Short communication

Psychological distress during the COVID-19 lockdown: The young adults most at risk

F. Glowacz*, E. Schmits

Psychologie Clinique de la délinquance, Unité de Recherche Adaptation, Résilience et Changement (ARCh), Faculté de Psychologie, Logopédie et Sciences de l'Education (FPLSE), Université de Liège, Belgium

ARTICLE INFO

ABSTRACT

To control the COVID-19 pandemic, governments have implemented restrictions. This study evaluates psychological distress related to the crisis and identifies predictive factors of anxiety/depression according to age. 2,871 adults were recruited through an online questionnaire during the lockdown. Three subsamples were identified: 18–30; 30–50; > 50 years. The population suffers from anxiety and depression. Young adults adu reported lower levels of living space, occupational activity, social contact and alcohol use, but higher anxiety, depression and uncertainty than older participants. This psychological distress can be explained by lockdown conditions (differently according to age) and by intolerance to uncertainty. Also, youth's alcohol intake has decreased. Deconfinement strategies have been discussed.

1. Introduction

On March 11, 2020, the WHO declared the COVID-19 outbreak as a pandemic as the virus spread worldwide. Governments across the world have imposed restrictive measures, such as lockdowns, social distancing and voluntary self-isolation (Huang and Zhao, 2020; Hossain et al., 2020; Sharma et al., 2020; Brooks et al., 2020), preventing the transmission. These measures have disrupted people's lives and jobs, and have implications for health and wellbeing (Liu et al., 2020; Qiu et al., 2020; Zhang et al., 2020; Cao et al., 2020). Studies have reported high levels of depressive and anxiety symptoms, poor sleep quality, especially in young (Huang and Zhao, 2020). Predictors of distress related to containment may vary across countries (Jahanshahi et al., 2020). For Belgium, France and Quebec, lockdowns were declared on mid-March and progressive deconfinement was organized from May 4 onwards. As psychological risks and impacts differed across age and countries, it is important to understand what has determined psychological distress in confined people by age category in order to have an idea of the issues that may appear during deconfinement.

Uncertainty remains a component of any pandemic crisis, with the serious threat the COVID-19 epidemic poses to people's physical health and lives, as well as the impossibility of knowing in advance the duration of containment, the real risk of being contaminated, the symptomatic manifestations of the virus and the consequences at personal, economic and societal levels. Intolerance of uncertainty may be a risk factor for depression and anxiety (Freeston et al., 1994; Carleton et al., 2012). Population has to cope with confinement, impacting people's psychological state and substance use behaviors. Digital technologies and internet-based medias and applications (such as Zoom, Skype, WhatsApp and FaceTime) could bridge social distance and allow for the maintenance of social interactions (Merchant et al., 2020; Galea et al., 2020). This would be a protective factor for distress. Also, the COVID-19 pandemic is likely to increase substance use. Stress is a prominent risk factor for the onset and maintenance of alcohol misuse but the potential public health effects of long-term isolation on alcohol use are unknown (Clay and Parker, 2020).

The main purpose of this study is to measure the psychological distress related to the COVID-19 crisis and public health measures associated with its containment, and to provide mental health intervention policies to cope with this challenge. This study proposes to assess the association between the proximity to contamination, lockdown conditions, alcohol use and intolerance to uncertainty, and anxiety and depressive symptoms separately among youth, middle-aged and older populations.

* Corresponding author at: Service de Psychologie Clinique de la délinquance, Faculté de Psychologie, Université de Liège. Quartier Agora, Place des Orateurs, 1 (B33). B-4000 Liège, Belgium.
E-mail address: fabienne.glowacz@uliege.be (F. Glowacz).

2. Methods

2.1. Participants

2871 adults (79% women) were recruited in the general population through an online self-report questionnaire. Participants were aged between 18 and 85 years ($M = 33.67$, $SD = 15.35$). Three age groups were identified: 18–30 years ($n = 1479$, 51.5% of the sample), 30–50 years ($n = 885$, 30.8%) and 50 years and more ($n = 507$, 17.6%). 84.5% of participants live in Belgium, 14.8% in another French-speaking country (mainly France and Canada).

2.2. Materials and measures

Data were obtained through an online self-report questionnaire (approved by the Ethics Committee of the Faculty of Psychology of the University of Liège) completed during the lockdown (from April 17 to May 1, 2020). Sociodemographic data and lockdown conditions were assessed: the living environment (surface area of the accommodation, the availability of a terrace/garden), professional situation (student, working from home, usual workplace, no work), loss of financial income (Yes/no). Occupational activity was estimated through 11 items on a 4-points Likert scale evaluating several daily activities such as reading or watching TV ($\alpha = 0.51$; $M = 24.31$; $SD = 4.39$; $min = 11$; $max = 44$). The frequency of social contact was assessed through 7 items on a 4-points Likert scale evaluating contact with friends, family, colleagues and so on through digital media ($\alpha = 0.54$; $M = 16.17$; $SD = 3.66$; $min = 7$; $max = 28$). The primary (oneself) and the secondary (a close person) coronavirus contaminations were specified with three modalities (not infected, infected but not tested, tested positive for the coronavirus) and a score of proximity to contamination was determined ($M = 0.92$; $SD = 1.63$; $min = 0$; $max = 8$). Validated measures were adapted to the context of the COVID-19 crisis and the related-lockdown. Alcohol use was assessed through an adapted AUDIT-C questionnaire (Bush et al., 1998) ($M = 2.5$; $SD = 1.18$; $min = 1$; $max = 5$). Changes in alcohol use was assessed: decrease, stability and increase. Anxiety and depression were evaluated by the Hospital Anxiety and Depression scale (HAD, Zigmond and Snaith, 1983) with seven items for anxiety ($\alpha = 0.81$; $M = 7.15$; $SD = 4.14$; $min = 0$; $max = 21$) and seven for depression ($\alpha = 0.67$; $M = 7.88$; $SD = 3.60$; $min = 0$; $max = 21$). Cut-off points are 8 and 11 (Bjelland et al., 2002). Two items of the Intolerance of Uncertainty Scale (Freeston et al., 1994) have been included ($\alpha = 0.74$; $M = 6.85$; $SD = 2.01$; $min = 2$; $max = 10$). A question evaluating if the person had consulted a psychologist during the lockdown (Yes/No) was also added.

2.3. Data analysis

SPSS 26 software was used to, first, perform descriptive statistics, consistency reliability and Kruskal-Wallis one-way analysis of variance (age group comparison). Second, to predict anxiety and depression, two distinct models were tested (multiple regressions), separately for three subsamples (18–30 years; 30–50 years and >50 years). Statistical significance was set at $p < .05$.

3. Results

Descriptive statistics are shown in Table 1. With the exception of gender, the three age groups' profiles significantly differ from each other. Participants aged 18–30 years reported significantly lower levels of living environment, occupational activity, social contacts, frequency and quantity of alcohol use, but higher levels of anxiety, depression and uncertainty than older participants. Note that 45% of young, 37% of middle-aged and 25% of older participants presented anxiety symptoms. Respectively, 56%, 49% and 43% reported depressive symptoms.

After controlling for gender ($p > .05$), higher rates of anxiety have been reported among (1) young with higher levels of proximity to contamination ($\beta = 0.05$, $p = .01$), social contact through digital media ($\beta = 0.07$, $p = .001$) and intolerance of uncertainty ($\beta = 0.53$, $p < .001$), and less frequent use of alcohol ($\beta = -0.05$, $p = .02$) (environment and occupation are not significant); (2) middle-aged people with higher levels of social contact through digital media ($\beta = 0.11$, $p = .001$) and intolerance of uncertainty ($\beta = 0.41$, $p < .001$) (proximity to contamination, environment, occupation and alcohol use are not significant); (3) older people with higher levels of occupational activity ($\beta = 0.08$, $p = .03$) and intolerance of uncertainty ($\beta = 0.53$, $p < .001$), and a lower level of living environment ($\beta = -0.08$, $p = .04$) (proximity to contamination, social contact and alcohol use are not significant).

After controlling for gender ($p > .05$), results also shown higher rates of depression among (1) young with higher levels of intolerance to uncertainty ($\beta = 0.37$, $p < .001$), and lower levels of living environment ($\beta = -0.07$, $p = .004$), occupational activity ($\beta = -0.12$, $p < .001$) and social contact through digital media ($\beta = -0.07$, $p = .004$) (proximity to contamination and alcohol use are not significant); (2) middle-aged people with higher levels of intolerance of uncertainty ($\beta = 0.35$, $p < .001$), and a lower level of occupational activity ($\beta = -0.16$, $p < .001$) (proximity to contamination, environment, social contact and alcohol use are not significant); (3) older people with higher levels of intolerance of uncertainty ($\beta = 0.39$, $p < .001$), and a lower level of living environment ($\beta = -0.13$, $p = .001$) and social contact through digital media ($\beta = -0.10$, $p = .01$) (proximity to contamination, occupation and alcohol use are not significant). Note that beta coefficient are relatively low, expected for intolerance to uncertainty.

4. Discussion

A considerable percentage of the population suffers from anxiety and depressive symptoms related to the COVID-19 lockdown and it can be explained by an intolerance of uncertainty, whatever the age of the people. This intolerance of uncertainty in itself can increase the level of psychosocial comorbidity (Freeston et al., 1994; Carleton et al., 2012, 2020; Sim and Chua, 2004; Sankar et al., 2017).

Reducing uncertainty is necessary to reduce anxiety and depressive symptoms. Uncertainty tends to increase fear (Mertens et al., 2020; Hancock and Mattick, 2020). Effective health communication could mitigate uncertainty by providing the general public with clear information and sticking to the facts as much as possible (Van der Bles et al., 2020); consistent and specific information by avoiding fear-based communication and instructions (Finset et al., 2020). The communication should rather be empathic, by acknowledge the impact of the situation for individuals' emotions and lives (Shen, 2010; Finset et al., 2020). During the deconfinement process, communicating clear, unambiguous messages about social behaviours, notably, in relation to the wearing of masks, face to face and touch contact, the conditions for frequenting bars, will also help reduce uncertainty.

Young people are the most impacted by the COVID-19 lockdown (Huang and Zhao, 2020). Proximity to contamination (only for young people), an overload of contact through social networks and a high intolerance of uncertainty increases anxiety in this population. Half of the present young subsample is made up of students who are consumed by major uncertainties regarding their future and educational perspectives.

Young people can develop creative solutions and new skills to deal with the pandemic, but they are nevertheless the most psychologically troubled. Contact through digital media is anxiety-provoking for them and cannot replace face-to-face contact. Young adults were the least to seek psychological help via visio-consultation. Distance education and examinations could increase their level of uncertainty and stress, either because these involve new teaching and assessment modalities as yet unknown to them, or because distance supervision, communication and monitoring by teachers has not been sufficiently clear, structured and reassuring.

Table 1

Descriptive statistics, Chi-square tests and Kruskal-Wallis one-way analysis of variance between the three subsamples.

	Modalities	(1) 18–30 years $n = 1479$ % (n)	(2) 30–50 years $n = 885$ % (n)	(3) > 50 years $n = 507$ % (n)
Gender	Women	80.8 (1174)	80.2 (701)	76.1 (385)
Profession**	Student	49.8 (723)	2.1 (19)	0.4 (2)
	Homeworking	23.8 (346)	56.8 (503)	37.4 (188)
	Usual workplace	9.7 (141)	17.3 (153)	14.3 (72)
	No work	16.7 (242)	23.7 (210)	47.9 (241)
Loss of income**	Yes	27.9 (405)	22.9 (203)	17.7 (89)
Changes in alcohol use**	Decrease	29.9 (420)	14.6 (127)	12.3 (60)
	Stability	52.5 (738)	51.4 (446)	65 (317)
	Increase	17.6 (248)	33.9 (294)	22.7 (111)
Psychologist**	Yes	6.1 (77)	9 (71)	5.7 (25)
	Comparisons	**m (SD)**	**m (SD)**	**m (SD)**
Proximity to contamination		.88 (1.57)	.98 (1.68)	.92 (1.65)
Living environment**	1–2; 1–3; 2–3	5.24 (1.95)	5.50 (1.72)	5.86 (1.64)
Occupational activity**	1–2; 1–3; 2–3	23.01 (3.91)	26.40 (4.62)	24.39 (3.83)
Social contacts**	1–2	15.86 (3.61)	16.62 (3.67)	16.28 (3.73)
Frequency of alcohol use**	1–2; 1–3	2.28 (1.08)	2.66 (1.16)	2.85 (1.36)
Quantity of alcohol use*	1–3	1.28 (0.68)	1.27 (0.56)	1.34 (0.63)
Anxiety**	1–2; 1–3; 2–3	7.80 (4.41)	6.90 (3.79)	5.76 (3.52)
Depression**	1–2; 1–3	8.24 (3.57)	7.69 (3.66)	7.21 (3.47)
Uncertainty**	1–2; 1–3	7.19 (1.97)	6.60 (1.93)	6.31 (2.11)

Note 1. * $p < .05$. ** $p < .001$. Valid percentages have been taken into account, excluding missing data. The sum of the related n can therefore differ slightly from the total n.

Note 2. Comparisons = Multiple comparisons. This column shows the significant differences between groups ($p < .05$), using the Bonferroni correction.

It is important to propose clear guidelines for teachers to help them communicate with students, to offer access to infrastructure that will be conducive to their well-being, such free psychological consultations, and the promotion of access to sports and cultural centers. The government and schools should collaborate to provide high-quality, timely crisis-oriented psychological services to college students (Cao et al., 2020). Also, new studies are needed for help to inform student-centered support programs and mitigate the long-term negative implications (Gubric et al., 2020; Van Daele et al., 2020), also for employed or unemployed youth.

Few studies on the consumption of alcohol in the general population during confinement have been published (Clay and Parker, 2020). Young people have drunk alcohol less often and in smaller quantities, but with an anxiolytic effect. The symptoms of older people are not affected by alcohol use. Alcohol is not a common mean of combating anxiety/depression in the whole population in a locked-up situation. Although half the population did not change their alcohol consumption habits during the lockdown, a larger percentage of young have decreased their alcohol consumption than increased it. But a larger percentage of middle-aged and older people have seen an increase in their alcohol consumption habits. Alcohol use among young should mainly take place in social contexts, whereas older people increase their alcohol use to cope with the lack of contact. The potential public health effects of long-term isolation on alcohol use and misuse are unknown (Clay and Parker, 2020). It has to be kept in check and under review during the post-confinement period. Government officials should provide public health warnings about the risk of excessive consumption in social contexts among young adults and the possibility that older adults maintain their currently increased level of alcohol use. Psychological first aid (Haider et al., 2020; Garrido et al., 2019) could be helpful to reduce mental health discomfort caused by the COVID-19 crisis.

To conclude, we need to consider different age groups when developing strategies for deconfinement as well as the importance of targeting 18–30-year-olds, who have been especially vulnerable. Distress due to intolerance of uncertainty has affected the community, and we need to carefully calibrate communication and deconfinement policies by taking this central dimension into account.

Ethics approval statement

All respondents agreed to participate in the study, which was approved by the ethics committee at Liege University.

Source of funding

No funding was received.

Declaration of Competing Interest

The authors declare no competing interests.

References

Bjelland, I., Dahl, A., Haug, T., Neckelmann, D., 2002. The validity of the Hospital Anxiety and Depression Scale. An updated literature review. J Psychosom Res. 52, 69–77. https://doi.org/10.1016/s0022-3999(01)00296-3.

Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N., Rubin, G.J., 2020. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. The Lancet. 395, 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8.

Bush, K., Kivlahan, D.R., McDonell, M.B., Fihn, S.D., Bradley, K.A., 1998. The AUDIT Alcohol Consumption Questions (AUDIT-C): an Effective Brief Screening Test for Problem Drinking. Arch Intern Med. 158 (16), 1789–1795. https://doi.org/10.1001/archinte.158.16.17892909.99.1.20.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., Zheng, J., 2020. The psychological impact of the COVID-19 epidemic on college students in China. Psychiatry Res. 287, 112934. https://doi.org/10.1016/j.psychres.2020.112934.

Carleton, R.N., Mulvogue, M.K., Thibodeau, M.A., McCabe, R.E., Antony, M.M., Asmundson, G.J., 2012. Increasingly certain about uncertainty: intolerance of uncertainty across anxiety and depression. J Anxiety Disord. 26 (3), 468–479. https://doi.org/10.1016/j.janxdis.2012.01.011.

Clay, J.M., Parker, M.O., 2020. Alcohol use and misuse during the COVID-19 pandemic: a potential public health crisis? The Lancet Public Health 5, E259. https://doi.org/10.1016/S2468-2667(20)30088-8.

Finset, A., Bosworth, H., Butow, P., Gulbrandsen, P., Hulsman, R.L., Pieterse, A.H., ..., & van Weert, J. (2020). Effective health communication–a key factor in fighting the COVID-19 pandemic. Patient Education and Counseling, 103(5), 873. 10.1016/j.pec.2020.03.027.

Freeston, M.H., Rhéaume, J., Letarte, H., Dugas, M.J., Ladouceur, R., 1994. Why do people worry? Pers Individ Dif. 17 (6), 791–802. https://doi.org/10.1016/0191-8869(94)90048-5.

Freeston, M.H., Tiplady, A., Mawn, L., Bottesi, G., Thwaites, S., 2020. Towards a model of uncertainty distress in the context of Coronavirus (Covid-19). Preprints.

Galea, S., Merchant, R.M., Lurie, N., 2020. The mental health consequences of COVID-19 and physical distancing: the need for prevention and early intervention. JAMA Internal Medicine. https://doi.org/10.1001/jamainternmed.2020.1562. Published online April 10, 2020.

Garrido, S., Millington, C., Cheers, D., Boydell, K., Schubert, E., Meade, T., Nguyen, Q.V., 2019. What works and what doesn't? A systematic review of digital mental health interventions for depression and anxiety in young people. Front Psychiatry 10, 759. https://doi.org/10.3389/fpsyt.2019.00759.

Grubic, N., Badovinac, S., Johri, A.M., 2020. Student mental health in the midst of the COVID-19 pandemic: a call for further research and immediate solutions. Int. J Soc. Psychiatry 1–2 0020764020925108.

Haider, I.I., Tiwana, F., Tahir, S.M., 2020. Impact of the COVID-19 Pandemic on Adult Mental Health. Pak J Med Sci. 36 (COVID19–S4). https://doi.org/10.12669/pjms.36.COVID19-S4.2756.

Hancock, J., Mattick, K., 2020. Tolerance of ambiguity and psychological well-being in medical training: a systematic review. Med Educ. 54 (2), 125–137. https://doi.org/10.1111/medu.14031.

Hossain, M.M., Sultana, A., Purohit, N., 2020. Mental health outcomes of quarantine and isolation for infection prevention: a systematic umbrella review of the global evidence. Available at SSRN 3561265.

Huang, Y., Zhao, N., 2020. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 epidemic in China: a web-based cross-sectional survey. Psychiatry Res. 288, 112954. https://doi.org/10.1016/j.psychres.2020.112954.

Jahanshahi, A.A., Dinani, M.M., Madavani, A.N., Li, J., Zhang, S.X., 2020. The distress of Iranian adults during the Covid-19 pandemic–More distressed than the Chinese and with different predictors. Brain Behav. Immun. https://doi.org/10.1016/j.bbi.2020.04.081.

Liu, S., Yang, L., Zhang, C., Xiang, Y.T., Liu, Z., Hu, S., Zhang, B., 2020. Online mental health services in China during the COVID-19 outbreak. The Lancet Psychiatry 7 (4), e17–e18.

Merchant, R.M., Lurie, N, 2020. Social media and emergency preparedness in response to novel coronavirus. JAMA. https://doi.org/10.1001/jama.2020.4469.

Mertens, G., Gerritsen, L., Salemink, E., Engelhard, I., 2020. Fear of the coronavirus (COVID-19): predictors in an online study conducted in March 2020. Preprint. doi: 10.31234/osf.io/2p57j.

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., Xu, Y., 2020. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. General psychiatry 33 (2), 100213. https://doi.org/10.1136/gpsych-2020-100213.

Sankar, R., Robinson, L., Honey, E., Freeston, M.H., 2017. We know intolerance of uncertainty is a transdiagnostic factor but we don't know what it looks like in everyday life: a systematic review of intolerance of uncertainty behaviours. Clin. Psychol. Forum 296, 10–15.

Sharma, A., Pillai, D.R., Lu, M., Doolan, C., Leal, J., Kim, J., Hollis, A., 2020. Impact of isolation precautions on quality of life: a meta-analysis. J. Hosp. Infect. 15 (1), 35–42. https://doi.org/10.1016/j.jhin.2020.02.004.

Shen, L., 2010. Mitigating psychological reactance: the role of message-induced empathy in persuasion. Hum. Commun. Res. 36, 397–422. https://doi.org/10.1111/j.1468-2958.2010.01381.x. 2010.

Sim, K., Chua, H.C., 2004. The psychological impact of SARS: a matter of heart and mind. Can Med Assoc J 170 (5), 811–812. https://doi.org/10.1503/cmaj.1032003.

Van Daele, T., Karekla, M., Kassianos, A.P., Compare, A., Haddouk, L., Salgado, J., …, De Witte, N.A.J., 2020. Recommendations for policy and practice of tele psychotherapy and e-mental health in Europe and beyond. J Psychother. Integr. https://doi.org/10.1037/int0000218.

Van Der Bles, A.M., van der Linden, S., Freeman, A.L., Spiegelhalter, D.J., 2020. The effects of communicating uncertainty on public trust in facts and numbers. Proc. Natl Acad. Sci. 117 (14), 7672–7683. https://doi.org/10.1073/pnas.1913678117.

Zhang, S.X., Wang, Y., Rauch, A., Wei, F., 2020. Health, distress and life satisfaction of people in China one month into the COVID-19 outbreak. Psychiatry Res 288, 112958. https://doi.org/10.1016/j.psychres.2020.112958.

Zigmond, A.S., Snaith, R.P., 1983. The Hospital Anxiety and Depression Scale. Acta Psychiatr. Scand. 67, 361–370.