

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



JOURNAL OF ADOLESCENT HEALTH

Editorial Chinese Adolescent Research Under COVID-19

COVID-19 has created unprecedented consequences for adolescents and young adults in the contemporary world. Schools are suspended, cities are locked down, loved ones (such as grandpa and grandma) pass away, and there is not much certainty surrounding the pandemic, particularly regarding when it will be over. Obviously, there is a need to understand the health of adolescents and young adults under the shadow of COVID-19 as well as the factors affecting their well-being. Definitely, the articles based on Chinese adolescents enrich our understanding of the impact of COVID-19 on the health of young people [1-3].

There are several strengths of the Chinese articles that the Journal has published recently. First, the articles highlight the protective factors for young people facing adversity, including background sociodemographic factors (e.g., gender, age, urban vs. rural area), social support, physical activities, and daily routines. Second, large samples were used in these studies. Third, as Chinese people (1.44 billion) constitute approximately 18% of the world population (7.8 billion), Chinese findings would help to test the generalizability of Western theories and findings. As commented by Nielsen et al. [4], studies in human development are "WEIRD" research, with participants predominantly recruited from Western, educated, industrialized, rich, and democratic societies.

Despite the previously mentioned strengths of these Chinese studies, there are several methodological issues we should note. First, as convenience sampling is commonly used, generalizability of the findings to the adolescent population is unclear. Besides, collection of data online (which is reasonable because of the suspension of schools) may only attract those who are familiar with computer usage with good internet connection. Second, many researchers used translated Western measures in their studies. Although translated Western measures may provide the necessary conceptual frameworks, Western constructs may not be able to capture the related phenomena under non-Western cultures. Besides, there is a need to conduct validation studies for Chinese-translated measures. For scales using cutoff scores developed in the West, there is also a need to establish the validity of the cutoff scores used. Without proper validation, the meaning of different "levels" of psychosocial attributes (such as social support) is unclear. Third, regarding the background demographic factors, they could be regarded as predictors (i.e., main effects), moderators (i.e., interaction effects), or covariates

(i.e., confounding effects) in the analyses. Hence, it would be helpful if researchers could examine these possibilities in a study. Fourth, similar to these three studies, most studies on the wellbeing of Chinese young people are cross-sectional studies. Although cross-sectional studies have the advantages of ease of data collection and low cost, they cannot look at the temporal relationships between the predictors and criterion variables. Finally, given a significant relationship between a predictor and an outcome in a cross-sectional study, there are alternative explanations [5]. For example, there are several interpretations of the negative correlation between social support and anxiety: (1) social support influences anxiety; (2) anxiety influences social support; (3) social support and anxiety influence each other; and (4) the significant correlation is because of other factors (i.e., spurious effects) such as social class.

Conceptually, we need well-articulated theories to understand the impact of COVID-19 on the well-being of adolescents and young adults. Based on the systems theory and ecological perspective, factors in different systems surrounding the "person" and the "environment" influence the well-being of young people [6]. As far as the "person" is concerned, besides demographic factors such as gender and age, there is a need to understand how economic disadvantage affects people under COVID-19 because it intensifies the negative impacts of poverty on personal and family well-being [7]. For example, temporary unemployment because of city lockdown, additional expenses on buying masks and sanitizers, and additional Wi-Fi expense because of online learning at home are stressors for poor families. Regarding psychological factors influencing adolescent adjustment to COVID-19, it is important to examine protective factors under COVID-19. Based on the positive youth development (PYD) literature, three PYD attributes are important protective factors [8,9]. The first one is resilience [10]. As COVID-19 constitutes adversity for young people, those with better adversity quotient would adjust better. The second one is emotional quotient, which covers emotional awareness and management. Under COVID-19, anxiety, frustration, depression, and sadness are common negative emotions. Hence, how adolescents cope with such negative emotions and thrive under the negative emotional backdrop is important. The final PYD attribute is spiritual quotient, which refers to finding meaning from the pandemic. Research shows that those who can find purpose

See Related Article on p.747

¹⁰⁵⁴⁻¹³⁹X/© 2020 The Authors. Published by Elsevier Inc. on behalf of Society for Adolescent Health and Medicine. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). https://doi.org/10.1016/j.jadohealth.2020.09.011

in life thrive better [11]. Obviously, how to nurture such PYD attributes in adolescents so that they can thrive during the pandemic is important. With reference to the Project P.A.T.H.S. in Hong Kong, objective outcome evaluation findings showed that the program participants showed better resilience and thrived better [12,13]. In mainland China, experimental findings also showed that Tin Ka Ping P.A.T.H.S. Project can promote developmental assets in adolescents [14].

Regarding "environmental" influences on adolescent health, family has important influence (i.e., family social capital). Besides social support, parenting style also influences the wellbeing of young people. Parents who are responsive to the needs and worries of the child under COVID-19 are important. At the same time, because of school suspension, how adolescents and young adults can make the best use of their free time at home is also very important. Hence, behavioral control of parents would help adolescents develop disciplined and structured life patterns under the pandemic. In addition to dyadic family processes (particularly parent-child relationship and communication processes), systemic family functioning, such as mutuality, communication, and emotional expressiveness also shape the well-being of young people. As Chinese people place a strong emphasis on family solidarity but a weak emphasis on emotional expressiveness, it would be exciting to examine how family processes are related to adolescent adjustment under COVID-19.

However, with lockdown of cities, work from home, and school suspension, people have to stay at home. Although this may promote family cohesion, it may also easily trigger family conflict particularly when parents and their adolescent/young adult children hold different views on social issues, such as holding contrasting political views in Hong Kong [15]. Staying at home during the pandemic is like "fighting desperately among cornered wild beasts." Hence, besides looking at the "bright side" of family support, there is a need to examine the "dark side" of family support as well [16]. In addition, Walsh [17] argued that family beliefs, including meaning making of adversity, positive outlook (i.e., hope), and transcendence as well as spirituality are important resources under adversity.

Finally, as Chinese cultural beliefs about adversity [18] can also influence how people adjust to COVID-19, research in this area is theoretically and practically important. In Confucian thoughts, adversity is an opportunity for self-cultivation of virtues, and there are strong emphases on forbearance and perseverance. Actually, such views are consistent with the PYD literature. In Buddhist thoughts, accepting fate and transcendence of the material world constraints contribute to inner calmness. In Taoist thoughts, "let go" and "non-action" can cope with life challenges. Besides, Chinese cultural beliefs such as "man's determination can conquer nature" and "cross the bridge when you come to it" are also important cultural resources for healthy coping. These indigenous Chinese concepts constitute exciting research agendas for studies under COVID-19.

> Daniel T.L. Shek, Ph.D. Department of Applied Social Sciences The Hong Kong Polytechnic University Hunghom, Hong Kong

References

- Qi M, Zhou SJ, Guo ZC, et al. The effect of social support on mental health in Chinese adolescents during the outbreak of COVID-19. J Adolesc Health 2020;67:514–8.
- [2] Ren HG, He X, Bian XH, et al. The protective roles of exercise and maintenance of daily living routines for Chinese adolescents during the COVID-19 quarantine period. J Adolesc Health 2020. https://doi.org/10.1016/ j.jadohealth.2020.09.026. Accessed October 26, 2020.
- [3] Zhang CY, Ye ML, Fu YW, et al. The psychological impact of the COVID-19 pandemic on teenagers in China. J Adolesc Health 2020;67:747–55.
- [4] Nielsen M, Haun D, Kärtner J, Legare CH. The persistent sampling bias in developmental psychology: A call to action. J Exp Child Psychol 2017;162:31–8.
- [5] Ren P, Qin X, Zhang Y, Zhang R. Is social support a cause or consequence of depression? A longitudinal study of adolescents. Front Psychol 2018;9:1634.
- [6] Shek DTL, Siu AMH. "UNHAPPY" environment for adolescent development in Hong Kong [special issue]. J Adolesc Health 2019;64:S1-4.
- [7] Shek DTL. Economic disadvantage, perceived family life quality, and emotional well-being in Chinese adolescents: A longitudinal study. Soc Indic Res 2008;85:169–89.
- [8] Zhou Z, Shek DTL, Zhu X, Dou D. Positive youth development and adolescent depression: A longitudinal study based on mainland Chinese high school students. Int J Environ Res Public Health 2020;17:44–57.
- [9] Shek DTL, Siu AMH. Adolescent mental health policy and services in Hong Kong: Seven unresolved problems waiting for solutions [special issue]. J Adolesc Health 2019;64:S5–9.
- [10] Fergus S, Zimmerman M. Adolescent resilience: A framework for understanding healthy development in the face of risk. Annu Rev Public Health 2005;26:399–419.
- [11] Lin L, Shek DTL. The influence of meaning in life on adolescents' hedonic well-being and risk behaviour: Implications for social work. Br J Soc Work 2019;49:5–24.
- [12] Shek DTL, Ma CMS. Impact of the Project P.A.T.H.S. in the junior secondary school years: Objective outcome evaluation based on eight waves of longitudinal data. Sci World J 2012;2012:170345.
- [13] Shek DTL, Zhu XQ. Promotion of thriving among Hong Kong Chinese adolescents: Evidence from eight-wave data. Res Soc Work Pract 2020;30:870–83.
- [14] Zhu X, Shek DTL. Impact of a positive youth development program on junior high school students in mainland China: A pioneer study. Child Youth Serv Rev 2020;114:105022.
- [15] Shek DTL. Protests in Hong Kong (2019–2020): A perspective based on quality of life and well-being. Appl Res Qual Life 2020;15:619–35.
- [16] Kivisto KL, Welsh DP, Darling N, Culpepper CL. Family enmeshment, adolescent emotional dysregulation, and the moderating role of gender. J Fam Psychol 2015;29:604–13.
- [17] Walsh F. Practice principles and guidelines to strengthen family resilience. In: Walsh F, ed. Strengthening Family Resilience. New York: Guilford Press; 2015:128.
- [18] Shek DTL. The relationship between Chinese cultural beliefs about adversity and psychological adjustment in Chinese families with economic disadvantage. Am J Fam Ther 2003;31:427–43.