We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,300

Open access books available

172,000

International authors and editors

190M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities

WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com

“Deaths of Despair” among College Students Amidst COVID-19 Pandemic: A Call for Action

Kavita Batra and Ravi Batra

Abstract

As COVID-19 pandemic gains foothold worldwide, all spheres of life, including daily activities, education, economic, social sectors experienced significant downturns. While COVID-19 affects all population subgroups, college students are particularly vulnerable given their transition to the emerging adulthood surrounded by a broad possibility of future. According to a mounting evidence, college students bear a disproportionate burden of psychosocial morbidities, which can be explained by the uncertainties surrounding the course of the pandemic and the sudden transition to online education. Moreover, many businesses scaled down their recruitment efforts leaving limited employment for students and more competition in the graduate labor market. COVID-19 pandemic has set up a “perfect storm” for students to initiate or relapse of maladaptive behaviors to alleviate their negative feelings. This is where “Deaths of Despair” comes into play. This chapter aims to reflect on the factors contributing to “Deaths of Despair” among college students in the wake of COVID-19 pandemic. Author of this chapter would like to advocate for developing tailored interventions to promote the post-traumatic growth among college students.

Keywords: COVID-19, SARS-COV-19, anxiety, depression, mental health, college students, psychosocial, suicide, deaths of despair

1. Introduction

COVID-19 pandemic has set up a “perfect storm” for all population subgroups, students are particularly vulnerable due to their transition to the emerging adulthood with a broad horizon of future [1]. A recent meta-analytical evidence reported a higher proportion of psychological cluster of symptoms among college students amidst COVID-19 pandemic [1]. This unprecedented rise in mental health morbidities during COVID-19 contributed to the suicidal ideations among students [2]. According to the Centers for Disease Control and Prevention (CDC), the suicidal ideation and increase in maladaptive behaviors were among the most common reported outcomes by the persons aged 18–24 years [3]. The mortality associated with increased substance abuse and suicide is termed as “deaths of despair,” which is a burgeoning public health concern [4]. A report from the Well Being Trust projects

nearly 75,000 “deaths of despair” may result from the substance abuse and suicides during pandemic [4]. These projections are concerning and underscore the need of developing targeted interventions to improve mental health outcomes of college students. For this, it is critical to explore all dimensions of “despair” in the context of the COVID-19 pandemic for the conceptual mapping [5], which authors attempt to describe in this chapter.

1.1 Despair (“down from hope”): an interwoven concept

Previous studies conceptualized “despair” as a common pathway or triggering mechanism to other causes of mortality at an individual and community level [5]. These pathways may persist for years and may predispose individuals to the diseases of despair, i.e. addiction and suicidal ideation [5]. The mechanism of interplay between individual and community factors is yet to be understood fully [5]. Despair can intersect across multiple interrelated domains, including cognitive, behavioral, emotional, biological, and social networks [4, 5]. More importantly, despair in the community level may predispose individual to the “deaths of despair,” which highlights the need of diffusing protective factors, such as social inclusion, behavioral activation, and reappraisals of difficult situations to prevent “deaths of despair” among college students [5]. Social context of despair is critical especially among college students because they may have a shared exposure with others in a circumscribed set of networks, such as school setting [4, 5]. Next, the social comparison is another yet important dimension, which may contribute to the individual-level despair among students [4, 5]. Undoubtedly, COVID-19 pandemic played a significant role in increasing the prevalence of community factors of despair, including the structural inequities, systemic problems, and economic stagnation, which may have permeated into the individual level of despair [1, 4–6].

2. Stressors among college students

Stress among students during COVID-19 pandemic may stem from environmental pressure, academic workload, and social or interpersonal pressure [7], which form the basis to understand an interwoven concept of “diseases of despair” [7]. The environmental pressure also includes the factors associated with the micro and macro socio-economic dynamics [6].

2.1 Environmental pressure during COVID-19 pandemic

As an overlay effect of COVID-19 pandemic, economic recession is an important dimension of despair to understand micro and macro socio-economic stressors [6]. Given the strong association between economic recession and suicide, it is vital to study financial stressors or economic determinants of COVID-19 among college students [8]. Job insecurity, uncertainties about future, plummeted job opportunities, job loss and difficulty in securing new jobs stemming from COVID-19 contributed to the adverse psychological outcomes among students [1, 9, 10]. In a Texas based study, above 50% students reported financial difficulties experienced by them or by their loved ones [11]. Every 3 in 10 students reported having limited opportunities for the internships or job placements [11]. A significant proportion of students reported changes in the living environment to be more distractive [11]. The majority of students had fear of contagion and expressed their worries about their family members getting infected with COVID-19 [11].

2.2 Academic pressure as a stressor

The effects of COVID-19 are far ranging and education is not spared [11, 12]. With the sudden transition to the virtual learning, students experience undue academic pressure and poor emotional health [12–15]. Fear of academic year loss was associated with psychological distress and suicidal ideation among students as suggested by previous evidence [13–16]. Black students reported the greater risk of academic failure compared to their white counterparts [14, 15]. Reduced access to technology and electronic devices may explain the socioeconomic and racial dividends, which highlights the need of addressing structural inequities to prevent “deaths of despair” among students [14].

2.3 Social or interpersonal pressure (COVID-19 pandemic: an antisocial event)

With the institution of social distancing mandates, such as lockdown measures, the rates of social isolation and loneliness have surged among students with limited or no face-to-face interactions [16–18]. This social isolation and loneliness have contributed significantly to the suicidal ideations and subsequent “deaths of despair” among students [16–18]. With the reduced opportunities of in-person interactions, students are relying more on the social media and are getting exposed to the false news or “infodemic” which may act as a triggering mechanism for the suicidal behavior and unhealthy behaviors, i.e. substance abuse (“diseases of despair”) [18, 19].

3. Diseases of despair (DoD)

Not all individuals start from suicidal actions stemming from the feelings of depression, anxiety, and hopelessness, some may develop dependence on noxious substances first in the hope to improve their situations [20, 21]. However, in reality, these behaviors worsen the situations and sets up a vicious cycle to contribute to subsequent depression and suicidal behaviors [21]. This points to the fact that the death of despair is a common pathway to suicides and substance abuse [22]. In a recent survey conducted among nearly 1500 individuals, young adults were twice likely to engage in the substance abuse behaviors and the prevalence of despair among young adults was 20 percent [22]. Reportedly, suicidal ideation increased by over 200% between 2009 and 2018 among young adults aged 18–34 years [23]. This is a complex problem with a multifactorial origin, which stem from the change in social structure and social media [19, 20, 23]. Cyberbullying and sleep problems are also contributing to the adverse mental health outcomes, including psychological distress and suicidal thoughts [19]. Three behaviors, including drug overdose, suicides, and alcoholic liver disease collectively called diseases of despair [19–25], which contribute to the deaths of despair.

3.1 Sociodemographic determinants of DoD

Just like other events, gender and race/ethnic disparities do exist in the prevalence of diseases or deaths of despair [22, 23, 26]. As compared to females, males are nearly twice likely to be diagnosed with alcohol and substance abuse related despair diagnoses [26]. However, females have had higher odds of exhibiting suicidal ideations than their male counterparts [26]. These differences in the suicidal attempts can be partially explained by differences in perception, natural coping mechanism,

and social expectations among males and females [27]. Females tend to have safety seeking behaviors and are less likely to resort to self-destructive behaviors, such as suicidal attempts [27, 28]. Age was also a significant predictor of DoD, with 18–35 years old being at the highest risk [21, 25, 26]. African Americans, people with lower socio-economic status and less education attainment had the higher rates of despair [22]. Type of insurance was also associated with the higher risk of diseases of despair [26]. People with public insurance and Affordable Care Act (ACA) were significantly more likely to exhibit any diseases of despair diagnoses compared to those with commercial insurance plans [26]. These disparate effects highlight the need of deciphering potential mechanisms of risk based on theoretical frameworks [28].

4. DoD through a theoretical lens

DoD can be investigated through a theoretical lens and there are several theories, including cognitive behavior models, Precarious Manhood Theory, and the Interpersonal-Psychological Theory of Suicide, which paints a comprehensive layout to conceptualize psychopathology associated with DoD [28]. The Beck's cognitive model [29] states that the engagement in the self-destructive behaviors occur subsequent to the distortion of the beliefs following trauma. There are two maladaptive cognitions, namely assimilated and overaccommodated cognitions [28, 29], which can easily be described in the context of COVID-19. Assimilated cognitions are related to the feeling of self-blame, for instance self-doubt or regret for not getting the employment. On the other hand, overaccommodated cognitions is linking multiple events to question self-worth [29]. For instance, previous rejections by the employers made one believe that he/she will never find a job [29]. These experiences may trigger the feelings of low self-efficacy and hopelessness leading to the depressive symptoms as explained through the Learned Helplessness Theory of Depression [29, 30]. Hopelessness is a well-established risk factor of "Deaths of Despair," and COVID-19 has created a conducive environment for the hopelessness among college students with regards to the financial hardships and limited job opportunities [29, 30]. Another framework is Precarious Manhood Theory, which is important dimension with regards to DoD. Men feel distressed if asked to engage in "feminine" activities [29, 30] and attempt to engaging in stereotypic masculine coping behaviors to restore their gender-role [29, 30]. All these models explain the potential mechanisms of hopelessness, which drive up the diseases of despair.

4.1 Psychological capital and social media

The levels of hopelessness during COVID-19 pandemic were investigated among students. Students reported worries associated with far-ranging impacts of COVID-19 on their academic goals, job security and fear of contagion, which may result in undesirable outcomes, such as DoD [31, 32]. The anxiety and hopelessness were greater among students spending more time on social media [31, 32]. Excessive use of social media predisposes students to the negative coping mechanisms of escapism, thereby reducing their psychological capital [31, 32]. Students with the less psychological capital tend to use self-destructive measures to cope with the negative events, such as COVID-19 pandemic [31, 32]. According to the collective evidence, psychological capital acts as a mediator in the association between excessive use of media (problematic social media use) and mental health issues among college students [31–33].

4.2 Social media and suicide

Social media increases the risk of suicidal behavior through cyberbullying [32, 33]. Previous research indicate that victims of cyberbullying were more likely to commit suicides than those who were not victims [32, 33]. Cyberbullying is not a sole predictor of suicidal behaviors among young adults, however, the risk can be increased by preponderance of other psychological and environmental stressors described elsewhere in this chapter [11–15, 19, 32, 33]. Another emerging concern is the media contagion effect [34–36]. Evidence suggested suicidal behavior as a contagion, can be impacted directly or indirectly through media reporting, suicide clusters, and through an exposure to a suicidal peer [37]. These effects are more pronounced among college students due to the social-influence effect on the risk perception of this group [36, 37]. Several reports confirmed that self-harming young adults are more active in social media than those who do not engage in such behaviors [35–38]. Researchers have suggested a U-shaped relationship between social media use and mental health, meaning poor mental being at lower and higher ends of internet use [37, 38]. Social media advertisements expose adolescents to other risky behaviors, which can have a negative influence on their psychological well-being [37, 38].

4.3 Social media and risky behaviors

Social marketing may have negative influence on mental health and behaviors among young adults, for instance, alcohol brand promotion advertisements on social media platforms [37, 38]. Alcohol brands are strongly presented over the social media channels, including Facebook, YouTube, and Twitter these days and expose young adults to underage drinking [38, 39]. Unrestricted advertisements are responsible for the mass persuasion and viewers (especially young adults) perceive such behaviors as normative and desirable and are at greater risk of adopting maladaptive behaviors. Another emerging issue, which has a strong association with mental health, substance abuse, and suicidality is sexting and digital abuse [38–41]. Sexting is sharing the sexually explicit messages through messages, emails, and/or internet, and this acts as a moderator of age-inappropriate sexual behavior [40, 41]. Young adults who sexted had higher odds of being engaged in substance abuse, which is one of the diseases of despair [41, 42]. Young adults are highly predisposed to these behaviors due to their propensity towards peer pressure, lack of self-regulation, and technophilic nature [41–43]. The content presented in this chapter point to developing effective mental health and suicide prevention programs to address the unmet needs of the adolescents.

5. Public health recommendations: a call for action

A number of micro and macro level strategies can be undertaken to overcome the barriers and challenges in the road of preventing DoD. Microlevel strategies will entail activities to increase personal and social capital of at-risk individuals. Promoting healthy behaviors, and reversing biological depletion through pharmacological interventions will also be included [4, 5]. A sense of belongingness, meaning, and hope can be improved through embedding at-risk individuals in the social activities. In fact, students should be the part of discussion of improving mental health outcomes.

At macrolevel, identification of at-risk students will be critical. Identifying students with early stress symptoms can be beneficial to prevent the progression to the

chronic mental disorders. School and community based psychological interventions can help alleviate the diseases of despair among college students [36, 37]. Educating parents to openly communicate with their children will help curbing this crisis [36, 37]. Control of underlying factors associated with DoD is critical, especially in the current crisis of COVID-19 pandemic. For instance, more jobs can be created for the students to alleviate their fears of financial instability during COVID-19 pandemic. Educational institutions can develop some training programs for the students to make them suitable for the competitive markets. Academic institutions need to invest more in building the mental health infrastructure to provide psychological counselling, harm reduction services, and to expand mental health treatment services to the students. Educators can play a role of gatekeeper by identifying behaviors of despair among their students. Periodic assessment of mental health of students is critical. COVID-19 pandemic is a wake-up call for us to take actions for addressing emotional, social, and psychological needs of the adolescents. Access to mental health services should not be driven by gender and race/ethnic status as healthcare is a right for all. Authors of this chapter advocate for the equitable healthcare delivery model to address the systemic inequities already prevailing across the nation.

6. Conclusions

COVID-10 has impacted all aspects of life and students are particularly vulnerable. Psychological and economic impacts of COVID-19 are devastating and will leave a lasting thumbprint in the absence of culturally and linguistically appropriate public health interventions. It is critical to take proactive approach to overcome underlying causes of deaths of despair among students. Early identification of at-risk students, promoting parental educations to develop open communications with their young children, building mental health infrastructure at institutional and community level will be critical. Students can be educated to take care of their general health by incorporating healthy lifestyle habits to develop a connection between mind and body. Mindfulness meditation may offer a great strategy not only to relieve stress but also improve memory and focus. Telehealth services can also be employed to overcome the accessibility barriers. Programs to bolster economic, social, and psychological support need to be prioritized and suicide prevention should not be optional.

Conflict of interest

The authors declare no conflict of interest.

Notes/thanks/other declarations

None.

IntechOpen

Author details

Kavita Batra^{1*} and Ravi Batra²

¹ Office of Research, Kirk Kerkorian School of Medicine, University of Nevada,
Las Vegas, Nevada, United States

² Department of Information Technology, Coforge Ltd., Atlanta, Georgia,
United States

*Address all correspondence to: kavita.batra@unlv.edu

IntechOpen

© 2022 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

References

- [1] Batra K, Sharma M, Batra R, Singh TP, Schvaneveldt N. Assessing the psychological impact of COVID-19 among college students: An evidence of 15 countries. *Healthcare (Basel)*. 2021;**9**(2):222. DOI: 10.3390/healthcare9020222
- [2] Pandemic increasing suicidal ideation. Inside Higher Ed. 2020. Available from: <https://www.insidehighered.com/news/2020/08/17/suicidal-ideation-rise-college-aged-adults-due-covid-19-pandemic>. [Accessed: September 1, 2021]
- [3] Czeisler MÉ, Lane RI, Petrosky E, et al. Mental health, substance use, and suicidal ideation during the COVID-19 pandemic — United States, June 24–30, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 2020;**69**:1049–1057. DOI: 10.15585/mmwr.mm6932a1external icon
- [4] Projected deaths of despair from COVID-19. Well Being Trust. 2020. Available from: https://wellbeingtrust.org/wp-content/uploads/2020/05/WBT_Deaths-of-Despair_COVID-19-FINAL-FINAL.pdf. [Accessed: September 1, 2021]
- [5] Shanahan L, Hill SN, Gaydos LM, et al. Does despair really kill? A roadmap for an evidence-based answer. *American Journal of Public Health*. 2019;**109**(6): 854–858. DOI: 10.2105/AJPH.2019.305016
- [6] Oyesanya M, Lopez-Morinigo J, Dutta R. Systematic review of suicide in economic recession. *World Journal of Psychiatry*. 2015;**5**(2):243–254. DOI: 10.5498/wjp.v5.i2.243. PMID: 26110126; PMCID: PMC4473496. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4473496/>
- [7] DeVyllder J, Zhou S, Oh H. Suicide attempts among college students hospitalized for COVID-19. *Journal of Affective Disorders*. 2021;**294**:241–244. DOI: 10.1016/j.jad.2021.07.058
- [8] Kim C, Cho Y. Does unstable employment have an association with suicide rates among the young? *International Journal of Environmental Research and Public Health*. 2017;**14**(5):470. DOI: 10.3390/ijerph14050470
- [9] Bhandari N, Batra K, Upadhyay S, Cochran C. Impact of COVID-19 on healthcare labor market in the United States: Lower paid workers experienced higher vulnerability and slower recovery. *International Journal of Environmental Research and Public Health*. 2021;**18**(8):3894. DOI: 10.3390/ijerph18083894
- [10] Wilson JM, Lee J, Fitzgerald HN, Oosterhoff B, Sevi B, Shook NJ. Job insecurity and financial concern during the COVID-19 pandemic are associated with worse mental health. *Journal of Occupational and Environmental Medicine*. 2020;**62**(9):686–691. DOI: 10.1097/JOM.0000000000001962
- [11] Son C, Hegde S, Smith A, Wang X, Sasangohar F. Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*. 2020;**22**(9):e21279. DOI: 10.2196/21279
- [12] Clabaugh A, Duque JF, Fields LJ. Academic stress and emotional well-being in United States college students following onset of the COVID-19 pandemic. *Frontiers in Psychology*. 2021;**12**:628787. DOI: 10.3389/fpsyg.2021.628787
- [13] Hasan N, Bao Y. Impact of "e-Learning crack-up" perception on psychological distress among college students during COVID-19 pandemic: A mediating role of "fear of academic year

- loss". Children and Youth Services Review. 2020;**118**:105355. DOI: 10.1016/j.childyouth.2020.105355
- [14] Luo M, Guo L, Yu M, Jiang W, Wang H. The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public - A systematic review and meta-analysis. Psychiatry Research. 2020;**291**:113190. DOI: 10.1016/j.psychres.2020.113190
- [15] Kaurani P, Batra K, Rathore Hooja H, et al. Perceptions of dental undergraduates towards online education during COVID-19: Assessment from India, Nepal and Sri Lanka. Advances in Medical Education and Practice. 2021;**12**:1199-1210. DOI: 10.2147/AMEP.S328097
- [16] Cheung T, Lam SC, Lee PH, Xiang YT, PSF Y. International research collaboration on COVID-19. Global imperative of suicidal ideation in 10 Countries amid the COVID-19 pandemic. Frontiers in Psychiatry. 2021;**11**:588781. DOI: 10.3389/fpsy.2020.588781
- [17] O'Connor RC, Kirtley OJ. The integrated motivational-volitional model of suicidal behaviour. Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences. 2018;**373**(1754):20170268. DOI: 10.1098/rstb.2017.0268
- [18] Uddin R, Burton NW, Maple M, Khan SR, Tremblay MS, Khan A. Low physical activity and high sedentary behaviour are associated with adolescents' suicidal vulnerability: Evidence from 52 low- and middle-income countries. Acta Paediatrica. 2020;**109**(6):1252-1259. DOI: 10.1111/apa.15079
- [19] Sharma M, Batra K, Flatt J. Testing the Multi-Theory Model (MTM) to predict the use of new technology for social connectedness in the COVID-19 pandemic. Healthcare (Basel). 2021;**9**(7):838. DOI: 10.3390/healthcare9070838
- [20] Daniels M, Sharma M, Batra K. Social media, stress and sleep deprivation: A triple "S" among adolescents. Journal of Health and Social Sciences. 2021;**6**(2):159-166
- [21] Biswas T, Scott JG, Munir K, Renzaho AMN, Rawal LB, Baxter J, et al. Global variation in the prevalence of suicidal ideation, anxiety and their correlates among adolescents: A population-based study of 82 countries. E Clinical Medicine. 2020;**24**(100395): 1-9
- [22] Copeland WE, Gaydos L, Hill SN, et al. Associations of despair with suicidality and substance misuse among young adults. JAMA Network Open. 2020;**3**(6):e208627. DOI: 10.1001/jamanetworkopen.2020.8627
- [23] Diseases of Despair skyrocket in America. USA News. 2020. Available from: <https://www.usnews.com/news/health-news/articles/2020-11-10/diseases-of-despair-skyrocket-in-america>. [Accessed: September 1, 2021]
- [24] Sex, racial/ethnic disparities apparent among adolescents with suicidal ideation. Healio. 2021. Available from: <https://www.healio.com/news/psychiatry/20210614/sex-raciaethnic-disparities-apparent-among-adolescents-with-suicidal-ideation>. [Accessed: September 1, 2021]
- [25] Ohio Deaths of Despair. Ohio University. 2020. Available from: https://878570bd-c4fe-4dfe-8107-669a96dd214b.filesusr.com/ugd/89e8f1_c87f53c4fd3744b3a7445a0cba20b42d.pdf. [Accessed: September 1, 2021]
- [26] George DR, Snyder B, Van Scoy LJ, et al. Perceptions of diseases of despair by members of rural and urban high-prevalence communities: A qualitative

- study. *JAMA Network Open*. 2021;**4**(7):e2118134. DOI: 10.1001/jamanetworkopen.2021.18134
- [27] Rhodes AE, Boyle MH, Bridge JA, et al. Antecedents and sex/gender differences in youth suicidal behavior. *World Journal of Psychiatry*. 2014;**4**(4): 120-132. DOI: 10.5498/wjp.v4.i4.120
- [28] Rehder K, Lusk J, Chen JI. Deaths of despair: Conceptual and clinical implications. *Cognitive and Behavioral Practice*. 2021;**28**(1):40-52. DOI: 10.1016/j.cbpra.2019.10.002
- [29] Beck AT, Emery G, Greenberg RL. *Anxiety Disorders and Phobias: A Cognitive Perspective*. New York, NY: Basic Books; 1985
- [30] Franklin JC, Ribeiro JD, Fox KR, et al. Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin*. 2017;**143**(2):187-232. DOI: 10.1037/bul0000084
- [31] Vandello JA, Bosson JK, Cohen D, Burnaford RM, Weaver JR. Precarious manhood. *Journal of Personality and Social Psychology*. 2008;**95**(6):1325-1339. DOI: 10.1037/a0012453
- [32] Kaplan Serin E, Doğan R. The relationship between anxiety and hopelessness levels among nursing students during the COVID-19 pandemic and related factors. *Omega (Westport)*. 2021;302228211029144. DOI: 10.1177/00302228211029144 [Published online ahead of print, 2021 Jul 4]
- [33] Sedgwick R, Epstein S, Dutta R, Ougrin D. Social media, internet use and suicide attempts in adolescents. *Current Opinion in Psychiatry*. 2019;**32**(6):534-541. DOI: 10.1097/YCO.0000000000000547
- [34] Whitlock JL, Powers JL, Eckenrode J. The virtual cutting edge. *Developmental Psychology*. 2006;**42**(3):407-417
- [35] Baume P, Cantor CH, Rolfe A. Cybersuicide: The role of interactive suicide notes on the Internet. *Crisis*. 1997;**18**(2):73-79
- [36] Webb M, Burns J, Collin P. Providing online support for young people with mental health difficulties: Challenges and opportunities explored. *Early Intervention in Psychiatry*. 2008;**2**(2):108-113
- [37] Luxton DD, June JD, Fairall JM. Social media and suicide: A public health perspective. *American Journal of Public Health*. 2012;**102**(Suppl. 2): S195-S200. DOI: 10.2105/AJPH.2011.300608
- [38] Forum on Global Violence Prevention; Board on Global Health; Institute of Medicine; National Research Council. *Contagion of Violence: Workshop Summary*. Washington (DC): National Academies Press (US); 2013 II.4, The contagion of suicidal behavior. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK207262/>
- [39] Memon AM, Sharma SG, Mohite SS, Jain S. The role of online social networking on deliberate self-harm and suicidality in adolescents: A systematized review of literature. *Indian Journal of Psychiatry*. 2018;**60**(4):384-392. DOI: 10.4103/psychiatry.IndianJPsychiatry_414_17
- [40] Chassiakos YLR, Radesky J, Christakis D, Moreno MA, Cross C. Council on communication and media. *Pediatrics*. 2016;**138**(5):e20162593. DOI: <https://pediatrics.aappublications.org/content/138/5/e2016259>
- [41] Teen sexting linked to sexual activity, thoughts of suicide. *NBC News*. 2011. Available from: <https://www.nbcnews.com/id/wbna44819455>. [Accessed: September 1, 2021]

[42] Gassó AM, Klettke B, Agustina JR, Montiel I. Sexting, mental health, and victimization among adolescents: A literature review. *International Journal of Environmental Research and Public Health*. 2019;**16**(13):2364. DOI: 10.3390/ijerph16132364

[43] Ybarra ML, Mitchell KJ. "Sexting" and its relation to sexual activity and sexual risk behavior in a national survey of adolescents. *The Journal of Adolescent Health*. 2014;**55**(6):757-764. DOI: 10.1016/j.jadohealth.2014.07.012