p = .411). However, Finnish students were approximate one year older than their Chinese counterparts (F = 12.82, p<.001). Besides, a series of t-test analyses displayed that the two sample groups differed significantly with regard to religion (F = 419.27, p<.001), Chinese sample had less religious belief than Finnish sample; marital status (F = 10.30, p = .002), students were less often cohabited and married while more often single and in a relationship in China than in Finland; number of children in the primary family (F = 155.82,

Table 1 Socio-demographic characteristics of the Chinese and Finnish Master's Degree students

Socio-demographics		Chinese (n = 101)	Finnish (n = 105)
Age	*M*(*SD*)	23.73 (1.54)	24.78 (2.04)
Gender	Male	45 (44.6%)	41 (39.0%)
	Female	56 (55.4%)	64 (61.0%)
Religion	Yes	3 (3.0%)	39 (37.1%)
	No	98 (97.0%)	66 (62.9%)
Major	Social Science	45 (44.6%)	50 (47.6%)
	Science	56 (55.4%)	55 (52.4%)
Family Structure:			
Marital Status	Single	63 (62.4%)	37 (35.2%)
	In a Relationship	34 (33.7%)	24 (22.9%)
	Cohabited	1 (1.0%)	26 (24.8%)
	Married	3 (3.0%)	8 (7.6%)
Single Child	Yes	42 (41.6%)	10 (9.5%)
	No	59 (58.4%)	95 (90.5%)
Single Parents	Yes	6 (6.0%)	2 (2.0%)
	No	95 (94.1%)	103 (98.0%)
Economic status:			
Family Economic Status	High	8 (7.9%)	33 (31.4%)
	Average	84 (83.2%)	63 (60.0%)
	Low	9 (8.9%)	9 (8.5%)
Job(Full Time or Part Time)	Yes	39 (38.6%)	64 (61.0%)
	No	62 (61.4%)	41 (39.0%)
Source of Economic Support	Myself	36 (35.6%)	81 (77.1%)
	Parents	65 (64.4%)	24 (22.9%)
Received Social Support	Satisfactory	30 (29.7%)	9 (8.5%)
	Average	63 (62.4%)	65 (61.9%)
	Unsatisfactory	8 (7.9%)	31 (29.5%)

$p<.001$), more Chinese students were single child in their families; parental marital status (F = 9.38, $p<.002$), Finnish sample had more family with single parent; economic status (F = 38.92, $p<.001$), more Finnish students from a wealth family than Chinese students; source of economic support (F = 24.80, $p<.001$), most Chinese students received their economic support from their parents, while Finnish students depended themselves.

4.2 Procedure

The data was collected between November, 2010 and January, 2011. The Finnish data was collected in November, 2010. An e-questionnaire including the MAST scale and socio-demographics information form was sent to 110 students in the Faculty of social sciences and Faculty of Biological and Environmental Sciences by universities' e-mail system and the Master 's Degree students can answer all the questions on-line and respond easily. The whole process was insured anonymous and voluntary participation.

The Chinese data was collected in January, 2011. However, Chinese university did not have an e-mail system for every student, thus, a paper version of the questionnaire with both the MAST scale and socio-demographics information form were distributed to 110 Master's Degree students. Similar gender and major distribution were considered in the process of data collection in order to balance both samples in two countries and improve the representativeness of both cultures. University classes were used as data collection sites, and the participation was voluntary. The researcher asked students not to write their names, and the completed questionnaires were enclosed into sealed envelopes and returned to the researcher directly. This made them understand that their answer would not be identified, and also ethical problems were avoided.

Master's Degree students in China filled in the Chinese version of the MAST scale (Wong, 2004), while the Finnish students filled in the English version (Orbach et al. 1991). In addition

to the MAST scale, Masters Degree students in both countries complete a socio-demographics information form. All students were offered an opportunity to contact the researcher in case there were any problems for which they were concerned. For this reason, the researcher's name, postal address and e-mail address were provided for them in both China and Finland.

4.3 Measures

Attitudes towards suicide:

The Multi-Attitude Suicide Tendency Scale (MAST) was employed to access subjects' suicide attitudes. This 30-item scale consists of four sub-scales, including Repulsion by Life (MAST-RL), Attraction of Life (MAST-AL), Repulsion by Death (MAST-RD), and Attraction by Death (MAST-AD), which is a theory-based instrument designated to assess the tendency towards and repulsion of life and death (Osman et al, 1994). Respondents are asked to indicate their response on a 5-point scale (1 = *I strongly agree* and 5 = *I strongly disagree*). The procedure in the research by Hagstrom and Gutiereerz (1998) were employed in this research, score were reversed in all 30 items of The MAST scale, which means that higher score represent higher agreement with the component being measured. The four subscales are independently, thus a total 30-items score cannot be provided.

The validity of the Multi-Attitude Suicide Tendency Scale in predicting suicidal tendency received initial empirical support in different samples. In a study by Obrach(1991), he applied this scale to a sample of 165 Israeli normal, suicidal, and psychiatric adolescents aged 15 to 18 years. The factor scales showed good internal consistency, as well as concurrent and discriminant validity in the cross-replication sample (Obrach et al., 1991). Furthermore, Osman et al. (1993) investigated the factor structure and psychometric properties of the MAST in a sample of American college students aged 18 to 34 years. The alpha coefficients were satisfactory and comparable to the values reported by Orbach et al. (1991). In general, the

results of Orbach et al. (1991) and Osma et al. (1993) studies show that the MAST has good validity and reliability in both adolescent and adult samples.

A Chinese version of the MAST has also been developed by Wong (2004), which was tested on a sample of 415 Chinese adolescents. The results indicated good consistency and convergent validity with the Depression Self-Rating Scale and Suicidal Behaviors Questionnaire among non-suicidals, suicidal ideators, and suicide attempters.

Socio-demographic characteristics:
A socio-demographic information form was used in this study in order to obtain more valuable information of the Chinese and Finnish samples from cultural and social perspectives. This form includes 11 variables, namely, age, gender, religion, major, family structure (e.g. marital status, number of children in the primary family, and parental marital status), economic status (family economic status, employment, and source of economic support), and received social support.

4.4 Data Analyses

Data analyses were conducted by using the SPSS software version 17.0, statistical differences were considered significant at $p<0.05$ for all statistical analyses. Firstly, the MAST scale for Chinese and Finnish respondents were scored on the four subscales, including Repulsion by Life (MAST-RL), Repulsion by Death (MAST-RD), Attraction to Life (MAST-AL), and Attraction to Death (MAST-AD). Next, differences in the socio-demographic factors were compared by means of the Independent-Samples T-Test. Thirdly, a series of One-way ANOVA were employed to investigate differences between the two countries in overall attitudes towards suicide measured by the four subscales of the MAST scale. Fourthly, a series of One-way ANOVA analyses was conducted to determine which socio-demographics contributed to statistical difference on mean score of each subscale in the whole sample, and then to the

Chinese and Finnish samples respectively. Fifthly, using dummy coding to recode variables such as marital status, family economic status and received social support, then, considering nationality as a fixed factor, General Linear Model Univariate was employed to examine possible socio-demographic covariates. Lastly, continue using General Linear Model Univariate to further explore the interaction effects between socio-demographics (gender, religion, marital status, family economic status, and received social support) and cultural backgrounds on attitudes towards suicide.

5. RESULTS

5.1 Attitudes towards suicide in the two samples

Table 2 presents the means and standard deviation for the four subscales of the MAST for the Chinese and Finnish Master Degree's students separately. Both Chinese and Finnish students had the highest score in the subscale of Attraction to Life (MAST-AL). On the other hand, both Chinese and Finnish students had the lowest score in the subscale of Repulsion to Life (MAST-RL). Consequently, the results show positive attitudes towards life for both samples.

The mean scores of the subscale of Attraction to Death (MAST-AD) and Repulsion by Death (MAST-RD) in the two samples were both around 2.50, based on the average scores of each subscales of the MAST, which is in an average level and implied contradictory attitudes towards suicide in both samples, while Chinese sample had a lower score in both subscales than their Finnish counterparts.

A series of ANOVA analyses were conducted to examine mean group differences in the original four subscales of the MAST score between the Chinese and Finnish samples (see table 2). The ANOVA results showed that a statistically significant difference ($F = 18.45$, $p<.001$) was found in the subscale of Attraction to Life (MAST-AL) between the two cultural groups, which implicated that Chinese students ($M = 4.17$, $SD = 0.52$) were more attracted to life than Finnish students ($M = 3.86$, $SD = 0.51$). The statistically significant group difference ($F = 28.23$, $p<.001$) was also obtained in the subscale of Attraction to Death (MAST-AD), implicating that Chinese students ($M = 2.22$, $SD = 0.53$) were less attracted to death than Finnish students ($M = 2.62$, $SD = 0.55$). On the contrary, no statistically significant group difference was found in the subscale of Repulsion of Life (MAST-RL) and Repulsion of Death (MAST-RD).

In sum, both Chinese and Finnish students held positive attitudes towards life, while they held contradictory attitudes towards suicide. Furthermore, the Finnish and Chinese samples differed from each other regarding to the subscales of Attraction to Life (MAST-AL) and Attraction to

Death (MAST-AD). Students in China were significantly more likely to view life as a positive thing and view death as more negative thing than their counterparts in Finland.

Table 2 Differences in the MAST scores between the Chinese and Finnish students

	Chinese (n = 101)	Finnish (n = 105)		
Item description	M (SD)	M (SD)	F	p
Repulsion by life	1.95 (0.53)	1.93 (0.57)	0.65	.799
Attraction to life	4.17 (0.52)	3.86 (0.51)	18.45	.000***
Repulsion by death	2.39 (0.75)	2.51 (0.92)	1.05	.307
Attraction to death	2.22 (0.53)	2.62 (0.55)	28.23	.000***

Note: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

5.2 The effect of socio-demographic characteristics on attitudes towards suicide in the whole sample

Table 4 shows the results of comparative analyses (a series of ANOVA analyses) on attitudes towards suicide by each level of socio-demographic factors in the whole sample (before separate by country, n = 206). Statistically significant differences in the MAST scale obtained in four socio-demographic factors, including gender, religion, family structure (marital status, and parental marital status), and economic status (family economic status, and source of economic support).

In terms of gender groups, statistically significant group differences (F = 4.05, p = .045) were found only in the subscale of Repulsion by Life (MAST-RL), implying that male students were more likely repulse by life than their female counterparts.

In terms of religion groups, statistically significant group differences obtained in the subscale of Repulsion by Life (MAST-RL) (F = 8.62, p = .004), Attraction to Life (MAST-AL) (F = 9.78, p = .002) and Attraction to Death (MAST-AD) (F = 9.74, p = .002), which implicated that

individuals who had religious beliefs were less likely repulse by life than their counterparts, however, a contradict result existed in the subscale of Attraction to Life and Attraction to Death, showing that individuals who had religious beliefs were more likely to attract to life and death at the same time.

In terms of family structure groups, on one hand, statistically significant differences in marital status group were reported in both the subscales of Attraction to Life (MAST-AL) ($F = 6.10$, $p = .001$) and Repulsion by Death (MAST-AD) ($F = 3.05$, $p = .030$), indicating that students who were cohabitated was the most security group and had the most strong willing to life, followed by who were in relationships, who were married and who were single; On the other hand, statistically significant differences in group of parental marital status existed only in the subscale of Attraction to Life (MAST-AL) ($F = 4.62$, $p = .033$), which reflected that students from a broken family were more likely to attract to life and distance from suicidal behavior.

In terms of economic status groups, on one hand, statistically significant differences in family economic status groups found in both the subscales of Attraction to Life (MAST-AL) ($F = 5.49$, $p = .005$) and Repulsion by Life (MAST-RL) ($F = 3.04$, $p = .050$), implying individuals from wealth families were more likely to love life and less likely give rise to a motivation of self-destructive behavior; on the other hand, statistically significant differences in source of economic support group obtained in the subscale of Attraction to Life (MAST-AL) ($F = 4.62$, $p = .033$), implicating that individuals who supported by their parents were less likely to feeling of security and tend to have negative attitudes towards life.

Table 3 Differences in the MAST scores with regard to socio-demographics in the whole sample (n = 206)

Socio-demographic variables			RL	AL	RD	AD
			M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Gender	Male		2.03 (0.59)	3.96 (0.57)	2.37 (0.84)	2.38 (0.61)
	Female		1.87 (0.51)	4-06 (0.50)	2.51 (0.84)	2.45 (0.55)
		F	4.05*	1.66	1.48	0.60
Religion	Yes		1.72 (0.46)	4.24 (0.49)	2.56 (1.01)	2.66 (0.55)
	No		1.99 (0.56)	3.96 (0.53)	2.42 (0.79)	2.36 (0.57)
		F	8.62**	9.78**	0.85	9.74**
Major	Social Science		1.94 (0.53)	4.03 (0.53)	2.38 (0.79)	2.59 (0.59)
	Science		1.93 (0.57)	4.00 (0.50)	2.54 (0.89)	2.46 (0.55)
		F	0.03	0.14	1.86	0.69
Family Structure:						
Marital status	Single		1.99 (0.58)	3.87 (0.55)	2.39 (0.81)	2.43 (0.56)
	In a relationship		1.97 (0.59)	4.14 (0.50)	2.48 (0.86)	2.43 (0.64)
	Cohabited		1.79 (0.58)	4.25 (0.39)	2.81 (0.87)	2.50 (0.45)
	Married		1.89 (0.41)	4.02 (0.53)	1.98 (0.70)	2.10 (0.58)
		F	2.33	6.10**	3.05*	1.32
Single Child	Yes		1.89 (0.57)	3.97 (0.46)	2.53 (0.80)	2.38(0.62)
	No		1.95 (0.55)	4.04 (0.55)	2.42 (0.85)	2.43 (0.56)
		F	0.55	0.64	0.65	0.38
Single Parents	Yes		2.30 (0.77)	3.63 (0.54)	2.33 (0.77)	2.41 (0.57)
	No		1.92 (0.54)	4.03 (0.53)	2.46 (0.84)	2.64 (0.74)
		F	3.76	4.62*	0.17	1.22
Economic Status:						
Family Economic Status	High		1.80 (0.50)	4.21 (0.50)	2.55 (0.77)	2.55 (0.66)
	Average		1.94 (0.55)	4.00 (0.51)	2.44 (0.86)	2.40 (0.54)
	Low		2.18 (0.62)	3.75 (0.65)	2.29 (0.87)	2.31 (0.61)
		F	3.04*	5.49**	0.64	1.43
Job(Full Time or Part Time)	Yes		1.97 (0.57)	4.04 (0.52)	2.44 (0.85)	2.49 (0.59)
	No		1.91 (0.54)	3.99 (0.54)	2.46 (0.84)	2.36 (0.56)
		F	0.63	0.36	0.04	2.69
Source of Economic Support	Myself		1.96 (0.57)	4.09 (0.53)	2.49 (0.88)	2.48 (0.59)
	Parents		1.91 (0.53)	3.93 (0.53)	2.41 (0.79)	2.35 (0.56)
		F	0.40	4.62*	0.45	2.46
Received Social Support	Satisfactory		1.84 (0.60)	4.01 (0.47)	2.58 (0.70)	2.38 (0.55)
	Average		1.96 (0.53)	3.97 (0.56)	2.40 (0.87)	2.43 (0.56)
	Unsatisfactory		1.97 (0.62)	4.10 (0.49)	2.50 (0.88)	2.45 (0.65)
		F	0.76	1.53	0.69	0.14

Note: RL = Repulsion by death; AL = Attraction to life; AD = Attraction to death; RD = Repulsion by life.

*p <0.05, **p<0.01, ***p<0.001.

5.3 The effect of socio-demographic characteristics on attitudes towards suicide in the Chinese sample

Table 4 shows the results of comparative analyses (a series of ANOVA analyses) on attitudes towards suicide by each level of socio-demographic factors in Chinese Master's Degree students. Statistically significant differences in the MAST scale were found in four socio-demographic variables, including religion, family structure (marital status, and parental marital status), and economic status (family economic status).

Statistically significant differences in religion groups ($F = 3.89$, $p = .050$) obtained only in the subscale of Repulsion by Death (MAST-RD), implicating that Master Degree's students who had religious faith were less likely to perceive death as a frightening and undesirable state and suicide as an unforgivable behavior than their counterparts in China; Statistically significant differences in marital status groups ($F = 3.70$, $p = .014$) showed in the subscale of Repulsion by Life (MAST-RL), indicating Chinese Master's Degree students who got married were less likely to believe problems are irresolvable and motivate self-destruction behaviors, followed by those who were in a relationship, those who were single, and those who were cohabited. Meanwhile, significant differences in marital status groups ($F = 5.04$, $p = .003$) also existed in the subscale of Attraction to Life (MAST-AL) with the same rank in the subscale of Repulsion by Life (MAST-RL), reflecting that Chinese students who were married were more likely to feel security from family, friends and lovers and distance from self-destruction behaviors; Statistically significant differences in parental marital status groups ($F = 8.64$, $p = .004$) found only in Attraction to Life (MAST-AL), reflecting that Master's Degree students from a single family in China were more likely to feel security with regard to interpersonal relationship and loss their self-esteem than their counterparts; statistically significant differences in family economic status groups ($F = 6.32$, $p = .003$) were reported in the subscale of Attraction to Life (MAST-AL), implying Chinese Masters Degree's students from wealth families were more likely to fulfill their self-esteem and prevent self-destruction behavior compared to those from average families and poor families.

Table 4 Differences in the MAST scores with regard to socio-demographics in the Chinese sample (n = 101)

Socio-demographic variables			RL	AL	RD	AD
			M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Gender	Male		2.02 (0.60)	4.10 (0.56)	2.48 (0.88)	2.12 (0.51)
	Female		1.89 (0.47)	4.22 (0.42)	2.31 (0.63)	2.29 (0.54)
		F	1.67	1.01	1.28	2.60
Religion	Yes		1.95 (0.64)	4.29 (0.46)	1.56 (0.23)	2.05 (0.64)
	No		1.95 (0.53)	4.09 (0.53)	2.42 (0.75)	2.22 (0.53)
		F	0.00	3.81	3.89*	0.32
Major	Social Science		1.97 (0.51)	4.17 (0.49)	2.31 (0.81)	2.24 (0.50)
	Science		1.93 (0.55)	4.16 (0.54)	2.45 (0.70)	2.20 (0.56)
		F	0.10	0.02	0.76	0.16
Family Structure:						
Marital status	Single		2.06 (0.54)	3.76 (0.52)	2.43 (0.83)	2.29 (0.52)
	In a relationship		1.74(0.43)	4.08 (0.39)	2.35 (0.62)	2.10(0.54)
	Cohabited		2.43	3.00	2.00	2.71
	Married		1.62 (0.58)	4.10 (0.30)	2.00 (0.67)	2.00 (0.57)
		F	3.70**	5.04**	0.45	1.40
Single Child	Yes		1.85 (0.56)	4.16 (0.53)	2.56 (0.78)	2.28 (0.62)
	No		2.01 (0.50)	4.20 (0.35)	2.27 (0.72)	2.18 (0.46)
		F	2.22	0.05	3.58	0.86
Single Parents	Yes		2.17 (0.73)	3.15 (1.01)	2.44 (0.87)	2.40 (0.67)
	No		1.93 (0.52)	3.89 (0.52)	2.38 (0.75)	2.21 (0.52)
		F	1.01	8.64**	0.03	0.78
Economic Status:						
Family Economic Status	High		1.77 (0.48)	4.26 (0.53)	2.22 (0.57)	2.41 (0.61)
	Average		1.96 (0.54)	4.20 (0.46)	2.40 (0.77)	2.24 (0.51)
	Low		1.99 (0.56)	3.62 (0.55)	2.43 (0.82)	1.87 (0.52)
		F	0.49	6.32**	0.22	2.57
Job(Full Time or Part Time)	Yes		1.96 (0.53)	4.15 (0.53)	2.33 (0.72)	2.25 (0.52)
	No		1.94 (0.54)	4.19 (0.50)	2.43 (0.78)	2.20 (0.54)
		F	0.02	0.15	0.43	0.28
Source of Economic Support	Myself		1.95 (0.58)	3.90 (0.55)	2.35 (0.73)	2.19 (0.53)
	Parents		1.94 (0.51)	3.84 (0.48)	2.41 (0.77)	2.24 (0.53)
		F	0.01	0.31	0.14	0.20
Received Social Support	Satisfactory		1.78 (0.51)	4.22 (0.71)	2.58 (0.71)	2.27 (0.55)
	Average		2.00 (0.52)	4.15 (0.53)	2.31 (0.76)	2.21 (0.52)
	Unsatisfactory		2.16 (0.60)	4.18 (0.43)	2.35 (0.82)	2.07 (0.63)
		F	2.48	0.08	1.31	0.43

Note: RL = Repulsion by death; AL = Attraction to life; AD = Attraction to death; RD = Repulsion by life. *p <0.05, **p<0.01, ***p<0.001.

5.4 The effect of socio-demographic characteristics on attitudes towards suicide in the Finnish sample

Table 5 presents the results of comparative analyses (a series of ANOVA analyses) on attitudes towards suicide by each level of socio-demographic characteristics in Finnish Master's Degree students. Statistically significant differences of suicide attitudes existed on some socio-demographics, such as gender, religion, major, family structure (marital status and parental marital status), economic status (family economic status), and received social support.

Among the Finnish sample, statistical differences in gender groups (F = 6.03, p = .014) and major groups (F = 6.08, p = .015) were both only displayed in the subscale of Repulsion by Death (MAST-RD), which implicated that females and who majored in social science were more likely to fear death; statistically significant differences in religion groups (F = 10.735, p < .001), parental marital status groups (F = 4.00, p = .048) and family economic status groups (F = 3.68, p = .029) were only showed in the subscale of Repulsion by Life (MAST-RL), which indicated that students who had no religious beliefs from broken middle-class families were more likely to experience pain and stress; statistically significant differences in received social support groups (F = 3.51, p = .034) were reported in the subscale of Attraction to Life (MAST-AL), which reflected that students who received satisfactory social support were more likely to satisfy their life compared to who received unsatisfactory social and average social support; statistically significant differences in marital status groups (F = 2.85, p = .041) were found in Repulsion by Death (MAST-RD), which evidenced that students who were cohabited were more likely to fear death than those in a relationship, single and married. Meanwhile, significant differences (F = 3.62, p = .016) were also found in the subscale of Attraction to Death (MAST-AD), which implied students who were married were less likely to believe that death is a superior way of being than life, followed by those were cohabited, single and in a relationship.

Table 5 Differences in the MAST scores with regard to socio-demographics in the Finnish sample (n = 105)

Socio-demographic variables			RL	AL	RD	AD
			M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Gender	Male		2.03 (0.59)	3.83 (0.56)	2.24 (0.80)	2.67 (0.58)
	Female		1.86 (0.55)	3.89 (0.46)	2.68 (0.95)	2.58 (0.53)
		F	2.31	0.30	6.03*	0.65
Religion	Yes		1.70 (0.45)	3.57 (0.43)	2.63 (1.00)	2.71 (0.52)
	No		2.06 (0.59)	3.87 (0.51)	2.44 (0.86)	2.56 (0.56)
		F	10.74***	1.04	1.16	1.81
Major	Social Science		1.93 (0.55)	3.81 (0.51)	2.74 (0.91)	2.65 (0.52)
	Science		1.93 (0.60)	3.90 (0.50)	2.30 (0.88)	2.59 (0.57)
		F	0.00	0.80	6.08*	0.37
Family Structure:						
Marital status	Single		1.99 (0.58)	4.07 (0.54)	2.31 (0.78)	2.67 (0.54)
	In a relationship		1.97 (0.59)	4.19 (0.58)	2.60 (1.04)	2.76 (0.55)
	Cohabited		1.79 (0.58)	4.30 (0.30)	2.84 (0.87)	2.49 (0.46)
	Married		1.89 (0.41)	4.09 (0.61)	1.97 (0.75)	2.14 (0.62)
		F	0.76	1.08	2.85*	3.62*
Single Child	Yes		1.92 (0.57)	3.91 (0.46)	2.52 (0.92)	2.60 (0.56)
	No		2.03 (0.58)	3.83 (0.53)	2.43 (0.92)	2.81 (0.41)
		F	0.36	0.67	0.80	1.41
Single Parents	Yes		2.72 (1.01)	3.79 (0.30)	2.00 (0.16)	3.36 (0.50)
	No		1.91 (0.56)	3.89 (0.52)	2.52 (0.92)	2.60 (0.54)
		F	4.00*	0.14	0.63	3.79
Economic Status:						
Family Economic Status	High		1.81 (0.51)	4.04 (0.34)	2.63 (0.80)	2.58 (0.67)
	Average		1.92 (0.57)	3.85 (0.49)	2.50 (0.96)	2.62 (0.51)
	Low		1.38 (0.65)	3.87 (0.75)	2.15 (0.95)	2.75 (0.33)
		F	3.68**	0.51	1.01	0.32
Job(Full Time or Part Time)	Yes		1.97 (0.59)	3.86 (0.53)	2.51 (0.91)	2.63 (0.58)
	No		1.85 (0.54)	3.86 (0.49)	2.51 (0.93)	2.61 (0.50)
		F	1.11	0.00	0.00	0.08
Source of Economic Support	Myself		1.95 (0.59)	4.17 (0.50)	2.54 (0.93)	2.60 (0.56)
	Parents		1.81 (0.59)	4.16 (0.58)	2.39 (0.87)	2.66 (0.50)
		F	1.19	0.01	0.50	0.19
Received Social Support	Satisfactory		2.03 (0.69)	4.06 (0.38)	2.54 (0.72)	2.76 (0.30)
	Average		1.92 (0.54)	3.76 (0.52)	2.49 (0.96)	2.63 (0.53)
	Unsatisfactory		1.92 (0.62)	3.80 (0.64)	2.54 (0.90)	2.54 (0.63)
		F	0.17	3.51**	0.04	0.61

Note: RL = Repulsion by death; AL = Attraction to life; AD = Attraction to death; RD = Repulsion by life. *p <0.05, **p<0.01, ***p<0.001.

5.5 The effect of socio-demographic characteristics on attitudes towards suicide after controlling the country of origin

In order to address hypothesis 2, the context-free effect of socio-demographic characteristics in terms of gender, religion, major, family structure (marital status, number of children in the primary family, and parental marital status), economic status (family economic status, employment, and source of economic support), and received social support in the four MAST subscales was investigated in the whole data after controlling for the effect of country in the dependent on the MAST subscales. General Linear Model Univariate was employed here, with the country being included into the model as a fixed factor and socio-demographic characteristics as covariates.

As table 6 indicates, statistically significant difference was only found in the subscale of Attraction to Death (MAST-AD): Finnish students were more likely to attract to death and view suicide less negative than their Chinese counterparts (M = 2.62, SD = 0.55, compared to M = 2.22, SD = 0.53) after controlling for the effect of socio-demographic factors. Because of the covariant effect of social-demographic characteristics on attitudes towards suicide, the group differences in the subscale of Attraction to Life (MAST-AL) were less compared to the results of table 2.

In terms of the effect of social-demographic characteristics in the MAST-scores in two samples, religion, family structure, economic status and received social support were significant predictors. Regarding to religion, statistically significant effect existed only in the subscale of Repulsion by Life (MAST-RL), which implied that individual who had a religion belief was less likely repulse by life (M = 1.72, SD = 0.46, compared to M = 1.99, SD = 0.56). Regarding to family structure, on one hand, significant differences from marital status groups were found both in the subscale of Repulsion by Death (MAST-RD) and Attraction to Death (MAST-AD),

Table 6 Differences in the MAST scores with regard to socio-demographic Characteristics between the Chinese and Finnish students

Socio-demographic variables		RL	AL	RD	AD
Country	*F*	2.14	3.26	0.06	27.68
	p	.146	.073	.813	.000***
Gender	*F*	1.31	0.07	0.34	0.13
	p	.254	.386	.563	.716
Religion	*F*	10.82	3.28	0.48	1.12
	p	.001**	.072	.490	.291
Major	*F*	0.09	0.60	0.88	0.09
	p	.765	.441	.349	.765
Family Structure:					
Marital status					
Single (compared to married)	*F*	3.27	1.39	1.74	8.74
	p	.072	.240	.189	.004**
In a relationship(compared to married)	*F*	0.60	0.01	2.41	6.61
	p	.439	.905	.122	.011*
Cohabited(compared to married)	*F*	0.04	0.06	6.17	2.51
	p	.838	.815	.014*	.651
Single Child	*F*	1.25	0.86	1.38	1.63
	p	.264	.354	.241	.291
Single Parents	*F*	2.99	2.05	0.00	4.23
	p	.085	.154	.989	.041*
Economic Status:					
Family Economic Status					
High (compared to low)	*F*	2.99	4.53	0.24	0.08
	p	.085	.035*	.635	.783
Average (compared to low)	*F*	0.81	2.10	0.01	0.48
	p	.368	.149	.944	.490
Job(Full Time or Part Time)	*F*	0.88	1.52	0.82	1.10
	p	.348	.219	.366	.295
Source of Economic Support	*F*	0.04	1.28	0.48	0.48
	p	.847	.250	.490	.492
Received Social Support					
Satisfactory (compared to average)	*F*	1.12	4.68	1.63	0.21
	p	.291	.032*	.203	.651
Unsatisfactory (compared to average)	*F*	0.17	0.90	0.21	1.55
	p	.678	.344	.649	.215

Note: RL = Repulsion by death; AL = Attraction to life; AD = Attraction to death; RD = Repulsion by life. *p <0.05, **p<0.01, ***p<0.001.

which evidenced that individuals who were cohabited more likely been repulsed by death (*M* = 2.81, *SD* = 0.87, compared to *M* = 2.40, *SD* = 0.83), whereas individuals who were single (*M* = 2.43, *SD* = 0.56, compared to *M* = 2.42, *SD* = 0.60) or in a relationship (*M* = 2.43, *SD* = 0.64, compared to *M* = 2.42, *SD* = 0.54) more likely had suicidal behavior than who were married. On the other hand, significant difference from parental marital status groups was reported in the subscale of Repulsion by Death (MAST-RD), which showed that individuals who had a single parent was more likely to view suicide as a approval thing (*M* = 2.64, *SD* = 0.74, compared to *M* = 2.42, *SD* = 0.57). Regarding to economic status groups, significant difference obtained in the subscales of Attraction to Life (MAST-AL), which indicated that individuals from wealth families more likely had willing to live than who from poor families (*M* = 4.21, *SD* = 0.50, compared to *M* = 3.97, *SD* = 0.53). Regarding to received social support groups, significant difference was found also in the subscales of Attraction to Life (MAST-AL), which implicated that individuals who received satisfactory social support were more likely to be attracted by life and be rejected by suicidal behaviors than who received average social support (*M* = 4.10, *SD* = 0.47, compared to *M* = 3.99, *SD* = 0.54).

Last but not least, family structure contributed more statistical differences in the MAST scale compared to others social-demographics, which can be regarded an important covariate with country factor to influenced forming attitudes towards suicide among the two samples.

5.6 The country-specific effect of socio-demographic characteristics on attitudes towards suicide

In order to address hypothesis 3, the General Linear Univariate Model and a series of interaction tests were used to further examine whether and how gender, religion, marital status (single compared to married), family economic status and received social support (satisfactory compared to average) had affect attitudes towards suicide in the two cultures. Five separate models were tested for each of the socio-demographic factors.

Table 7 presents the results of the interaction effect in these five models. The effects of religion and marital status were country specific in the subscale of Repulsion by Life (MAST-RL), while no significant relationship was found in the subscale of Repulsion by Death (MAST-RD). In addition, similar results were obtained in the subscale of Attraction to Life (MAST-AL) and the subscale of Attraction to Death (MAST-AD), revealing that all interaction effects were significant and all demographic effects were country specific.

Furthermore, a series of correlation analyses was employed in post-hoc analysis how socio-demographics, including gender, religion, marital status, family economic status and received social support, influence attitudes towards suicide in Finnish and Chinese cultures. The findings can be summarized as follows:

In terms of the subscale of Repulsion by Life (MAST-RL), the scores of Finnish students were negatively associated with religion, while they were not associated with marital status. In contrast, the scores of Chinese students were not associated with religion, whereas they were positively associated with marital status. In other words, the attitudes in the Finnish sample were more religion-dependent whereas in the Chinese sample the attitudes towards repulsion by life were more related to the marital status factor.

In terms of the subscale of Attraction to Life (MAST-AL), the scores of Chinese students were positively associated with marital status and received social support. Although no significantly correlation was found in other socio-demographics, the scores of Finnish students were comparatively more related to gender, religion and family economic status. Accordingly, the attitudes towards attraction to life among Chinese students were more related to marital status and received social support, while Finnish students' attitudes were more related to gender, religion and family economic status.

In terms of the subscale of Attraction to Death (MAST-AD), no significant correlation was obtained because the small size of the sample. However, comparatively, when expressing attitudes towards attraction to death, individuals tended to be more influenced by gender,

marital status and family economic status in China, but more influenced by religion and received social support in Finland.

To summarize, the combined results of the above three subscales, the attitudes of Chinese students towards suicide were more related to gender, marital status, family economic status and received social support, whereas religion more strongly influenced attitudes towards suicide among Finnish students.

Table 7 Differences in the MAST scores with regard to gender, religion, marital status, family economic status and received social support between the Chinese and Finnish students

Socio-demographic variables		RL	AL	RD	AD
Country	*F*	0.02	17.89	0.92	27.73
	p	.885	.000***	.339	.000***
Gender	*F*	3.99	1.22	1.35	0.28
	p	.047*	.272	.248	.598
Gender X Country	*F*	2.03	9.84	1.20	14.21
	p	.134	.000***	.304	.000***
Country	*F*	1.18	2.30	0.49	18.89
	p	.278	.131	.487	.000***
Religion	*F*	9.75	10.63	0.29	1.22
	p	.002**	.001**	.589	.270
Religion X Country	*F*	4.91	10.44	0.67	14.74
	p	.008**	.000***	.514	.000***
Country	*F*	0.22	11.23	0.60	31.31
	p	.639	.001**	.440	.000***
Marital status	*F*	7.02	10.15	0.60	2.85
(single compared to married)	*p*	.009**	.002**	.438	.093
Marital status X Country	*F*	3.54	14.72	0.83	15.67
	p	.031*	.000***	.440	.000***
Country	*F*	0.07	13.43	0.65	25.35
	p	.797	.000***	.423	.000***
Family Economic Status	*F*	2.92	2.40	0.25	0.01
(High compared to low)	*p*	.089	.123	.556	.917
Family Economic Status X Country	*F*	1.49	10.49	0.70	14.05
	p	.277	.000***	.499	.000***
Country	*F*	0.37	23.26	1.78	28.83
	p	.543	.000***	.183	.000***
Received Social Support	*F*	1.82	5.63	1.66	0.90
(Satisfactory compared to average)	*p*	.179	.019*	.198	.346
Received Social Support X Country	*F*	0.94	12.25	1.34	14.55
	p	.392	.000***	.259	.000***

Note: RL = Repulsion by death; AL = Attraction to life; AD = Attraction to death; RD = Repulsion by life.

*p <0.05, **p<0.01, ***p<0.001.

Table 8 Correlation analyses between the MAST scores and significant interaction effect items in the two cultures

Socio-demographic variables		Chinese (n=101)				Finnish (n =106)			
		RL	AL	RD	AD	RL	AL	RD	AD
Gender	r	-	-.055	-	-.160	-	-.098	-	.079
	p	-	.585	-	.110	-	.318	-	.420
Religion	r	.002	-.102	-	-.057	-.307	.189	-	.131
	p	.981	.310	-	.574	.001**	.054	-	.182
Marital status	r	.291	-.300	-	.165	.085	-.141	-	.073
(single compared to married)	p	.003**	.002**	-	.099	.387	.153	-	.459
Family Economic Status	r	-	.101	-	.107	-	.117	-	-.047
(High compared to low)	p	-	.316	-	.285	-	.233	-	.637
Received Social Support	r	-	.258	-	.061	-	.033	-	.080
(Satisfactory compared to average)	p	-	.009**	-	.547	-	.737	-	.418

Note: RL = Repulsion by death; AL = Attraction to life; AD =Attraction to death; RD = Repulsion by life. *p <0.05, **p<0.01, ***p<0.001.

6. DISCUSSION

6.1Interpreting the differences in overall attitudes towards suicide

This study found significant cross-cultural differences in suicide attitudes between the Finnish sample and the Chinese sample. The significant group differences in the MAST scores were obtained in the subscale of Attraction to Life and the subscale of Attraction to Death so that Chinese students were more likely to distantiate death and attract to life. Hence, the most important finding of the present study can be concluded that Master's degree students in China expressed more negative attitudes towards suicide than their Finnish counterparts. Although there is no previous direct comparison on attitudes towards suicide between Chinese sample and Finnish sample, the main difference obtained in this study is similar to those found in prior cross-cultural studies between European countries and Asian countries (e.g. Eskin et al., 1995; Etzerdorfer et al., 1998), suggesting that individuals in European culture hold more acceptable attitudes towards suicide than those from Asian culture. Meanwhile, this finding is consistent with the reports from WHO (2009) showing the higher suicide rates in Finland (18.3 per 100 000 people) than in China (6.6 per 100 000 people).

Despite these differences are in line with earlier studies, the questions remain, why differences exist in Chinese and Finnish students' attitudes towards suicide? What do these differences reflect? There are some general explanations which may take account for.

Firstly, culture beliefs are different in China and Finland, which may affect the way individuals understand the same question. In Asian culture, death would be considered in the context of relationships where family name is an important aspect that affects attitudes towards suicidal behavior, while it would be regarded as an independent act in western culture (Range et al., 1999). Thus, Chinese culture may discourage suicidal behavior and form negative suicide attitudes compared to Finnish culture.

Then, considering a cross-cultural study on suicide attitudes by Dervic, et al. (2006), in which he explained the differences in attitudes by differences in the North American and Central European patterns of socialization, the same differences may also apply to Asian and Northern European patterns and explain some part of the findings in this study.

Thirdly, Lester (1987) had emphasized that 'subculture is an important concept since it sharpens our awareness of what the values and attitudes are that accompanies participation in a particular type of behavior, and it draws our attention to the social shaping of behavior that can take place, facilitating the entry of people into the subculture and maintaining their presence in the subculture after entry'. (p.61). Moreover, attitudes towards suicide reflect social meaning in culture, and suicide occurs in a specific cultural and societal setting restricted by the local legal and cultural practice (Hjelmeland et al, 2008). Therefore, the group difference in suicide attitudes between two cultures in this study may imply the specific ideological and cultural environment in China and Finland that Finnish society more tolerate and accept suicide than Chinese society.

Fourthly, from the socio-economic perspective, although the relationship between poverty or affluence and suicide is by no means simple and direct, but as Durkheim (1952) indicated in his very early work, suicide rates are relatively high among the highest income-groups. On the other hand, the suicide tendency varies with the degree of social cohesion, when social solidarity is strong, less people commit suicide, while social equilibrium is shattered, more people kill themselves (Durkheim, 1952). The relationship between economic stress and high suicide rates can be explained by the weak social cohesion (Dublin, 1963). Finland is a developed country with prosperous economic, while China is a developing country with a collective society. Accordingly, the difference of suicide attitudes can be explained by the differences of economic situation and social solidarity in these two countries. Meanwhile, country wealth and good social welfare system, to a certain degree, hamper individual's ambition and affect his completive and acquisitive attitudes, which may lead to lose the aim of the life, arouse anxiety and depression (Hendin, 1964). Finland as a wealthy county with a good social welfare system, and competition here is not as intensive as in China, and Finns do not

have enthusiasm to pursue money and material goods like Chinese people do (Vihakara, 2006). Hence, lack of ambition and competition contributes to the comparatively acceptable attitudes towards suicide among Finns than their Chinese counterparts.

Fifthly, when it comes to personality, Finns are not talkative, they like quiet, and they are reserved and are constrained in facial and emotional expression (Dutton, 2009). But they like freedom and protect own privacy, and easily accept new things and ideas, the concepts of family and marriage in Finland are not as important as in China. However, Chinese people are used to living in busy areas; they like get together and share their lives. They are traditional, and suppressive with respect to others' feelings. Great importance is placed on the family and marriage, individual's unfavorably acts or behaviors (e.g. suicide) influence themselves and considered as also reflecting unfavorably and shameful on the whole family (Lester, 1987). Therefore, the differences in personality one way or another give rise to Chinese students' negative attitudes towards suicide and Finnish students' positive attitudes towards suicide.

Sixthly, from the education perspective, the unique stress of academic life and the normative culture of the university are responsible for students' suicidal thought and behavior (Haas, Hedin & Mann, 2003). Especially during the Master's degree phase, academic pressure and competition become more intensive, and the risk of suicide consequently increases. Different educational systems were employed in two countries during the Master's degree phase. Finnish universities implement the police that wide-in and strict-out, on the contrary, admission to Chinese universities is exceptionally competitive, but academic pressure is comparatively less, and graduation from Chinese universities is easier than from Finnish universities. Finnish Master's degree students need to invest much energy in studies after they attended in the universities and they may experience more frustration from academic performance, so they are prone to express more negative attitudes towards future even towards life, which may increase the risk of suicide.

Last but not least, from the physical environment perspective, climate and temperature influenced the suicide rates (e.g. Marttunen, 1994: Valtonen, 2007; Ruuhela et al., 2009).

Finland is located in the North hemisphere bipolar at high latitudes, and Finnish people tend to suffer Bipolar disorder which is a lifelong and severe mood disorder associated to suicidal behaviors (Valtonen, 2007). Furthermore, although Helsinki is a capital of Finland, the entertainment life for youth is less compare to Cha Shang in China, and this may cause negative attitudes towards life. Paradoxically, the larger the city, the higher the suicide rate: Dublin (1963) explained suicides by large number of people crowded into highly organized communities, in other words, the stress of urbanization. Cha Shang as a medium-sized city in China and it is much bigger and more crowded than Helsinki in Finland. Citizens in Cha Shang are thus supposed to express more negative attitudes towards life, but the finding of this study is reverse. This partly evidences that not just a single factor can form individual's attitudes towards suicide. Indeed, this study wishes to provide possible explanations for the findings, but the premise of those explanations are all in part based on the reasonable but unproven assumption, and all possible factors have an interaction effect on suicide attitudes.

6.2 Interpreting the effect of socio-demographic characteristics on attitudes towards suicide in the two cultures

Durkheim (1952) used social categories to explain the variation in suicide rates from country to country. Rising suicide rates were considered to indicate improper social integration due to the failure of the family, church, and state. Accordingly, this study also investigated socio-demographic information on the responding students in order to further explore possible differences in attitudes towards suicide in the Finnish and Chinese cultures. Six socio-demographic factors, including gender, religion, major, family structure (e.g. marital status, number of children in the primary family, and parental marital status), economic status (family economic status, employment, and source of economic support), and received social support were examined.

To begin with, statistically significant differences in the MAST scores were obtained for four socio-demographic factors among the whole sample, including gender, religion, family structure (marital status, and parental marital status), and economic status (family economic status, and source of economic support). Accordingly, these four socio-demographic characteristics, in one way or another, influence the attitudes towards suicide. This finding is in agreement with previous studies (e.g. Qian, 2004), but inconsistent with the study by Wang & Lu (2001). Differences on the sampling process and statistical methods may account for this discrepancy.

In addition, the effects of socio-demographic factors were separately examined in the Chinese and Finnish samples. On one hand, statistically significant differences in the MAST scale were found among the Chinese Master's degree students for three socio-demographic variables: religion, family structure (marital status, and parental marital status), and economic status (family economic status). This finding lends support to the preliminary findings of Wang & Lu (2001), Qian (2004), and Zhou et al. (2007). On the other hand, statistically significant differences in attitudes towards suicide existed among the Finnish Master's degree students in relation to all socio-demographic variables, including gender, religion, major, family structure (marital status and parental marital status), economic status (family economic status), and received social support. However, no comparable studies concerning attitudes towards suicide in Finland have previously been conducted.

Apparently, socio-demographic variables more strongly affected the attitudes towards suicide in the Finnish sample than in the Chinese sample, but direct comparison of the findings from the two samples above is not an appropriate way to examine the essential differences between the two cultures. Therefore, a mixed model combining socio-demographic characteristics and ethnic backgrounds needs to be developed.

Initially, a general Linear Model Univariate was employed, with the country being included in the model as a fixed factor and socio-demographic characteristics as covariates. A significant group difference was only found in the subscale of Attraction to Death (MAST-AD); when

controlling for the effect of socio-demographic variables, the group differences in the subscale of Attraction to Life (MAST-AL) disappeared when compared to the results presented in Table 2. At the same time, four socio-demographic variables namely religion, family structure, economic status and received social support, affected the group differences in all four subscales. Family structure was found to be one of the most influential factors, especially for the subscale Attraction to Death (MAST-AD). This finding emphasized the important role of the family structure factor in attitudes towards suicide. Very few studies on attitudes towards suicide have considered socio-demographic characteristics as covariates. So far, only one study by Qian (2004) included socio-demographic characteristics into a statistical model, and the effect of family structure on attitudes towards suicide was consistent with this study.

Next, five sample models were developed in order to examine interaction effect (socio-demographic characteristics and cultural background) on attitudes towards suicide. Because no significant group differences were obtained on the level of the major factor in previous analyses, the major variables were deleted in later statistical analysis. The group differences were mainly found in the subscales of Attraction to Death (MAST-AD) and Attraction to Life (MAST-AL), and all demographic effects were country specific. More specifically, when individuals expressed their attitudes towards suicide, gender, marital status, family economic status and received social support had a stronger effected in the Chinese sample, whereas the attitudes of the Finnish sample were more influenced by religion.

The results of the above series of analyses suggest that socio-demographics are not simply related to attitudes towards suicide, as interaction effects between socio-demographics and cultural background had a greater influence on attitudes towards suicide in this cross-cultural comparison study. Consequently, we need to focus on the interaction effects on attitudes towards suicide when we interpret the findings.

Nevertheless, two questions arose from the findings. Firstly, why did religion have a greater effect on attitudes towards suicide in the Finnish sample compare to the Chinese sample? Secondly, why did gender, marital status, family economic status and received social support

more strongly influence attitudes towards suicide in the Chinese sample compare to the Finnish sample?

In terms of gender, suicide may be considered a masculine type of behavior, as it is a more frequent outcome among males than females (Lester, 1987), particularly at a younger age. However, societal stereotypes and expectations concerning gender differences influence suicidal behavior so that attempted suicide is seen as a 'weak' or 'feminine' behavior (Lester, 1987). Due to the social position of women, or the emotional differences between the two genders, or the interrelationship of both, the two genders do not share social life equally (Durkheim. 1952). Male social roles require them to face unbearable problems more frequently in daily life, and increase the chances of failure at the same time. Females, in contrast to males, are most likely to signal for help by threatening or attempting suicide (Hatton, 1984), while males are not able to ask for medical help or any other kinds of help they may need to communicate their anxieties and fear. Moreover, males are more likely to harbor feelings of sexual inadequacy or insecurity about their masculinity, and refuse to admit such feelings because of shame (Hatton, 1984). China is a masculine society, while Finland by contrast is a feminine society (Hofstede, 1998). Therefore, the significant interaction effect between gender and the Chinese sample on attitudes towards suicide can be explained by the characteristics of masculinity.

In terms of family structure, parenting style need to be taken into account. On one hand, stronger parents overvalue performance. They like comparing their children's achievements, their children tend to develop self-hatred if they fail, even worse, causes a develop suicidal behavior or positive attitudes towards suicide as a self-punishment way for failure; On the other hand, some parents encourage children independent, children receive less parental control, although independent makes them less vulnerable for the failure, increase the opportunities to early access sex, alcohol and drugs, which also the incentive for suicidal behavior or acceptable attitude towards suicide. Correspondingly, because of one-child policy in China, most Chinese parents belong to the first type, they are strict with children and with high hopes, and children are also overdependence on their parents; On the contrary, independent self-sufficient child is

highly valued in Scandinavian culture, Finnish parents encourage children take own responsibilities and make own decisions, who are attributed to the second type of parents. Therefore, both parents in two cultures are possible influence their children that shape positive attitudes towards suicide, using parental style to explain the group difference are not appropriate and sufficient here. In addition, early separation from parents is a source of anxiety and resentment (Gutierrez et al., 2000). Children from a single parent family may feel abandoned when they early separate from parents, so they experience more anxiety than their counterparts. In contrast, when individuals grow up to early adulthood, marriage becomes a protective factor distancing from suicidal behavior and its attitudinal biases (e.g. Lloyd &Yip, 2001; Qian, 2004). The suicide rate of the unmarried people increases between 20 and 45 years much more rapidly than after that, and there are more suicides among the single and the divorced than among the married (Durkheim, 1952). As Durkheim (1952) pointed out 'sexual anomy in which they chronically exist, the aggravation they suffer must be most perceptible just when sexual feelings are most aroused'. (p.14). Hence, from childhood to early adulthood, family structure plays an independent role in shaping individuals' attitudes towards suicide. According to the findings, marital status, as a part of family structure factor, was more related to Chinese students' attitudes towards suicide. Although China is keeping progress and open mind to new ideas in many aspects, the tradition culture is still deep seated. As a nation with a long history where the family and marriage concept is of great importance, its concept serves as the basis of individuals' thoughts. However, Finnish people do not attach weight to the family and marriage as much as Chinese people do, people like to choose to cohabit rather than get married in Finland. The culture today seems more accepting of a woman's decision not to get married or have a baby, young college women knew that they can lead their own lives different from their mothers. Moreover, most western societies are liberal in outlook, Finnish people accept casual relationship, and a broken relationship or a rejection may not cause a stronger emotional damage or frustration compared to their counterparts in China. Consequently, marital status is a powerful factor on attitudes towards suicide among the Chinese sample, while the effect on the Finnish sample cannot be identify.

In terms of economic status, the relationship between economic status and suicidal behavior has been evidenced (e.g., Vijayakumar et al., 2005; Mäki & Martikaninen, 2007). Unemployed individuals or those employed in blue-collar occupations, and those with low income were the highest risk group of suicide (Mäki & Martikaninen, 2007). For students, financial concerns had been identified as an important factor that contributed to the suicidal thoughts or attempts in universities (Gtizerrez et al., 2000). Despite those universities' students from wealth families, most of students still need to concern their own living expense. The risk of suicide behavior will be in line with how heavy the financial burden is. Finland is a wealth country and provides many kinds of financial supports for students. Unlike Finland, Chinese students need to pay tuition fee ever year, and most of them depend their own and their parents without any financial support from the government. Thus, Chinese students and their families have more financial burdens than their counterparts in Finland, which may cause the finding that the effect of family economic status on attitudes toward suicide more associated with Chinese students compared to Finnish students.

In terms of received social support, positive attitudes towards suicide are related to unsatisfactory social support (Qian, 2004). Feeling socially isolated or unsupported may increases the depressive symptoms experienced, which were considered to be the common denominators and important precipitating factors or motives of suicide (Gutierrez et al., 2001). China as a collective country, individual needs various relationships to connect outside world and have a foothold in the highly competitive society. Eventually, besides individual's personal capability, those relationships connect to relatives, friends, superiors, and organizations will transfer to stronger support and play independent roles in ones successfully future career. Individuals in China depend much on social support. On the contrary, Finnish society pursues individualism. Individual less likely dependent on others, and personal capability is more important than relationships in working life. Consequently, the influence of received social support attitudes towards suicide is more obvious compared to the Finnish samples.

In terms of religion, religious individuals may deny the freedom to choose between life and death (Eskin, 2004). Suicide rates are high in countries where religious taboos on suicide are

weak (Sakamoto et al, 2006). In other words, if a country has strong religious or moral prohibition against suicide, fewer suicides will happen here, such as Catholic countries (Durkheim, 1952). Moreover, religious beliefs have been evidenced to be natively associated with the tolerance of suicide (Hjelmeland et al., 2008). Religion can have a protective effect against suicide, as it can provide a disapproving set of values of suicide and facilitate an individual's process of social integration (Lester, 1987). Personal religious beliefs and exposure to a religious environment can also protect individuals from suicidal behavior by reducing its acceptability, providing social support, moral prohibitions, specific cognitive beliefs, and a sense of purpose (Range et al., 1999). When religious individuals have certain religious beliefs, religious faith and affiliation, these may influence their habits, thoughts, and actions. Consequently, religious beliefs may, to a certain degree, help individuals to form negative attitudes towards suicide. Specifically, Protestantism is prevalent in Finland, and Buddhism has the most believers in China, while both religions view suicide less as a taboo and include a belief in an after-life. Hence, it is difficult to determine whether the group difference arises from a different religious influence on the respondents in our data. However, China is in many ways a more secular country compared to Finland. Comparatively, religion plays a much larger role in Finland, and religion exerts more influence on personal beliefs; thus, the differences in the number and religious affiliation of believers partly explained why religion had a stronger effect on attitudes towards suicide in the Finnish sample.

6.3 Limitations

This study had several limitations that be taken into account when interpreting its findings.

First of all, as Etzersdorfer, et al. (1998) stated 'research on attitudes involves several methodological difficulties possibly leading to biases, the willingness to answer freely may be particularly reduced in discussing an emotive topic such as suicide'. (p. 107). Indeed, in a study on such a sensitive topic, it is hard to avoid biases from researchers and respondents.

Next, whether people in different cultures understood questions in the same way (Hjelmeland, et al., 2008), and how they defined attitudes towards suicide might influence the results and therefore limit their generalizability.

Another possible limitation of this study derives from the sample. In this study, the samples were selected from just two faculties, one is the Faculty of Social Sciences, another is the Faculty of Biological and Environmental Sciences. Students from those two faculties with such narrow disciplines cannot represent the whole population of Master's degree students. Meanwhile, paper version questionnaires were employed in China, while only e-questionnaires were used among the Finnish sample. This difference may influence the reliabilities of data collecting and final results. For another, due to the small number of the whole sample, no firm conclusions can be made. The samples of this cross-cultural study are not representative of the Finnish and Chinese general populations, but just represent some segments of Master's degree students in Helsinki and Changsha. Thus, the representativeness of the samples limits the generalizabiliting of the findings.

Another, limitation in the methodology of the present study, is that, unlike in the Chinese sample, because of the lack of a valid Finnish version questionnaire, the Finnish sample responded an English language questionnaire, which, to a certain degree, will influence their understandings of the contents. In addition, in order to avoid the overweight of the models, five separate models were used to examine the interaction effect of socio-demographics factors and country of residence in MAST-scores. This lowered the reliability of the results and also put a limitation on the generalizability of the findings.

Most importantly, no single cause or motive can adequately account for suicide. Hence, as a complicated pheromone, suicide cannot be completely explained or predicted by attitudes towards suicide. More factors should be considered, including biological environment, interpersonal relationships, psychic and mental health condition.

Despite these limitations, the knowledge gained from this cross-cultural comparison study offers valuable insights into what may be contributing to the differentials attitudes towards suicide among Chinese and Finnish students.

6.4 Practical implication

6.4.1 Implications for suicide prevention

Suicide prevention programs started in the United States, the tough beginning reflected people's negative attitudes towards any suicidal behavior during the early years. Up until the late 1950s, the prevailing attitudes of society tempered by the realization that individuals had the right to take their own lives, and society had a responsibility to create a dignity place for everyone willing to live. (Hatton, 1984.)

Some Western developed countries have already had national suicide prevention programs for a long time, while just 'exporting ' these plans are not properly for developing countries due to large differences in both risk and protective factors associated with suicidal behavior between developed and developing countries (Vijayakumar, et al., 2004; Hjelmeland, et al., 2008). The findings of the present study emphasize the need for acknowledgement of culture-sensitive and culture-specific factors in suicide prevention. For example, this study showed that gender, marital status, family economic status and received social support had more influence on attitudes towards suicide in China, while religion affected more in Finland. Accordingly, suicide prevention should consider these factors when developing suitable programs for different target groups and cultures. Thus, in order to develop and implement a suicide prevention program, one should consider these findings and set priorities accordingly.

A Master's thesis study on students' attitudes towards suicide cannot definitively resolve the question of suicide prevention and intervention, but it can provide a picture of how these young

people understand and think about suicide, and it also can give us some necessary guidelines for future suicide prevention programs.

Nowadays, high suicide rates among young people can be partly explained by their more tolerance of suicide and less fear of its consequences (Zemaitiene & Zaborski, 2005). Positive or acceptable attitudes towards suicide were often prior to the suicidal behavior. This offers possibilities for prevention, providing warning signs of suicidal potential. Therefore, in planning suicide prevention, it is necessary to know how individuals think about life and death (Sakamoto et al, 2006). The personal attitude will not only determine their own behavior and also may influence others' behavior. Similarly, the different social attitude will influence social behavior or individual behavior differently. Master's degree students' attitudes towards suicide are not single and isolated, but complex and changing. In order to build a suicide prevention program for university students and promoting their mental health education, many aspects, need to be considered, such as the role of society, schools, and families, in shaping suicidal attitudes and behaviors among youngsters.

6.4.2 Implication for further research

Attitudes towards suicide and cross-cultural differences in these cannot be adequately understood by questionnaires only. In order to properly define and understand differences in attitudes towards suicide in two cultures, later work should combine quantitative and qualitative research methods and to investigate the social, historical and politics contexts.

In addition, the relationship between socio-demographics and suicide attitudes at a national level is complex, and warrants further exploration. The results of the present study just represent the relationships between some socio-demographics (e.g. gender, religion, family structure, economic status, received social support), others factors such as age, and occupation remain uncertain.

The current study warrants a number of cautions about overgeneralizing the results. Challenges for future studies well are how to generalize from current findings to more diverse non-student populations. Therefore, further research is needed to expand more populations, and to focus on different occupations and ages.

7. CONCLUSION

The aim of the study was to compare the attitudes towards suicide among Chinese and Finnish Master's degree students, to examine the effect of socio-demographic characteristics on attitudes towards suicide in the two samples, and to explore whether there effects are culture-specific.

Based on the results provided by the current study, it could be concluded that both Chinese and Finnish students held positive attitudes towards life, whereas they expressed contradictory attitudes towards suicide. Compared to Chinese students, Finnish student held more agreeable and acceptable attitudes towards suicide. Four socio-demographic variables, including gender, religion, family structure (marital status, and parental marital status), and economic status (family economic status, and source of economic support) were found to have a significant relationship with attitudes towards suicide among the whole sample. Furthermore, after examining the effect of socio-demographics on attitudes towards suicide in the Chinese sample and Finnish sample separately, the results indicated that all socio-demographic characteristics, including gender, religion, major subject, family structure, economic status, and received social support were related to attitudes towards suicide among the Finnish students, while for Chinese students there were three related socio-demographics: religion, family structure, and economic status. In contrast, after considering the interaction effects between socio-demographics and cultural backgrounds on attitudes towards suicide, the attitudes of Chinese students were more related to gender, marital status, family economic status and received social support, whereas Finnish students were more influenced by religion.

These findings suggest that culture plays an important role in shaping country-specific differences in attitudes towards suicide and their association with socio-demographic characteristics. Therefore, the future suicide prevention programs need to take culture-sensitive and culture-specific factors into account and set priorities accordingly.

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APPENDIX I: The Multi-Attitude Suicide Tendency Scale (English version)

Thank you very much for your participation in this survey.
Please note that this survey will be only used for psychological research. Your thoughts and answers will be of great help to our research. Hope you could fill out every item as regarded. There is no Right or Wrong answers here. The form will be collected for academic research after filled out completely. Therefore, others will not see your completed questionnaire.
Thank you for your cooperation!

Personal Information:

Gender：□ Male □ Female Specialty：□ Arts □ Science □ Others_______(Which)
Age： ____________ Religion：□ Yes__________(Which) □ No
Marital Status：□ Single □ In a relationship □ Cohabited □ Married
Single Child：□ Yes □ No Family Economic Status：□ Good □ Average □ Bad
Single Parent：□ Yes □ No Received Social Supports：□ Good □ Fair □ Bad
Do you have a job（full-time or part-time）now? □ Yes □ No
Who support your Study and Living expense? (you can choose more than one item）：
□ Yourself □ Family □ Scholarship or other funds
Health condition：□ Good □ Average □ Bad

Multi-Attitude Suicide Tendency Scale

Each question is divided into five levels, numbers 1-5 represent from strongly disagree to strongly agree respectively for you to choose (1 represents strongly disagree, 2 represents disagree, 3 represents neutral, 4 represents agree, 5 represents strongly agree).
Please circle the answer that represents you most.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Most of the time I feel Happy.	1	2	3	4	5
2. Life seems to be one long and difficult struggle.	1	2	3	4	5
3. I fear the idea that there is no return from death.	1	2	3	4	5
4. I fear death because all my mental and spiritual	1	2	3	4	5
activity will stop.	1	2	3	4	5
5. Even though things may be tough at times, I think	1	2	3	4	5
it's worth living.	1	2	3	4	5
6. I feel that close people make me feel good.	1	2	3	4	5
7. I fear death because my identity will disappear.	1	2	3	4	5
8. I know people who have died and I believe that	1	2	3	4	5
I will meet them when I die.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9. I don't ask for help even when things are very	1	2	3	4	5
tough for me.	1	2	3	4	5
10. Thinking about death gives me the shivers.	1	2	3	4	5
11. I am afraid of death because my body will rot.	1	2	3	4	5
12. I fear death because it means that I will not be able	1	2	3	4	5
to experience and think anymore.	1	2	3	4	5
13. I can see myself as being very successful in the	1	2	3	4	5
future.	1	2	3	4	5
14. I feel that I am not important to my family.	1	2	3	4	5
15. Sometimes I feel that my family will be better	1	2	3	4	5
off without me.	1	2	3	4	5
16. Sometimes I feel that my problems can't be solved.	1	2	3	4	5
17. Death can change things for the better.	1	2	3	4	5
18. I like to do many things.	1	2	3	4	5
19. Death is actually eternal life.	1	2	3	4	5
20. The thought that one day I will die frightens me.	1	2	3	4	5
21. I don't like to spend time with my family.	1	2	3	4	5
22. Many problems can be solved by death only.	1	2	3	4	5
23.I believe that death can bring a great relief for	1	2	3	4	5
suffering.	1	2	3	4	5
24.I fear death because all my plans will come to an	1	2	3	4	5
end.	1	2	3	4	5
25. I am very hopeful.	1	2	3	4	5
26. In some situation it is better to die than go on living.	1	2	3	4	5
27. Death can be a state of rest and calm.	1	2	3	4	5
28. I enjoy many things in life.	1	2	3	4	5
29. Death frightens me more than anything else.	1	2	3	4	5
30. No one really loves me.	1	2	3	4	5

APPENDIX II: The Multi-Attitude Suicide Tendency Scale (Chinese version)

亲爱的同学:

您好!

感谢您在百忙之中抽出时间来完成这份调查问卷!

本次调查仅供心理学研究使用，您真实想法和实际情况将为我们的研究提供很大帮助。望您能按照要求，如实地填写每一项。本问卷的答案没有对错、好坏之分，填完后，我们将收回作为学术研究之用。因此，除了研究者以外，其他人都不会看到您填的问卷。谢谢您的合作!

基本资料：

性别：口男　口女　　年龄：____________

宗教信仰：口有__________(哪一种)　口无　　专业：口文科　口理科　口其他_______

婚姻状况：口单身　口恋爱中　口同居　口已婚　　独生子女：口是　口否

家庭经济状况：口好　口一般　口差　　单亲家庭：口是　口否

工作（全职或兼职）：口有　口无　　社会支持：口好　口中等　口差

谁负担你的学习与生活开销（可多选）：口自己　口家人　口奖学金或其他资助

健康状况：口好　口一般　口差

Multi-Attitude Suicide Tendency Scale-Chinese Version：

每道题被分为五个等级，数字从 1-5 分别代表您对问题从完全不赞同到完全赞同（1 代表完全不赞同 2 代表不赞同 3 代表中立 4 代表赞同　5 代表完全赞同）。

请圈上您认为最能代表您的答案。

	完全不赞同	不赞同	中立	赞同	完全赞同
1．大部分时间我都感到快乐。	1	2	3	4	5
2．生活有如漫长艰难的挣扎。	1	2	3	4	5
3．我害怕死后没有复活的念头。	1	2	3	4	5
4．我害怕死后我所有精神和灵性上的活动都会终止。	1	2	3	4	5
5．即使事情有时是困难的，我觉得生活仍有价值。	1	2	3	4	5
6．我觉得身边的人令我感到愉快。	1	2	3	4	5
7．我害怕死亡因为身份会消失。	1	2	3	4	5
8．我相信我死后会与去世的朋友相遇。	1	2	3	4	5
9．即使事情对我来说十分艰辛，我也不会寻求帮助。	1	2	3	4	5
10. 当我想及死亡，我会感到震栗。	1	2	3	4	5
11. 我害怕会死亡因为身体会腐坏。	1	2	3	4	5
12．我害怕死亡因为这表示我不能再体验事物和思想。	1	2	3	4	5
13．我预见自己的将来十分成功。	1	2	3	4	5

	完全 不赞同	不赞同	中立	赞同	完全 赞同
14．我觉得我对于我家庭来说并不重要。	1	2	3	4	5
15．我有时觉得家中没有我会好些。	1	2	3	4	5
16．我有时觉得我的问题是无法解决的。	1	2	3	4	5
17．死亡能够将事情变得更好。	1	2	3	4	5
18．我喜欢做很多事情。	1	2	3	4	5
19．死亡才是真正的永生。	1	2	3	4	5
20．当我想到有一天我会死时，我感到害怕。	1	2	3	4	5
21．我不喜欢与家人一起消磨时间。	1	2	3	4	5
22．很多问题只有通过死亡才能解决。	1	2	3	4	5
23．我相信死亡能够解脱很大的痛苦。	1	2	3	4	5
24．因为死后我所有计划都会化为泡影，所以我害怕死亡。	1	2	3	4	5
25．我充满希望。	1	2	3	4	5
26．在某些情况下，死亡比活着更好。	1	2	3	4	5
27．死亡是一个平静及休止的状态。	1	2	3	4	5
28．我享受生命中的很多事情。	1	2	3	4	5
29．死亡比任何事情更能把我吓怕。	1	2	3	4	5
30. 没有人真正爱我。	1	2	3	4	5