The lack of instruments or scales developed or validated in Portuguese for the Brazilian cultural context, as well as the impossibility of objectively identifying and measuring tokophobia, make adequate therapeutic guidance difficult.

A systematic review and meta-analysis was performed of the risk factors. The perception of tokophobia was assessed among pregnant women and prenatal health care professionals to identify the peculiarities of tokophobia in the Brazilian socio-cultural and clinical-obstetric context. The conceptual and psychometric analysis process allowed the development and validation of the Tokophobia Assessment Questionnaire (Questionário de Avaliação da Partofobia) in Brazilian Portuguese, available from the authors upon request. This research project was approved by the Universidade do Sul de Santa Catarina research ethics committee (protocol 87312818.0.0000.5369).

The Tokophobia Assessment Questionnaire has been validated[5]; its reliability was measured with the Pearson correlation coefficient (0.766) and the intraclass correlation coefficient (0.856). Bland-Altman analysis showed a central tendency between the difference and mean of the two Tokophobia Assessment Questionnaire applications in almost the entire sample. The general Cronbach's alpha was 0.935 (Table 1). The Kappa index was 0.444 and the Pearson correlation coefficient between the first application of the Tokophobia Assessment Questionnaire and the Depression, Anxiety and Stress Scale was 0.607. Exploratory factor analysis identified six factors categorized into conceptual groups: physical repercussions (factor 1); feeling of panic (factor 2); social involvement (factor 3); interference in daily habits (factor 4); pregnancy avoidance (factor 5); self-perception of tokophobia (factor 6) (Table 1). Use of the item response theory demonstrated the suitability of all items (Figure 1).

Therefore, the 25-item Tokophobia Assessment Questionnaire is reliable and valid and is the first instrument for assessing the clinical, emotional and psychiatric manifestations of tokophobia. Although developed for the Brazilian population, the instrument may have worldwide applicability.

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References

1 Aksoy AN, Aydin F, Kucur SK, Gözükara I. Maternal and fetal Doppler velocimetry in women diagnosed with fear of childbirth. Niger J Clin Pract. 2016;19:632-5.
2 Thomson G, Stoll K, Downe S, Hall WA. Negative impressions of childbirth in a North-West England student population. J Psychosom Obstet Gynaecol. 2017;38:37-44.
3 Hamama-Raz Y, Sommerfeld E, Ken-Dror D, Lacher R, Ben-Ezra M. The role of intra-personal and inter-personal factors in fear of childbirth: a preliminary study. Psychiatr Q. 2017;88:385-96.
4 Smith V, Gallagher L, Carroll M, Hannon K, Begley C. Antenatal and intrapartum interventions for reducing caesarean section, promoting vaginal birth, and reducing fear of childbirth: an overview of systematic reviews. PLoS One. 2019;14:e0224313.
5 Mokkink LB, Terwee CB, Patrick DL, Alonso J, Stratford PW, Knol DL, et al. COSMIN checklist manual [Internet]. 2012 Jn [cited 2020 Jul 13]. fac.ksu.edu.sa/sites/default/files/cosmin_checklist_manual_v9.pdf

Hikikomori and the COVID-19 pandemic: not leaving behind the socially withdrawn

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The coronavirus disease 2019 (COVID-19) pandemic, which started in China in December 2019 and rapidly spread worldwide, has required most world leaders to take measures to contain and control the spread of the virus, including social distancing and mass quarantine.[1] However, these interventions are likely to produce a considerable burden on the mental health of affected populations.[2] In the past few months, teams of investigators have been joining efforts to arrive at a more comprehensive understanding of the mental health consequences of the COVID-19 outbreak. Nevertheless, it would be important to add discussion about the potential impact that such measures may have on the prevalence of a relatively new psychiatric disorder called *hikikomori* or "pathological social withdrawal."

Hikikomori was initially reported in Japan in the 1990s and is described as a condition of prolonged and severe social withdrawal lasting for at least six months, apparently not better explained by co-occurring severe psychiatric disorders.[3,4] In most cases, the affected individual, usually a young male, remains isolated in his own house, or in his own room in more severe cases.[4] Although it was initially considered a Japanese cultural

syndrome, over the years it has been reported in a variety of countries around the world, gaining the status of a public health problem in Asia, with prevalence estimates in community populations varying from 0.87 to 2.3%.[3-5] Although it is not possible to make inferences about causality in *hikikomori* cases, it seems that technology and the Internet are associated with this diagnosis.[4,6] Additionally, comorbid psychiatric conditions have been reported in many hikikomori cases, and these patients may be at increased suicide risk.[4,6] Family interventions, comorbidity treatment, online interventions, physical activity, multiple psychotherapeutic approaches, social skills training, etc., have been indicated as potentially useful strategies for *hikikomori* cases.[3,7-11] Nevertheless, the evidence to support these treatment approaches is weak, mainly due to a lack of studies on the topic.[3,6]

In 2020, updated diagnostic criteria[4] were proposed for *hikikomori*, with the inclusion of a severity classification based on the weekly frequency the individual leaves his home or room. Physical isolation at home is regarded as the central characteristic of the syndrome, which can be diagnosed only when all the following criteria are met: ''a) marked social isolation in one's home; b) duration of continuous social isolation of at least 6 months; c) significant functional impairment or distress associated with the social isolation.'' Per definition, only individuals who leave home 3 or less days/week, for a prolonged period of time as stated above, can be defined as *hikikomori.*[4] Even though loneliness is not one of the mandatory diagnostic criteria of the syndrome, it is a characteristic that becomes more pronounced with increasing continuous social withdrawal.[4,10]

The prevalence of *hikikomori* in Brazil is unknown due to a lack of empirical research on the phenomenon; however, the syndrome has been reported three times in Brazilian patients.[9,12,13] Recently, our group described the complete treatment program for one of these cases. The patient reported substantial clinical improvement after a multimodal intervention strategy, including pharmacological treatment of comorbidities, family psychoeducation, and the use of different psychotherapy techniques.[9]

Considering this scenario, we hypothesized that strict confinement measures may have relevant negative consequences on *hikikomori* cases, and the syndrome is likely to grow in prevalence. Young people, not only those with pathological social withdrawal, may increase the time spent gaming or on the Internet, factors potentially associated with the syndrome.[4,6] In Italy, for instance, empirical data described an increase in the use of digital media near bedtime during the lockdown.[14] Another important point of discussion is the expected increase of new technology-dependent habits during the COVID-19 pandemic that may persist in the aftermath of the pandemic, such as online shopping, food delivery, online education courses, exclusively online social interaction, and online medical and psychological appointments. Such life habits may be associated with *hikikomori* cases and could further increase their prevalence in the near future.[6,8] The rise in prevalence of psychiatric symptoms and disorders also may result in more *hikikomori* cases. Studies from China highlighted a substantial increase in anxiety and depression[15] during the COVID-19 outbreak, with a depression prevalence of 43.7% among Chinese adolescents.[16]

It is also necessary to assess how painful and emotionally distressing quarantine and social distancing measures are for *hikikomori* cases in comparison to other populations. Although it could be that populations that were socially withdrawn prior to the pandemic may not suffer as much, empirical data from Spain indicated loneliness as the strongest predictor of depression, PTSD and anxiety during the COVID-19 outbreak.[17]

Despite the lack of empirical data, families and health professionals should be vigilant about the potential increased risk of *hikikomori* among young people during and after the COVID-19 pandemic. Exercising at home, maintaining a healthy diet, and limiting screen time are all lifestyle behaviours that have been recommended during this pandemic[18] and are likely to promote better mental health outcomes. They may also have a positive impact on individuals at risk for *hikikomori*. In addition, once the pandemic is over, parents could focus on fostering outdoor activities and face-to-face interaction.

Social isolation has been growing in prevalence over the past decades, which has led some authors to say that we have been facing a silent and rising epidemic, potentially associated with other serious contemporary epidemics such as suicide and opioid use, called the ''modern behavioral epidemic of loneliness.''[19] *Hikikomori*, likewise, could be considered a rising and silent epidemic during and in the aftermath of the COVID-19 pandemic, since physical and social isolation is likely to increase. Therefore, it is essential not to further isolate this population in terms of clinical and scientific efforts.

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References

1 Wilder-Smith A, Freedman DO. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. J Travel Med. 2020;27:taaa020.
2 Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. 2020;395:912-20.
3 Li TM, Wong PW. Youth social withdrawal behavior (Hikikomori): a systematic review of qualitative and quantitative studies. Aust N Z J Psychiatry. 2015;49:595-609.
4 Kato TA, Kanba S, Teo AR. Defining pathological social withdrawal: proposed diagnostic criteria for hikikomori. World Psychiatry. 2020; 19:116-7.
5 Pozza A, Coluccia A, Kato T, Gaetani M, Ferretti F. The 'Hikikomori' syndrome: worldwide prevalence and co-occurring major psychiatric disorders: a systematic review and meta-analysis protocol. BMJ Open. 2019;9:e025213.
6 Kato TA, Shinfuku N, Tateno M. Internet society, internet addiction, and pathological social withdrawal: the chicken and egg dilemma for internet addiction and Hikikomori. Curr Opin Psychiatry. 2020;33:264-70.
7 Kubo H, Urata H, Sakai M, Nonaka S, Saito K, Tateno M, et al. Development of 5-day Hikikomori intervention program for family members: a single-arm pilot trial. Heliyon. 2020;6:e03011.
8 Wong JC, Wan MJ, Kroneman L, Kato TA, Lo TW, Wong PW, et al. Hikikomori phenomenon in East Asia: regional perspectives, challenges, and opportunities for social health agencies. Front Psychiatry. 2019;10:512.
9 Roza TH, Spritzer DT, Lovato LM, Passos IC. Multimodal treatment for a Brazilian case of Hikikomori. Braz J Psychiatry. 2020;42:455-6.
10 Kato TA, Kanba S, Teo AR. Hikikomori: multidimensional understanding, assessment, and future international perspectives. Psychiatry Clin Neurosci. 2019;73:427-40.
11 Nishida M, Kikuchi S, Fukuda K, Kato S. Jogging therapy for Hikikomori social withdrawal and increased cerebral hemodynamics: a case report. Clin Pract Epidemiol Ment Health. 2016;12:38-42.
12 Gondim FA, Aragão AP, Holanda Filha JG, Messias EL. Hikikomori in Brazil: 29 years of voluntary social withdrawal. Asian J Psychiatr. 2017;30:163-4.
13 Prioste CD, de Siqueira RC. Fetichismo virtual na vida de um Hikikomori brasileiro: um estudo de caso. DOXA: Rev Bras Psicol Educ. 2019;21:4-16.
14 Cellini N, Canale N, Mioni G, Costa S. Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. J Sleep Res. 2020 May 15;e13074. doi: http://10.1111/jsr.13074. Online ahead of print.
15 Li J, Yang Z, Qiu H, Wang Y, Jian L, Ji J, et al. Anxiety and depression among general population in China at the peak of the COVID-19 epidemic. World Psychiatry. 2020;19:249-50.
16 Zhou SJ, Zhang LG, Wang LL, Guo ZC, Wang JQ, Chen JC, et al. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. Eur Child Adolesc Psychiatry. 2020;29:749-58.
17 González-Sanguino C, Ausín B, Castellanos MA, Saiz J, López-Gómez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. Brain Behav Immun. 2020;87:172-6.
18 Balanzá-Martínez V, Atienza-Carbonell B, Kapczinski F, De Boni RB. Lifestyle behaviours during the COVID-19 – time to connect. Acta Psychiatr Scand. 2020;141:399-400.
19 Jeste DV, Lee EE, Cacioppo S. Battling the modern behavioral epidemic of loneliness: suggestions for research and interventions. JAMA Psychiatry. 2020 Mar 4. doi: http://10.1001/jamapsychiatry.2020.0027. Online ahead of print.

Working during pandemics: the need for mental health efforts to prevent the outbreak of mental disorders at the workplace

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The coronavirus disease 2019 (COVID-19) pandemic has imposed an imperative need for immediate changes in many economic, educational, religious, cultural, and other practices of daily life. This outbreak has specific potential to heighten stressful conditions at work because of economic instability and uncertainty, the need to reconcile old and new demands, and the aforementioned changes in the workplace. According to Hamouche,[1] COVID-19 has the potential to expose workers to stressful conditions such as infobesity (information overload), financial loss, job insecurity, the negative effects of social distancing, and potential stigma directed to those associated with the disease because of their ethnicity or occupation (e.g., health professionals). As pointed out by Burdorf et al.,[2] the COVID-19 pandemic poses an enormous occupational health challenge, since the risk of becoming contaminated is a reality for several jobs which involve working in close proximity with colleagues and/or the general population, as well as, in some occupations, regular exposure to the disease. This very real scenario of risk introduces a new stressor – namely, the fear of contagion among employees. Furthermore, even those jobs amenable to working from home pose the challenge of having to adapt one's routine, leading to additional work-related stress.

The pandemic is affecting the mental health of the general population, and this impact is expected to be greater in some individuals (e.g., specific age groups, people with underlying diseases which place them in the high-risk group, people with preexisting mental health disorders) than in others.[3] In some cases, occupational demands may cause additional distress by preventing workers from following social distancing recommendations, placing them at permanent risk of contagion. Such workers must remain constantly vigilant of preventive measures, which increases their risk of psychological overload and distress. Health professionals are particularly susceptible to this, since they are exposed to a high risk of contagion through contact with patients and are