

Appraisal of influencing factors model outlook: a case of Chinese college students

Xiaowu Wang*

Education Research Institute, China University of Geosciences, Wuhan, China

Abstract. The negative views on life and frequent suicides among college students are urgent issues to be addressed. Based on grounded theory, the Influencing Factors Model of College Students' Life Views (IFMCSLV) was constructed by open, axial, and selective coding. IFMCSLV revealed that 13 factors at four dimensions could influence college students' views on life. Besides, several appropriate solutions were proposed based on IFMCSLV. We believe this study can provide references for establishing a positive outlook for college students.

1 Introduction

Scholars around the world address the life issues of college students, studying their life satisfaction [1], stressors [2], quality [3], spiritual life [4], stressful life events [5], academic stress [6], and more. Additionally, college students' suicides are studied through empirical research in many pieces of literature, such as college student suicides in the United States [7]. In China, many researchers pay attention to the current situation of college students' view of life [8], connotations [9], problems [10], and more. As shown by the previous studies, academia has begun to place a premium on college students' life issues. The current research is primarily concerned with identifying the situation of college students' life views and searching for a method for reducing the suicides risk.

Ideation is a significant risk factor for future self-harmful behaviour [11]. The life views provide a guideline for adopting life-related behaviours. Nevertheless, the current research lacks a comprehensive understanding of the impacting factors and their interactions on college students' life views. Therefore, it is challenging to systematically cultivate positive views on life among college students and change their life-related behaviours.

This research clarified the composition and interactions of factors influencing college students' views on life by Nvivo11 and finally obtained the Influencing Factors Model of College Students' Life Views (IFMCSLV). It is beneficial to systematically explore feasible measures to cultivate positive life views and change their life behaviours, thus providing a new research reference for suicide prevention among college students. Based on IFMCSLV, some preventive methods to cultivate positive life views and promote mental health protection among college students were recommended.

* Corresponding author: wangxiaowu@cug.edu.cn

2 Research method

Grounded theory is a qualitative research technique used to develop a theory from empirical evidence [12]. Based on the grounded theory, this research adopted the interview method, collected interview data, performed three-level coding, and finally constructed IFMCSLV.

2.1 Research subjects

The research subjects were chosen by purposeful sampling, following the knowledge and experience principles [13]. Additionally, subjects' willingness to participate and ability to communicate articulately was considered. Finally, thirty-two college students (Age from 18-29, gender equality, 14 undergraduates, 14 master students, and 4 PhD students) in Wuhan who had rich life experiences and experienced life harming events were chosen. Table 1 summarizes the interviewees' basic information. Interviews lasted between 15 and 30 minutes and followed a pre-planned interview plan. With the interviewees' permission, the entire interview was recorded.

Table 1. Basic information of interviewees.

Code	Gender ¹	Education ²	Code	Gender	Education	Code	Gender	Education
D1	M	D	M12	M	M	U23	M	U
U2	M	U	U13	F	U	M24	F	M
U3	F	U	U14	F	U	M25	F	M
M4	M	D	U15	F	U	M26	F	M
D5	M	D	U16	F	U	M27	M	M
D6	M	D	U17	F	U	M28	M	M
D7	M	D	U18	M	U	M29	M	M
M8	M	M	M19	F	M	M30	M	M
U9	F	U	M20	F	M	M31	F	M
U10	F	U	U21	M	U	M32	F	M
U11	M	U	U22	F	U			

1: About the gender, “M” refers to “male,” and “F” refers to “female.”

2: About education, “U” refers to “undergraduate,” “M” refers to “master student,” “D” refers to “PhD student.”

2.2 Interview questions

The Social-Ecological Suicide Prevention Model (SESPM) categorized suicide risk factors into four dimensions: individual, relational, community, and societal. Personal characteristics such as health status are in individual dimension. Relational dimension contains direct interactions between individuals, such as family support. Community dimension limits the impact within a specific area, such as schools, workplaces. Societal dimension includes factors that span society, such as policies, laws, social and cultural norms, etc. [14] Using the SESPM as a guide, this study delved deeper into the data collected about these four dimensions throughout the interview process. Additionally, great attention was paid to other information.

3 Data analysis

After transcribing the interview transcripts into text, the original interview data was analyzed in the order of open coding, axial coding, and selective coding by NVivo11. Before coding, two interview transcripts were randomly chosen as the test sample.

3.1 Open coding

Open coding aims to generate initial concepts and discover initial categories. The original interview data were deconstructed, and the most valuable original statements were conceptualized. The selected original statement served as an illustration of this initial concept. Accordingly, 91 useful original statements and 36 initial concepts were obtained. Subsequently, the initial concepts were categorized. Since there is some crossover, the initial concepts containing two or more repetitions were chosen, and those contradicting initial concepts were rejected. Finally, following filtering and categorization, 31 initial concepts and 19 initial categories were acquired. Table 2 contains the open coding results.

Table 2. Open coding results.

Initial categories	Initial concepts	Original statements
Mental illness	Bipolar disorder	1. He has bipolar disorder, will pierce his veins.
	Depression	2. After the questionnaire, I found out that he was depressed.
Mentality	Poor mental state	3. It has something to do with the mental state of the people.
	Mental numbness	4. Most of them are mentally numb and confused.
Loneliness	Sense of loneliness	5. If there was someone to comfort, the tragedy wouldn't happened.
Learning	Academic pressure	6. There are three graduate students around me who committed suicide. They are under too much pressure to study.
Working	Frustrated at work	7. The essence is the frustration caused by not getting the due return for their work, so as to be disappointed in life.
Suffer setbacks	Less suffer setbacks	8. Today's young people have not experienced setbacks.
Ability to suffer setbacks	Ability to suffer setbacks	9. I think most of them are not strong in resisting setbacks.
Death cognition	Dare to face death	10. The realization of death makes me feel life deeply.
	Eternal spirit	11. My death won't be a mere death, my spirit will live forever.
	Life equals death	12. I am nihilistic, life and death is no different.
Family influence	Parental influence	13. Her parents paid little attention to her, so she committed suicide by jumping into the river.
	Family member	14. I'm sad for the death of loved ones, and rethink about life.
	New life born	15. The birth of a baby made me feel grateful for life.
Teacher-student relationship (TSR)	Tutor's disregard	16. If the tutor ignores the student's emotions while the course is heavy, the student will face high pressure in school.
No one cares and supports	No one cares	17. Just need a person to care for him and perhaps save him.
	No one supports	18. Hurt by others and no support from people around.
Other's changes	Other's family changes	19. The family changes of my classmates around me will make me easily empathize and change some of my opinions.
Other's death	Other's family death	20. His father died of alcoholism. His mother fed pesticides to him, and then drank them herself. This incident exerted the direct influence on me. Some people live, while others survive.
	Death of people around	21. The disappearance of the people around me will cause me to think about how to cherish my life more.
Ignore life education	Ignore life education	22. There are some elective life education general courses every semester, but I haven't taken them myself.
Hope to improve life education	Hope to be reasonable	23. I hope to reasonably set the class to give me time to think about the meaning of personal life and death.
	Hope to be interactive	24. Life education is only unilaterally output by teachers.
Psychological counseling institution	Psychological counseling institution	25. I think there should be a psychological counseling institution in each class.

Initial categories	Initial concepts	Original statements
Psychological assistance service	Psychological assessment	26. Students should be regularly evaluated psychologically, otherwise how to know their real psychological situation ?
	Professionalism	27. The psychological counseling needs to be more professional
	Documented	28. Students with psychological issues should be documented.
Media impact	Anxiety of media communication	29. I was particularly anxious when I read Sina Weibo during the COVID-19, so I uninstalled it.
Social environment	Media influences life views	30. Sometimes I get the life value from books and other media.
	Publicized suicides	31. Most of the suicides of college students become talk of the town after dinner. Few people take the issue seriously.

3.2 Axial coding

Axial coding aims to analyze potential logical links between initial categories, generates major groups and constructs various linkages between major categories and their corresponding initial categories. The initial categories were merged into the major categories according to their logical connections. Thus, 13 major categories were obtained. Axial coding results are shown in Table 3.

Table 3. Axial coding results.

Major categories	Initial categories	Connotation of the relationship
Mental illness	Mental illness	Students diagnosed with mental illnesses such as depression.
Mental and psychological state	Mentality	Poor mental state and numbness are reflections of it.
	Loneliness	Loneliness is a reflection of psychological situation.
Learning and working	Learning	Academic stress and other learning conditions.
	Working	Work-related conditions such as job disappointment.
Setback	Suffer setbacks	Less frustrated is one aspect of the setback situation.
	Ability to suffer setbacks	Ability to suffer setbacks is one aspect of setback.
Death cognition	Death cognition	Daring to face death, eternal spirit, and life is equal to death are manifestations of death cognition.
Family influence	Family influence	Parental influence, family member and new life born are family influences.
TSR	TSR	Tutor's disregard is a condition of TSR.
Other's cares and supports	No one cares and supports	No one cares and supports is a condition of it.
Other's life situation	Other's changes	Other's changed belongs to other's life situation.
	Other's death	Other's death belongs to other's life situation.
Life education course	Ignore life education courses	Ignoring is a reflection of the life education courses.
	Hope to improve the life course	Hope to improve is a reflection of the life education courses.
Psychological assistance	Psychological counselling institution	Counselling institution is one aspect of psychological assistance.
	Psychological assistance services	Assistance services is one aspect of psychological assistance.
Media factor	Media impact	Media impact is a media factor.
Social environment	Social environment	Social environment is a social factor.

3.3 Selective coding

Selective coding aims at the core category. This research highlighted the core category of "factors and mechanisms impacting pupils' view on life." Then, studied the interrelationships

and connections between the core and major categories through several inquiries and analyses of the original interview data. Eventually, IFMCSLV was created referring to the SESPM.

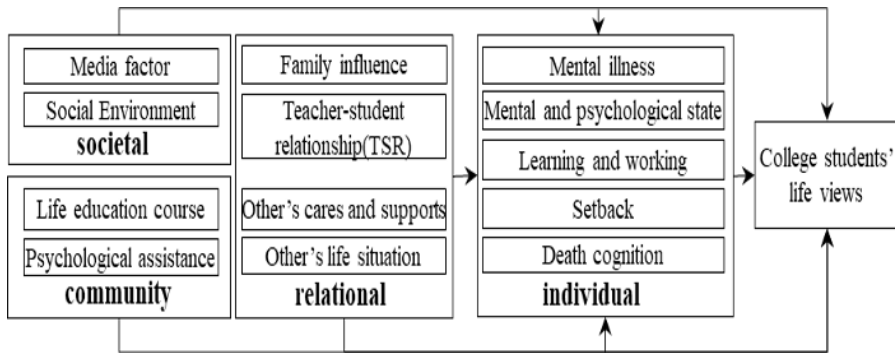


Fig. 1. Influencing factors model of college students' life views (IFMCSLV).

As shown in Figure 1, the factors influencing college students' outlook on life are influenced by four dimensions and thirteen influencing factors. The specific mechanism of action is as follows:

The five influencing factors at individual dimensions are endogenous factors. They directly influence college students' attitudes toward life and play a decisive role in their behaviour about life safety. D6 mentioned that bipolar disorder played a direct role in self-harm. In addition, M24 notes that the college student who committed suicide was in a poor mental state. M4 says that loneliness led to tragic suicide. The four influencing factors at the relational dimension, two influencing factors at the community dimension, and two influencing factors at the societal dimension are all exogenous elements that might affect college students' attitudes on life directly or indirectly. In terms of direct influence, those above can determine their direct impact on college students' outlook on life by being filtered into major categories. In terms of indirect effect, the analysis is as follows. First, the TSR affects college students' view of life by influencing their learning. M20 mentioned that the master student is particular because of the tutorial system. The heavy course load and the tutor's neglect or indifference to the student's emotions can expose the student to high pressure in academic. Second, life education courses influence how people perceive death indirectly. U14 says how a well-planned life course can provide her with the time and space to reflect on the meaning of life and death. Thirdly, the media indirectly affects college students' life views by affecting their psychological health. U13 stated that the information circulated through Sina Weibo during the COVID-19 made her apprehensive about life to the point where she couldn't take it anymore and unloaded it. Additionally, some evidence can be found in many pieces of literature to support the IFMCSLV theoretically. For example, the ability of positive TSR can change a life [15], life education can help students correct life views and realize life's value and meaning [16], rumors spread by media and social networks in COVID-19 cause serious psychological impacts such as anxiety [17], mental health care needs to be highly regarded during COVID-19 [18], etc. Evidence of direct and indirect influence can also be found in the interview transcripts. This excerpt demonstrates the complexity and diversity of influences: “My view of life, ah, first is the people around me, second is the news media, and third is what I’ve learned.”

After the IFMCSLV was constructed, the two randomly selected test samples were subjected to a theoretical saturation test. The test showed no new main categories emerged.

Moreover, no other significant relationships were included among the 13 main categories. The above indicates that the theoretical model has reached saturation.

4 Conclusions

This study described the composition and interaction of the influencing factors on college students' life views through grounded theory. Finally, IFMCSLV was created. According to IFMCSLV, 13 factors influence college students' outlook on life from four dimensions. It is difficult to change at individual dimension technically. However, many measures have feasibility in the other three sizes. Currently, the scope of international suicide prevention efforts consists of four levels: primary, secondary, tertiary prevention and postvention [14]. In terms of ex-ante prevention, the first three levels are worth considering. Referring to them and IFMCSLV, this research proposes the following entry points for college students' mental health protection and suicide prevention in universities.

In primary prevention, great attention should be paid to life education practice. The IFMCSLV shows that life education can directly influence college students' views on life. It can also indirectly influence them by influencing death cognition. Thus, life education is a significant breakthrough point. Several interviewees mentioned that their universities do not have reasonable and interactive life education. Therefore, universities should combine theory and practice in life education, such as the Life Education Experience Hall established in Yuhang and the Life Education Practice Base in Shanghai Normal University.

In secondary prevention, focus on TSR and imply gate-keeper training. TSR is a fundamental ethical relationship in educational practice. Many scholars studied TSR, such as communication skills in TSR [19], quality of TSR [20], TSR's effect on academic press [21], motivation to learn [22], emotional and behavioural adjustment [23], etc. Hagenauer (2014) notes that TSR affects students' studies at universities [24]. According to IFMCSLV, tutors' indifference can negatively influence one's academic stress and indirectly impact their life views. College years prove to be a vulnerable time for students and a critical period for suicide prevention [25]. The gate-keeper training program is a suicide prevention effort widely used in many populations. It trains people who regularly contact those in psychological distress to reduce the suicide rate [26]. The tutor is the first person responsible for postgraduate training in China. Instructors need to acquire mental health knowledge and become powerful "gate-keepers" through professional mental health seminars.

In tertiary prevention, further establish a psychological assistance system. According to IFMCSLV, psychological assistance can directly impact students' views on life. Universities should further build an on-campus psychological assistance system. Additionally, relying on the mental health resources in the region deepens medical-school cooperation. As Zhongchun Liu in Renmin Hospital of Wuhan University said, the late intervention of psychotherapy needs to integrate social forces.

In general, regarding the international scope of suicide prevention efforts and IFMCSLV, the breakthrough points proposed above were summarized based on the research. More supportive measures are expected to ensure that the psychological assistance system in universities is fully utilized and develop a positive outlook on life to reduce the likelihood of suicide and self-injurious conduct in college students effectively. In future studies, more samples can be expanded to remove geographic and statistical bias.

Acknowledgements

Funds for "Research on the Problems and Countermeasures of Suicide Prevention Education for Students in Wuhan Subordinate Universities". Project No. DXS2019013.

References

1. L. Paolini, A. P. Yanez, and W. E. Kelly, "An Examination of Worry and Life Satisfaction Among College Students," *Individual Differences Research*, **4**, (2006)
2. C. P. Chen, "Professional issues: Common stressors among international college students: Research and counseling implications," *Journal of college counseling*, **2**, 49-65 (1999)
3. G. H. Ghaedi, A. Tavoli, M. Bakhtiari, M. Melyani, and M. Sahragard, "Quality of life in college students with and without social phobia," *Social indicators research*, **97**, 247-256 (2010)
4. A. W. Astin and H. S. Astin, "Exploring and nurturing the spiritual life of college students," *Journal of College and Character*, **11**, (2010)
5. M. L. Reyes-Rodríguez, C. L. Rivera-Medina, L. Cámara-Fuentes, A. Suárez-Torres, and G. Bernal, "Depression symptoms and stressful life events among college students in Puerto Rico," *Journal of affective disorders*, **145**, 324-330 (2013)
6. V. M. Bhujade, "Depression, anxiety and academic stress among college students: A brief review," *Indian Journal of Health and Wellbeing*, **8**, 748-751 (2017)
7. A. J. Schwartz, "College student suicide in the United States: 1990-1991 through 2003-2004," *Journal of American College Health*, **54**, 341-352 (2006)
8. M. Zhang and Y. Huang, "The Present Status and Education of College Students' View of Life," *Heilongjiang Researches on Higher Education*, 127-131 (2018)
9. Z. Li and Z. Xu, "Life View of College Students: the Connotation, Structure and Education Guidance," *University Education Science*, 21-26 (2017)
10. P. Zhang, "College Students' View of Life and Its Countermeasures: Based on the Questionnaire Survey of Students' Outlook on Life in Seven Universities in Henan Province," *Journal of Henan University (Social Science)*, (2021)
11. P. M. Gutierrez, A. Osman, B. A. Kopper, F. X. Barrios, and C. L. Bagge, "Suicide risk assessment in a college student population," *Journal of Counseling Psychology*, **47**, 403 (2000)
12. K. Charmaz and J. Smith, "Grounded theory," *Qualitative psychology: A practical guide to research methods*, **2**, 81-110 (2003)
13. L. A. Palinkas, S. M. Horwitz, C. A. Green, J. P. Wisdom, N. Duan, and K. Hoagwood, "Purposeful sampling for qualitative data collection and analysis in mixed method implementation research," *Administration and policy in mental health and mental health services research*, **42**, 533-544 (2015)
14. R. J. Cramer and N. D. Kapusta, "A social-ecological framework of theory, assessment, and prevention of suicide," *Frontiers in psychology*, **8**, 1756 (2017)
15. M. Uitto, S. Lutovac, K. Jokikokko, and R. Kaasila, "Recalling life-changing teachers: Positive memories of teacher-student relationships and the emotions involved," *International Journal of Educational Research*, **87**, 47-56 (2018)
16. X. Xingyan, "Study on life education for college students," *Frontiers of Education in China*, **3**, 448-459 (2008)
17. S. Khan et al., "Impact of coronavirus outbreak on psychological health," *Journal of global health*, **10** (2020)
18. Y. Wang, X. Zhao, Q. Feng, L. Liu, Y. Yao, and J. Shi, "Psychological assistance during the coronavirus disease 2019 outbreak in China," *Journal of Health Psychology*, **25**, 733-737 (2020)

19. A. B. Frymier and M. L. Houser, "*The teacher-student relationship as an interpersonal relationship*," *Communication education*, **49**, 207-219 (2000)
20. J. N. Hughes, T. A. Cavell, and V. Willson, "*Further support for the developmental significance of the quality of the teacher–student relationship*," *Journal of school psychology*, **39**, 289-301 (2001)
21. J.-S. Lee, "*The effects of the teacher–student relationship and academic press on student engagement and academic performance*," *International Journal of Educational Research*, **53**, 330-340 (2012)
22. F. Koca, "*Motivation to Learn and Teacher-Student Relationship*," *Journal of international Education Leadership*, **6**, n2 (2016)
23. M.-T. Wang, M. Brinkworth, and J. Eccles, "*Moderating effects of teacher–student relationship in adolescent trajectories of emotional and behavioral adjustment*," *Developmental psychology*, **49**, 690 (2013)
24. G. Hagenauer and S. E. Volet, "*Teacher–student relationship at university: an important yet under-researched field*," *Oxford review of education*, **40**, 370-388 (2014)
25. T. L. Tompkins and J. Witt, "*The short-term effectiveness of a suicide prevention gatekeeper training program in a college setting with residence life advisers*," *The journal of primary prevention*, **30**, 131-149 (2009)
26. M. Isaac et al., "*Gatekeeper training as a preventative intervention for suicide: a systematic review*," *The Canadian Journal of Psychiatry*, **54**, 260-268 (2009)