




Common Mental Health Challenges in a University Context in Hong Kong: a Study Based on a Review of Medical Records

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Abstract

While numerous studies have suggested the rising prevalence of common mental disorders amongst university students, studies examining mental health of Chinese university students are limited. As such, this study reviewed medical records of the Mental Wellness Clinic in one local University in Hong Kong from September 1, 2016 to August 31, 2017. The diagnosis and the recurrent themes were identified by retrospective analysis. Results showed that the top three diagnoses were anxiety, depression and subthreshold psychosomatic symptoms, accountable for 76% of all the 135 cases. The top three recurrent themes of maladjustment were academic and work stress (62%), family stress (33%) and stress from peers and romantic relationship (18%). Ten out of the 135 cases (1 in 14) showed active suicidal idea or recent suicidal attempt(s) that required urgent psychiatric intervention. This study echoes with the global and local studies that anxiety and depression are the top two issues of students for seeking help from mental health professionals. It is argued that cultural factors must be taken into account when interpreting the findings. The strengths of having a Mental Wellness Clinic in the university campus for promoting well-being of university students are also discussed.

Keywords Mental health · University students · Depression · Anxiety · Well-being

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Rising Burden of Common Mental Disorders in the Global and Local Community

Common mental disorders refer to a range of depression and anxiety disorders. It is estimated that 4.4% (exceed 300 million people in 2015) and 3.6% of the global population suffer from depressive disorders and anxiety disorders, respectively (World Health Organization 2017). Nearly half of people suffering from depression live in the South-East Asia region and Western Pacific region, which include India and China. The total estimated numbers of people living with depressive disorders and anxiety disorders increased by 18.4% and 14.9% between 2005 and 2015, respectively (GBD 2015 Disease and Injury Incidence and Prevalence Collaborators 2016). It is estimated that the disease burden caused by mental disorders will continue to rise, and unipolar depressive disorders will emerge as the non-communicable disease leading to the greatest Disability-adjusted life years (DALYs) by 2030 (Mathers and Loncar 2006).

The negative consequences of these disorders in terms of lost health are huge. According to the World Health Organization (2017), depression is ranked as the single largest contributor to global disability (7.5% of all years lived with disability) and anxiety disorders are ranked sixth (3.4% of all years lived with disability) in 2015. It is well documented that common mental disorders lead to significant personal, social and economic loss, including psychosocial disability (Druss et al. 2009), functional impairment (Druss et al. 2009), loss of productivity (Moncrieff and Pomerleau 2000; Mykletun et al. 2006), and poor quality of life (Saarni et al. 2007; The ESEMeD/MHEDEA 2000 investigators, et al. 2004). Patients with common mental disorders are observed to have shorter life expectancy than the general population, with a strong dose-response effect between psychological distress and mortality (Russ et al. 2012). Depression is also a major contributor to suicide deaths (around 800,000 per year), with many more numbers of attempted suicide (but unsuccessfully). Suicide accounted for close to 1.5% of all deaths worldwide, bringing it into the top 20 leading causes of death, and was the second leading cause of death among 15–29 year olds globally in 2015 (World Health Organization 2017).

According to the Hong Kong Mental Morbidity Survey 2010–2013, the prevalence of common mental disorders among Chinese adults aged between 16 and 75 was 13.3%. The most common disorders were mixed anxiety and depressive disorder (6.9%), followed by generalized anxiety disorder (4.2%), depressive episode (2.9%), and other anxiety disorders including panic disorders, all phobias and obsessive compulsive disorder (1.5%) (Lam et al. 2015). Although direct comparison between figures quoted from global and local studies may be difficult, the prevalence of common mental disorders in Hong Kong, when compared with that of the global data, should deserve more attention.

Mental Health and Well-Being among University Students

Based on surveys in 21 countries with different income levels, the World Health Organization World Mental Health Surveys examined the associations of mental disorders with college entry and attrition by comparing college students ($n = 1572$)

and non-students in the same age range (18–22; $n = 4178$), including non-students who recently withdrew from college ($n = 702$). One-fifth (20.3%) of college students had 12-month DSM-IV/CID disorders and around 83% of these cases had pre-matriculation onset, which was more important in predicting subsequent college attrition when compared with those post-matriculation onsets. However, only 16.4% of students with 12-month disorders received any 12-month health care treatment for their mental disorders (Auerbach et al. 2016). A systematic review of studies of depression prevalence in university students reported prevalence rates ranged from 10% to 85% with a weighted mean prevalence of 30.6% (Ibrahim et al. 2013). The results suggested that the chances of university students suffering from depression are substantially higher as compared to non-students in the general population. According to a web-based survey of depression, anxiety and stress in 7915 first-year tertiary education students in Hong Kong in 2006, depression, anxiety and stress levels of moderate severity or above were found in 21%, 41% and 27% of the respondents, respectively (Wong et al. 2006). In a study that conducted in 2010, 68.6% out of 529 Chinese college students recruited from four universities in Hong Kong reported to suffer from insomnia (Sing and Wong 2010). A study about depression in college freshmen in Beijing and in Hong Kong in 2008 reported a higher prevalence of current depressive symptoms in Hong Kong in comparison with their counterparts in Beijing (Song et al. 2008).

In the broader context, there are alarming signs regarding adolescent mental health in Hong Kong. While the caseload of the child and adolescent psychiatric teams of the Hospital Authority rose from 18,900 in 2011–12 to 28,800 in 2015–16 (i.e., an increase of more than 50% in 5 years) (Lam et al. 2015), the complexity of the problems straddle multiple disciplines and sectors. Obviously, there are potential service gaps in the existing services in Hong Kong. There are findings suggesting that adolescent well-being deteriorated in the high school (Shek and Liang 2017; Shek and Lin 2017) and undergraduate years (Yu et al. 2018).

Establishing Mental Health Service within the University Campus

While health service is a common establishment in university campus, specialized mental health service is not commonly found within the health service setting. Most of the time, there is a sharp demarcation between university health service (which supposedly takes care of the physical health of the students) and student affairs office (which is expected to provide counselling service to address the mental health and well-being concerns of the students). Obviously, such a disjointed service arrangement gives rise to coordination problems which would be detrimental for both urgent cases and long-term wellness, as whole person wellness of students should not have a sharp demarcation line separating the physical and psychosocial aspects.

Conceptually speaking, there are several advantages of managing students with mental health problems within the University health service. The first advantage is that medical doctors in the University campus are well-situated to deal with student mental health issues. As medical doctors are familiar with the university culture, academic schedule, and with a sense of belonging in the same community, their expression of empathy and person centred support during medical counselling can be enhanced. Continuity of medical care with a span from Year 1 to Year 4 can be

provided if necessary. Strategic long-term plan regarding mental health promotion is feasible.

The second advantage is the non-stigmatizing nature of the Mental Wellness Clinic. As Mental Wellness Clinic is a functional service instead of a physical clinic, there is no concern about “stigma” or “labelling effect” when students visit University Health Service for medical consultation because it is primarily a health care center instead of a “mental health clinic”. This is especially important in a local community with traditional Chinese cultural beliefs, as the stigmatization of mental illness is one of the major factors for low utilization and high dropout rates in Chinese mental health services, which has long been recognised in previous literature (Ho et al. 2003).

The third advantage is cost-effectiveness. Medical officers are family physicians who are trained not only to treat physical or psychological fragments, but also provide comprehensive medical care to students, and to take care of their person wellness in terms of physical, psychological, social and spiritual aspects. For example, when a student is disturbed by acne, allergic rhinitis, and anxious mood due to academic stress, the problems of the student can be managed altogether by medical consultation at University Health Service, instead of being fragmented and referred to three doctors in different specialties off campus. This can save the time of the student and it is also cost-effective from public health perspective.

The fourth advantage is multidisciplinary collaboration, where utilization of university resources is possible with close collaboration among different disciplines in the University campus, such as University Health Service, University counsellors, academic departments, etc. These units can be complementary and operate with synergistic effect.

Fifth, University Health Service is easily accessible to all students as it is largely subsidized by the University. There is no financial concern for students regarding consultation fees. Triage of the students with mental health disturbances into urgent, semi-urgent and routine categories is performed by nursing staff of the University Health Service immediately at presentation. All urgent cases can be managed by medical officers within the same day. In case the students with complicated mental problem have to be referred to external psychiatrist, University Health Service will be able to provide support at the at-risk interim period during the long waiting time (in terms of months) before seeing external psychiatrist in the public setting.

Mental Wellness Clinic under University Health Service in a University in Hong Kong

In view of the increasing demand for mental health services, existing service gaps for adolescents, and in line with the recommendation of the Mental Health Review Report 2015 by HKSAR Government, a pilot multidisciplinary Mental Wellness Clinic under the operation of University Health Service of one local University in Hong Kong was established in 2016. This is the first well-structured multidisciplinary service among all local universities in Hong Kong which targets at mental health service provision focussing on university student population.

The objectives of the clinic include: a) to promote mental wellness in the University campus; b) to achieve early intervention; c) to work towards the goal of zero tolerance

to suicide incidence; d) to avoid stigmatization in patients with mental issues; e) to achieve a synergistic outcome by multidisciplinary input; and f) to be more cost-effective in the mental service implementation. The scope of services includes mental health assessment, comprehensive clinical assessment, medical counselling, drug treatment, referral arrangement and medical follow up. The clinical service is provided by medical officers of the University Health Service, which consists of four specialists in Family Medicine, supported by the nursing team. Case doctors closely collaborate with other disciplines such as university counsellors, external psychiatrists, university teachers, etc. when necessary during case management. As university students in Hong Kong are mainly Chinese adolescents who receive both Western and Chinese education, generic treatment of their mood conditions similar to the general population in different parts of the world may not be desirable. At the same time, we will take the unique Chinese cultural impact into consideration.

To understand the mental health issues faced by university students, there were two objectives of the present study. First, we attempted to find out the common diagnoses in the cases based on the medical records. Second, we examined the recurrent themes of the issues and challenges faced by university students. To the best of our understanding, this is the first study based on the health data collected from the University Health Service of a local University in Hong Kong and other Chinese communities.

Methods

The study was performed by reviewing the medical records from the aforementioned Mental Wellness Clinic of University Health Service. All medical records with at least one consultation coded with a special code designed for patients that managed by the clinic during September 1, 2016 to August 31, 2017, was retrieved from the computer system. All retrieved medical records were then categorized by the case medical officers who took care of the cases. In order to ensure reliability of the analyses, only the medical record under the care from one medical officer, who took care of the largest caseload during the specified period, was reviewed in detail on a case-by-case basis. The medical record of each medical consultation/attendance of the included cases were reviewed to avoid missing some important life event(s) or perception(s) which precipitated the mood disturbances. The diagnosis of each case was first retrieved by the ICPC code from the computer system and followed by double-checking by the first author who is the case medical officer. The recurrent themes and the possible underlying cultural meaning of each case were identified by retrospective analysis of each consultation record by the first author to avoid discrepancy between different investigators.

Results

A total of 229 patients received medical service from the Mental Wellness Clinic during September 1, 2016 to August 31, 2017. Among the 299 cases, 135 (45%) was under the care from one medical officer who took care of the largest caseload during the specified period. The remaining 164 cases (55%) were shared by three other medical officers.

Amongst the 135 cases, 99 were students (73%) and 36 were non-students (27%). In all 135 cases, 33% of patients were aged 25 and above and 67% were below age 25. Amongst the 99 student cases, 85 cases (86%) were aged 25 and below. Out of the 135 cases, 65% were females and 35% were males. Amongst the 99 students, 61% were females and 39% were males.

Ten out of the overall 135 cases (1 in 14) presented with active suicidal idea or with recent suicidal attempt required urgent psychiatric intervention. Male and female distribution shared half respectively among the 10 urgent cases. Given that 9 out of the 10 urgent cases were from the 99 students, it showed that 1 in 11 students seek for mental health service presented with active suicidal idea or with recent suicidal attempt.

Regarding the diagnoses of the cases (i.e., Research Question 1), the top three diagnoses were anxiety, depression and subthreshold psychosomatic symptoms, accountable for 76% of the overall 135 cases and 69% of the 99 student cases. The remaining cases suffered from sleep disturbances, eating disorders, bipolar affective disorders, psychosis, grief, Attention Deficit Hyperactivity Disorder ADHD and drug abuse. Table 1 shows the diagnoses of the overall 135 cases with breakdown into student and non-student groups.

Regarding Research Question 2 (i.e., recurrent themes and issues faced by the students), the top three recurrent themes of both overall 135 cases and the 99 student cases were academic/work stress, family stress and stress from peer/romantic relationship. Other themes related to physical illnesses, financial concern, and society unfairness. Table 2 shows the recurrent themes of the overall 135 cases with breakdown into student and non-student groups. For family stress, some students chose programs following parental wish without following one's interest. Some students also showed enmeshed emotional attachment problems with the parents.

Discussion

Most of the university students were in the age group of 18 to 25, with 99 cases (73%) belonged to the student population and 91 cases (67%) were younger than or at age 25.

Table 1 Diagnoses of the overall 135 cases with breakdown into student and non-student groups

	Student (Total 99)	Non-Student (Total 36)	Overall (Total 135)
Anxiety	26	11	37
Depression	22	13	35
Subthreshold psychosomatic symptoms	20	10	30
Sleep disturbances	16	0	16
Bipolar affective disorder	5	0	5
Eating disorder	4	1	5
Psychosis	3	1	4
ADHA	1	0	1
Grief	1	0	1
Drug abuse	1	0	1

Table 2 Recurrent themes of the overall 135 cases with breakdown into student and non-student groups

	Student (Total 99)	Non-Student (Total 36)	Overall (Total 135)
Academic / Work stress	55	29	84
Family stress	32	13	45
Peer/Romantic relationship	24	0	24
Physical illnesses	8	2	10
Financial stress	3	0	3
Society unfairness	2	0	2
Unknown	2	0	2

The finding of 1 in 14 patients seek help from Mental Wellness Clinic presented with active suicidal idea or recent suicidal attempt was an alarming figure. If urgent and timely psychiatric intervention were not offered, these patients might have ended up in suicides. This finding clearly reflected the importance of the Mental Wellness Clinic suicidal prevention in patients suffering from mental illnesses.

Although male and female distribution were equal among the 10 urgent cases, the total number of male patients attending Mental Wellness Clinic (47; 35%) was less than the number of female patients (88; 65%). This suggests that the proportion of having active suicidal idea or recent suicidal attempt in male patients (1 in 10) are more prevalent when compared to female patients (1 in 18). This can be reflected by a Chinese old saying, “*A man does not easily shed tears until his heart is broken*” (“男兒有淚不輕彈，只因未到傷心處”). According to traditional Chinese culture, men should never show emotional vulnerability in front of others. Taking Hsiang Yu, a Chinese general as an example. He rejected the help from his supporter for crossing the river to return to his hometown, Chiang-tung, and ended up his life after losing the battle for the throne in 207 BC. His reason of suicide was “*I came with eight thousands of youths of Chiang-tung. If I return defeated and alone, though the elders of Chiang-tung should pity me and make me their king, what mien-mu (face) would I have to see them?*”. This shows that he was very mindful of his defeat and he did not have courage to face the negative emotion.

The above observation and related interpretation suggest that clinicians should raise their awareness when managing Chinese male patients, who may forebear depressive symptoms until very late stage of depression with active suicidal thoughts at first clinical consultation as they do not easily express their negative feelings or thoughts to others. Crisis management can be a challenge to clinicians and mental health team because urgent cases are often unpredictable and doctor-patient rapport, which is critical in successful medical intervention, has to be built up in a very short period of time. This requires not only counselling skills of the case doctor, nurses and counsellors, but also the flexibility of the clinic administration system in re-scheduling the non-urgent patient appointments to prioritize the unpredictable urgent cases in a fully booked clinic.

Besides the special needs of Chinese males, special attention should also be paid to the themes highlighted from the medical records. The first area is academic/work stress. It is a common observation that students have high self-expectation of academic result. They have a perception that good academic result will link up with good career

prospect upon graduation, which is suggestive of high income and social status. They believe that this equates to good quality of life (QOL). A holistic understanding of QOL, apart from narrowing down to materialistic aspect, seems lacking in some students' mindset.

With high income, academic or social status, some students believe that they can be the "honour" of their family of origin. On the contrary, if they have "low GPA" making them fail to graduate on time or graduate with first honour, they will be a "shame" to the family (i.e., have "no face" to see their parents and relatives). This is a form of internalized sanction. The concept of "face" (Hu 1944) and "shame" (Jin 1992) has been well studied in Chinese literature. This thought is apparently more common among the non-local students who originally from mainland China. Many of them come to Hong Kong for a one-year master program or Ph.D. program with 3 to 4 years' time, by self-financed or scholarship. If these students cannot complete the study within the normal duration, they will not be able to obtain the degree due to financial concern. However, for some students with relatively low stress coping ability, it can be a difficulty for them to have quick adjustment to local language and culture, while achieving high academic standard. Hence, special support or mentoring system should be considered to this special group of students.

It is not an uncommon phenomenon that some students with major on "helping professionals", such as nursing, social work or allied health, experienced barrier in seeking medical help when they suffer from mental disturbances. "Helping professionals" sometimes have a perception that their mission is to "help" others but not being "helped" by others. If they seek for medical help, they may feel that it implies their own failure and see it as a burden to their colleagues. This is especially true when they undergo clinical placement or practicum training, where they usually encounter relatively higher stress in the reality as compared to studying in the "ivory tower" with more idealistic academic setting. Some students, even their professional supervisors, suffer from burnout, which is usually under-diagnosed and under-treated among medical professionals (Lo et al. 2018). Hence, awareness of burnout, especially among helping professionals, should be raised.

Another area of challenge faced by the patients was family stress. It is noteworthy that sometimes the students did not choose their academic program based on their own interests or wishes, but to their parents' instruction. Although university students are already adults by age definition, the concept of filial piety in Chinese culture is deeply rooted and will not cease with age progression. Filial Piety (孝道) is an important concept in Confucius teaching, well documented in "Classic of Filial Piety" (孝經). As many students do not want to have conflicts with parents to make them unhappy, they are used to follow parents' instructions in choosing their academic program, which receives the blessings from parents despite they clearly know that they have no interest in it. As a result, they are fragile when they encounter higher stress in final year, and lose direction when they are required to submit final year project. This sense of "worthlessness", which is one important symptom of depression, has to be dealt with during counselling process. Meaning seeking has to be facilitated by experienced counsellor or doctor.

The enmeshed relationship or emotional attachment with parents is also observed in some students with mental disturbances. Usually, the parents have their own marital discord since the childhood of the student who is then triangulated within the

strangled relationship (Bowen 1978). This limits the student to develop his/her own university life as he/she cannot be freed out from the family. The student who acts as the peace-maker has a perception that always staying at home with parents is an effective way of maintaining the family in harmony. Hence, they are willing to sacrifice their freedom since childhood. However, as the student grows up and enters adulthood, they also have an urge for self-development or finding their own partners. This leads to disequilibrium during the transitional stage from teenage to adulthood in the university years. Hence, how to facilitate the student with a strong belief in Chinese filial piety to achieve self-differentiation from the family of origin can be challenging to counsellors or doctors during the counselling process in the Chinese context.

On the other hand, it is observed that the emotional attachment to parents serves as a strong protective factor for the prevention of suicides in Chinese students with depression. One recurrent theme of the reason for giving up suicidal thought is the need or a sense of responsibility to take care of their parents. Students believe that if their bodies are damaged, their parents will feel heartbroken. As highlighted in volume 9 of Filial Piety Classics, “The body, hair and skin, all have been received from the parents, and so one doesn’t dare damage them—that is the beginning of Filial Piety.” (卷九 孝經): “身體髮膚，受之父母，不敢毀傷，孝之始也。”

Another important source of stress is from peer/romantic relationship. Traditional school bullying and cyberbullying are growing concerns worldwide, and prevalence was reported as 19% to 52% in studies conducted in Hong Kong (Chan and Wong 2015). Unfortunately, related studies conducted in local Universities are comparatively limited. In Chinese communities, school bullying is often perceived as a collective action and the behaviour of keeping silence by the bystanders in front of “authority” often perpetuate bullying. This phenomenon may be explained by the “Father-son dyad” (Hsu 1981) which is common in Chinese communities. Social exclusion, as a form of peer victimization, is a common bullying behaviour observed in Chinese schools (Chan and Wong 2016). Being isolated can be a painful experience for Chinese because Chinese use to have collective action. The closeness and proximity in a network of relationship serve as a basis for making value judgments and distribution of benefits within the group. This is the concept of “differential mode of association” (Fei 1992). This echoes with one of the recurrent themes identified in this study, that students experienced mental disturbances from peer stress, not uncommonly related to relational bullying, such as refusal to form small group with certain student by the majority of students in the class, so that the victim student cannot complete the group project work due to lack of group-mates. As university students come from different parts of the world with different ethnicities, bullying in any forms as precipitated by different cultures have to be addressed.

It is observed that some students with mental disturbances suffered from pathological grief towards the breakup of a relationship, or related to the sense of helplessness after having unwanted pregnancy or sexually transmitted diseases. The inability of differentiating love and sex, and poor understanding of sex knowledge may explain this observation. Talking about sex has been a taboo in Chinese culture in tradition. However, strengthening sexual health and the spiritual well-being of love are crucial and should be part of general education in the University curriculum.

The present findings and analyses suggest that Chinese university counsellors, doctors and teachers should have good understanding on traditional Chinese culture

when handling Chinese students with mental disturbances. For instance, if the counsellor does not understand the importance of “face culture” in Chinese, it is difficult to show empathy during the counselling process with a student who presents with suicidal thought due to low GPA and high self-expectation. Similarly, in the case of bullying management, without having an idea on the impact of “group value” and “authority” in Chinese, it is not easy for a therapist to understand the behaviour of the silent bystanders who may consider themselves belonging to the group of the bully gang, which is also symbolic to authority in the class. Furthermore, instead of attempting to remove students’ core traditional value, a therapist may consider acknowledging the importance of this core value, while facilitating the student to think of alternative solutions that do not violate with this core value; for examples, to re-define the meaning of success and failure, to add the elements of democracy and science to filial piety through encouraging mutual respect and critical thinking respectively (Li 1996).

It is observed that some local universities used to refer all students with mental disturbances to seek psychiatric management off campus. Apart from the advantages mentioned in the background section of managing students with mental disturbances within the university campus, there are practical difficulties observed by frontline clinicians and counsellors upon making external referrals. In Hong Kong, psychiatric referral to public setting, i.e. Hospital Authority, often requires long waiting time before the first medical appointment can be offered. Stable new case appointment waiting time varies from 45 to 118 weeks among different clusters/regions (Hospital Authority of Hong Kong 2018). Although psychiatric referral to private setting does not have waiting time concern, the high consultation fee is unlikely to be affordable by students without the financial supports from parents. Unfortunately, a significant proportion of students suffering from mental disturbances are either unwilling to tell their parents about their illnesses in order to avoid worries from parents, or the sources of mental stresses may be partially family related, which makes it impractical to expect these students to obtain financial support timely from their parents. In order to avoid stable cases at risk of worsening to unstable cases during the waiting period, and to offer timely medical consultation to all students with or without financial concern, the provision of timely mental wellness service within the university campus should be encouraged. Although mental health services are provided by some university health services in overseas with a similar setting to the clinic of this current study (Princeton University 2018; University of Calgary 2018; University of Michigan 2018), this multidisciplinary coordinated mental health care model is not commonly practised in Hong Kong currently. The positive pioneer experience of this local clinic should be largely promoted to local sister institutes.

In conclusion, this study echoes with the global and local studies that anxiety and depression are the top diagnoses of students to seek help from the Mental Wellness Clinic. The top three recurrent themes include academic/work stress, family stress and stress from peer/romantic relationship. The underlying cultural impact cannot be underestimated in the structuring of these recurrent themes and mental conditions. Enhancing psychosocial competence, spiritual reflection and taking traditional Chinese culture into consideration during medical counselling are important for the tailor made management to this specific university student population in the Chinese context. The provision of mental health service within the University community is important due to its accessibility, thus reducing the “labelling effect” and increasing cost-effectiveness in

coordinating multi-disciplines. This is especially important in combatting with the rising trend of mental health problems in the community.

However, as the Mental Wellness Clinic is a newly established service model since 2016, utilization and patient data are limited. To the best understanding, similar service model is not available in other sister institutes; therefore, it is only a single-centered study. Further studies from multi-centers are required before applying the results of current study to other sister institutes. Due to resources and manpower limitation, only medical records from one medical officer is analysed and therefore personal bias may occur. Although there are limitations of this study, the related findings underscore the value of having a mental wellness clinic within the university campus.

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References

- Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., et al. (2016). Mental disorders among college students in the World Health Organization world mental health surveys. *Psychological Medicine*, 46(14), 2955–2970. <https://doi.org/10.1017/S0033291716001665>.
- Bowen, M. (1978). *Family therapy in clinical practice*. Lanham: Jason Aronson.
- Chan, H. C. O., & Wong, D. S. W. (2015). Traditional school bullying and cyberbullying in Chinese societies: Prevalence and a review of the whole-school intervention approach. *Aggression and Violent Behavior*, 23, 98–108. <https://doi.org/10.1016/j.avb.2015.05.010>.
- Chan, H. C. O., & Wong, D. S. W. (2016). Traditional school bullying and cyberbullying perpetration: Examining the psychosocial characteristics of Hong Kong male and female adolescents. *Youth & Society*. Advance online publication. <https://doi.org/10.1177/0044118X16658053>.
- Druss, B. G., Hwang, I., Petukhova, M., Sampson, N. A., Wang, P. S., & Kessler, R. C. (2009). Impairment in role functioning in mental and chronic medical disorders in the United States: Results from the National Comorbidity Survey Replication. *Molecular Psychiatry*, 14, 728–737. <https://doi.org/10.1038/mp.2008.13>.
- Fei, X. (1992). *From the soil: The foundations of Chinese society*. Berkeley: University of California Press.
- GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. (2016). Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: A systematic analysis for the global burden of disease study 2015. *The Lancet*, 388(10053), 1545–1602. [https://doi.org/10.1016/S0140-6736\(16\)31678-6](https://doi.org/10.1016/S0140-6736(16)31678-6).
- Ho, E., Au, S., Bedford, C., & Cooper, J. (2003). *Mental health issues for Asians in New Zealand: A literature review*. Wellington: Mental Health Commission Retrieved from http://www.waikato.ac.nz/___data/assets/pdf_file/0008/76553/mhc-mhi-for-asians.pdf.
- Hospital Authority of Hong Kong. (2018). Retrieved from waiting time for new case booking at psychiatry special out-patient clinic: http://www.ha.org.hk/visitor/ha_visitor_index.asp?Content_ID=10053&Lang=ENG&Dimension=100&Parent_ID=10042&Ver=HTML
- Hsu, F. L. K. (1981). *Americans and Chinese: Passage to differences* (3rd ed.). Honolulu: University of Hawaii Press.
- Hu, H. C. (1944). The Chinese concepts of “face”. *American Anthropologist*, 46(1), 45–64. <https://doi.org/10.1525/aa.1944.46.1.02a00040>.

- Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, *47*(3), 391–400. <https://doi.org/10.1016/j.jpsychires.2012.11.015>.
- Jin, Y. (1992). “Mian”, “chi” yu Zhongguo ren xing wei zhi fen xi [Face, shame and the analysis of behavior patterns of the Chinese]. In *Zhongguo she hui yu wen hua* [Chinese society and culture] (pp. 41–63). Hong Kong: Oxford University Press (China).
- Lam, L. C. W., Wong, C. S. M., Wang, M. J., Chan, W. C., Chen, E. Y. H., Ng, R. M. K., et al. (2015). Prevalence, psychosocial correlates and service utilization of depressive and anxiety disorders in Hong Kong: The Hong Kong mental morbidity survey. *Social Psychiatry and Psychiatric Epidemiology*, *50*(9), 1379–1388. <https://doi.org/10.1007/s00127-015-1014-5>.
- Li, Y. (1996). Xiao de xian dai yi yi [The modern meaning of filial piety]. In *Wen hua yu xiu yang* [Culture and Cultivation] (pp. 111–117). Taiwan: You Shi Wen Hua [Youth Cultural].
- Lo, D., Wu, F., Chan, M., Chu, R., & Li, D. (2018). A systematic review of burnout among doctors in China: A cultural perspective. *Asia Pacific Family Medicine*, *17*(3), 1–13. <https://doi.org/10.1186/s12930-018-0040-3>.
- Mathers, C. D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, *3*(11), 2011–2030. <https://doi.org/10.1371/journal.pmed.0030442>.
- Moncrieff, J., & Pomerleau, J. (2000). Trends in sickness benefits in Great Britain and the contribution of mental disorders. *Journal of Public Health Medicine*, *22*(1), 59–67. <https://doi.org/10.1093/pubmed/22.1.59>.
- Mykletun, A., Overland, S., Dahl, A. A., Krokstad, S., Bjerkeset, O., Glozier, N., et al. (2006). A population-based cohort study of the effect of common mental disorders on disability pension awards. *The American Journal of Psychiatry*, *163*(8), 1412–1418.
- Princeton University. (2018). University Health Service. Retrieved from <https://uhs.princeton.edu/counseling-psychological-services/psychiatric-consultation>
- Russ, T. C., Stamatakis, E., Hamer, M., Starr, J. M., Kivimaki, M., & Batty, G. D. (2012). Association between psychological distress and mortality: Individual participant pooled analysis of 10 prospective cohort studies. *BMJ*, *345*, e4933. <https://doi.org/10.1136/bmj.e4933>.
- Saarni, S., Suvisaari, J., Sintonen, H., Pirkola, S., Koskinen, S., Aromaa, A., & Lönnqvist, J. (2007). Impact of psychiatric disorders on health-related quality of life: General population survey. *The British Journal of Psychiatry*, *190*(4), 326–332. <https://doi.org/10.1192/bjp.bp.106.025106>.
- Shek, D. T. L., & Liang, L. Y. (2017). Psychosocial factors influencing individual well-being in Chinese adolescents in Hong Kong: A six-year longitudinal study. *Applied Research in Quality of Life, Advanced Online Publications*, *13*, 561–584. <https://doi.org/10.1007/s11482-017-9545-4>.
- Shek, D. T. L., & Lin, L. (2017). Trajectories of personal well-being attributes among high school students in Hong Kong. *Applied Research in Quality of Life*, *12*(4), 841–866. <https://doi.org/10.1007/s11482-016-9492-5>.
- Sing, C. Y., & Wong, W. S. (2010). Prevalence of insomnia and its psychosocial correlates among college students in Hong Kong. *Journal of American College Health*, *59*(3), 174–182. <https://doi.org/10.1080/07448481.2010.497829>.
- Song, Y., Huang, Y., Liu, D., Kwan, J. S. H., Zhang, F., Sham, P. C., & Tang, S. W. (2008). Depression in college: Depressive symptoms and personality factors in Beijing and Hong Kong college freshmen. *Comprehensive Psychiatry*, *49*(5), 496–502. <https://doi.org/10.1016/j.comppsy.2008.02.005>.
- The ESEMeD/MHEDEA 2000 investigators, Alonso, J., Angermeyer, M. C., Bernert, S., Bruffaerts, R., Brugha, T. S., et al. (2004). Disability and quality of life impact of mental disorders in Europe: Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatrica Scandinavica*, *109*(Suppl. 420), 38–46. <https://doi.org/10.1111/j.1600-0047.2004.00329.x>.
- University of Calgary. (2018). Mental Health Services. Retrieved from <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>
- University of Michigan. (2018). University Health Service at UHS. Retrieved from <https://www.uhs.umich.edu/mentalhealthsvcs>
- Wong, J. G. W. S., Cheung, E. P. T., Chan, K. K. C., Ma, K. K. M., & Tang, S. W. (2006). Web-based survey of depression, anxiety and stress in first-year tertiary education students in Hong Kong. *Australian and New Zealand Journal of Psychiatry*, *40*(9), 777–782. <https://doi.org/10.1080/j.1440-1614.2006.01883.x>.
- World Health Organization. (2017). *Depression and other common mental disorders: Global health estimates*. Geneva: World Health Organization Retrieved from <http://apps.who.int/iris/bitstream/handle/10665/254610/WHOMSD?sequence=1>.
- Yu, L., Shek, D. T. L., & Zhu, X. (2018). The influence of personal well-being on learning achievement in university students over time: Mediating or moderating effects of internal and external university engagement. *Frontiers in Psychology*, *8*, 2287. <https://doi.org/10.3389/fpsyg.2017.02287>.