



Promoting mental health during the COVID-19 pandemic: the transtheoretical model of change and social marketing approach

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Abstract

The purpose of this paper is to illustrate how social marketers can use the Transtheoretical Model of Change to enhance their web-based campaigns promoting mental health during the COVID-19 Pandemic. The Transtheoretical Model of Change was adapted and applied in a COVID-19 mental health context and qualitative content analysis was conducted on 20 websites promoting mental health during the Pandemic from all around the world. Results show that campaigns vary in terms of their adherence to the Transtheoretical Model of Change. Some are very consistent, whereas others could benefit from incorporating specific relevant information. Particularly, the maintenance stage of change has been ignored by most websites analyzed. Designers of such campaigns could use this paper for inspiration, to check for the completeness of their websites, and to adapt their messages while the situation unfolds and individuals move from one stage of change to the next. Incorporating knowledge from a widely used and effective theoretical model is likely to make websites more successful in helping individuals maintain their mental health during the COVID-19 Pandemic.

Keywords Mental health · Campaigns · COVID-19 pandemic · Social marketing · Transtheoretical model of change · Stages of change model

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1 Introduction

While the COVID-19 pandemic continues to spread rapidly around the world, as of May 18 2021, over 163 million people have been infected and almost 3.4 million have died (WHO, 2021). Although many countries such as Israel, the U.K., the USA and Canada are in different stages of vaccinating their population, it is likely that it will be a while until things will get back to what they were before COVID-19. In addition, the mental health crisis of the pandemic may be more lasting than the more immediate epidemiological concerns.

Since the day the COVID-19 outbreak was declared as pandemic, vast numbers of studies have been published on its effects on mental health in a variety of disciplines ranging from psychology (Cao et al., 2020; Ferrucci et al., 2020; Kikuchi et al., 2020; Roma et al., 2020; Shi et al., 2020; Ye et al., 2020) and psychiatry (Zarghami, 2020) to economics (Codagnone et al., 2020). Indeed, this pandemic has been considered as one of the causational factors of mental disorders from its early stages (Taquet et al., 2020; Xiang et al., 2020) mostly due to the effects of overall restrictions, quarantine applications, panic and overloading of national healthcare systems (Szcześniak et al., 2021). Such factors combined with an unforeseen future and rapid boom of infected cases, have caused or aggravated mental health disorders such as posttraumatic stress (Bo et al., 2020; Kikuchi et al., 2020; Roma et al., 2020), depression (Shi et al., 2020) and anxiety (Paz et al., 2020; Zhu et al., 2020). These COVID-19 related mental health conditions not only affect the individual's personal life, but also make the application of restriction measurements such as curfews, social distancing and isolation much more difficult (Kikuchi et al., 2020), thus reducing the effectiveness of repressing the spread of the outbreak (Nishiuchi et al., 2017).

Due to this amplification of mental health issues, a number of countries have launched social marketing (SM) campaigns aiming at maintaining or/and improving mental health during the pandemic. Campaigns aiming to promote desired public health related behavior change are regarded as SM campaigns (Harris et al., 2019; Vecchiato et al., 2013). Websites are commonly used in promoting SM campaigns and sustaining desired behavior change; thus, evaluating the SM campaigns are often carried out by interpreting the websites with several criteria and tools (Mehmet et al., 2020; Rudov et al., 2017; Smith et al., 2015; Tobey et al., 2019; Zenone et al., 2020). The current research identified, selected and presented 20 such websites launched by inter-governmental, governmental and non-governmental organizations and qualitatively analyzed content to illustrate what has been undertaken globally to promote mental health during the pandemic. These campaigns were examined for consistency with an adapted Transtheoretical Model of Change (TTM), a widely used and effective health-related behavior change model. Combining literature from SM and clinical psychology, Levit et al. (2016) adapted the TTM (Brogan et al., 1999; Prochaska et al., 1992, 1994) and created a set of principles to guide the development of antidepressant websites. Current research further adapts these criteria points to include stress and anxiety, but more importantly, to fit the context of a pandemic, such as COVID-19. More

importantly, the current research addresses the intersection of two very important and timely topics, the COVID-19 pandemic and social marketing efforts to encourage positive mental health. Additionally, this work provides a detailed outline of possible mental-health related actions social marketers can take to employ the TTM for positive mental health during the current pandemic.

2 Theoretical framework

2.1 Transtheoretical model of change (TTM) for social marketers applied for websites of campaigns promoting mental health during COVID-19 pandemic

Levit et al. (2016) used TTM (Brogan et al., 1999; Prochaska et al., 1992, 1994), SM (Andreasen, 1995, 2004), and the mental health literature and developed a list of 25 criteria that designers of antidepressive campaign websites could use to strengthen their interventions. They also assessed how their proposed criteria are illustrated in five national comprehensive anti-depression campaigns from five English-speaking countries. Although effective social marketing of positive mental health may share substantial overlap with pre-COVID best practices, we further felt the need to adapt this integrated model to the COVID-19 pandemic context (see Table 1). However, our focus is on the practical aspects of applying the method as a social marketer seeking to encourage mental health and enabling others to complete a similar analysis to benefit their social marketing objectives, rather than advancing the theory *per se*.

We considered this combined TTM with SM as an appropriate framework to guide the development of websites aiming to improve the wellbeing of individuals with a focus on mental health during the COVID-19 pandemic for two main reasons. First, numerous studies including recent reviews (Hashemzadeh et al., 2019) show TTM's widespread applicability and effectiveness for a variety of behaviors such as physical activity, eating healthy, smoking and substance abuse, that influence mental health and are highly relevant during a pandemic. Second, TTM was tailored for campaign websites and therefore for mass media communication by incorporating SM techniques (Levit et al., 2016). Considering the speed at which events are developing and changing during a pandemic, websites are a main medium of communication. Similarly, public health concerns regarding issues such as vaccination (Kunze et al., 2019; Melovic et al., 2020), alcohol consumption (Sahadev et al., 2020), nutrition (Abdi et al., 2020; Vaughn et al., 2019), disease and infection control (Bauld, 2018; Gallivan et al., 2007; Mah et al., 2006; Pastrana et al., 2020), hand hygiene (Gould et al., 2010; Mah et al., 2006, 2008; Wilson et al., 2011), mask wearing, case contact tracing, social distancing and testing (Means et al., 2020), and public mental health concerns (Luck et al., 2009), all of which are highly relevant during the COVID-19 pandemic, often use SM techniques to promote behavior change.

The integrated TTM with SM model (Andreasen, 1995, 2004; Levit et al., 2016; Slater, 1999) states that behavioral change is not a two-step process, change or not change, instead, individuals move through a series of stages while modifying

Table 1 Appropriate messages for campaigns promoting mental health during the COVID-19 Pandemic (adapted from Levit et al., 2016)

Precontemplation (PCON)

- PCON1: Inform about signs (symptoms) of stress, anxiety and depression developed or aggravated by the COVID-19 Pandemic
- PCON2: Explain how COVID-19 has an impact on mental health. Provide self-assessment tools such as symptom checklists, True/False questionnaires, scenario uses, etc
- PCON3: Encourage people to recognize and admit mental health issues associated with the COVID-19 Pandemic and its associated measures using powerful emotional messages to get their attention
- PCON4: Provide awareness of mental health issues and increased risks of stress, anxiety and depression associated with COVID-19
- PCON5: Address stigma and remind people that it takes courage to admit mental health issues and to pursue change. Explain how unusual the situation is and how common it is to feel overwhelmed, anxious and depressed
- PCON6: Combat hopelessness and encourage hope (suggest that feeling better and help is possible). Provide stories or testimonials of people who acted and/or got help and improved their mental health and wellbeing in general
- PCON7: Provide examples of how life with less stress, anxiety and depression during COVID-19 can be. Explain how, although much cannot be controlled due to the measures associated with COVID-19 prevention, there are steps that can be pursued to make life better and bearable

Contemplation (CON)

- CON1: Introduce available options for dealing with stress, anxiety and depression during the pandemic, without a lot of detail
- CON2: Encourage readers to evaluate the effects of suggested behavioral change on their mental health and quality of life during the COVID-19 Pandemic
- CON3: Emphasize positive effects (for self and others) of changing. Provide testimonials of people who changed their behaviors and felt better
- CON4: Provide easy-to-adopt recommendations. Provide alternatives if costs are perceived to be high. Make it easy for people to adopt the recommended actions
- CON5: Encourage small actions to see improvement on mental health by increasing response efficacy (the belief that the adoption of the recommended actions will lead to the desired outcome), self-awareness and self-efficacy (the perception that the person is capable of following the recommendations). Encourage readers to access on-line tools, such as websites, health lines, and support groups. Help people prepare for a doctor's visit for their mental health if needed. Encourage use of self-observation when seeking help

Preparation (PREP)

- PREP1: Encourage the creation of a new life with new daily routines; a new self-image and positive self-evaluation
- PREP2: Promote more small steps to change the lifestyle and behavior (spending time outdoors, taking short walks, gardening, indoor exercises, meditation, new hobbies, taking a bath, calling a friend) to prevent mental health issues during the COVID-19 Pandemic
- PREP3: Encourage seeking professional help, give information on where to find help, provide contact numbers of telemedicine services, give more details on traditional treatment methods if available
- PREP4: Inform about alternative treatments and self-help, encourage the pursuit of lifestyle changes, and inform readers to seek individual support. Provide information about organizational support available from non-governmental bodies, charities, foundations, associations and civil societies
- PREP5: Encourage the creation of an action plan. Define the "new normal" and its rules with the framework of reopening
- PREP6: Ask people to commit to changes that "the new normal" will bring to the social life (i.e., putting the action plan in practice and telling others about it, setting a start date consistent with the reopening schedule declared by the state authorities)

Table 1 (continued)*Action (ACT)*

ACT1: Encourage people to follow their action plans in accordance with the “*new normal*” and with the framework of reopening

ACT2: Make people aware of the challenging situations that make action hard during the COVID-19 Pandemic and explain that the pandemic is an exceptional situation for human beings

ACT3: Provide ways for avoiding and preventing negative thought patterns, like finding positive ways of seeing situations and forming new beliefs (counter-conditioning), new healthy routines, hobbies, behavior substitution, stress reduction, and environmental management

ACT4: Praise people for their efforts and successes and encourage taking notice of the benefits of change and improvements—in respect to their mental health. Advise them to reward themselves in healthy ways, to accept rewards and to feel good about themselves—for making changes and improving their wellbeing

ACT5: Encourage people to watch what works or not for them; to become aware of warning signs of recurring mental health issues during the COVID-19 Pandemic and of appropriate responses to better cope with them

Maintenance (MAIN)

MAIN1: Destigmatize the recycling process; encourage people to view recurring mental health problems during the COVID-19 Pandemic as part of the natural course. Encourage people to stick to their new healthy routines even when they seem to feel better and/or when COVID-19 seems less of a threat

MAIN2: Encourage learning from setbacks, such as understanding what happened and what can be done differently next time

behavior (Prochaska et al., 1992, 1994). Different messages are appropriate for individuals found in different levels of readiness to change. Indeed, a first stage, the precontemplation stage (PCON in Table 1), includes a segment of the population consisting of individuals who are in denial—unaware of their need for change. Such people may not be able to recognize that the pandemic has affected their mental health and have no intention to do anything about it. According to the adapted TTM (Levit et al., 2016), precontemplators could be persuaded to consider changing (if needed) by informing them of signs of stress, anxiety and depression developed or aggravated by the COVID-19 pandemic, by explaining how COVID-19 has an impact on mental health; by providing them with self-assessment tools; by explaining how common it is to feel overwhelmed, anxious and depressed; and by addressing stigma for example. In addition, individuals found in the precontemplation stage could be further helped to start the change process by providing stories or testimonials of people who acted and/or got help and improved their mental health and wellbeing in general. These messages are meant to make individuals that need changing but are initially in denial explore the possibility that they may have a problem they should address and consider reasons for and against change, therefore moving into a contemplation stage (Brogan et al., 1999; Prochaska et al., 1992, 1994).

Once individuals are in the contemplation stage (CON in Table 1), they are called contemplators who have started to think on changing the behavior but carried out no action yet (Arden & Armitage, 2008). In our mental health and pandemic context, they may accept that they have stress, depression, anxiety, or other mental health issues associated or aggravated by the pandemic, but may still not be

seriously considering making efforts to keep those issues under control or overcome them. To help contemplators commit, it is advisable to introduce options for dealing with stress, anxiety and depression during the pandemic, without a lot of detail; to encourage individuals to evaluate the effects of suggested behavioral change on their mental health and quality of life during the COVID-19 Pandemic (cost/benefit analysis of behavioral change); and to emphasize positive effects of changing among others. As well, it is very important to provide easy-to-adopt recommendations and increase response efficacy (the belief that the adoption of the recommended actions will lead to the desired outcome) and self-efficacy (the perception that the person is capable of following the recommendations) at the same time decreasing perceived costs of changing and providing alternatives if costs are perceived to be too high (Levit et al., 2016; Prochaska et al., 1992, 1994; Slater, 1999).

The preparation stage (PREP in Table 1) occurs when individuals become ready to commit to change in the very near future (Brogan et al., 1999; Prochaska et al., 1992, 1994). To help people move into the action stage, when they are actually making changes to their behavior or changes to their environment that will facilitate behavior change, messages should encourage the creation of a new life with new daily routines with a new self-image and positive self-evaluation; promote more small steps to change the lifestyle and behavior and seek professional help when needed. Individuals should have easy access to telemedicine services and be given more details on traditional and alternative treatment methods if available. In addition, the creation of an action plan could be beneficial (Levit et al., 2016; Slater, 1999).

Individuals in the action stage (ACT in Table 1) are very active in monitoring and facing the problem (Brogan et al., 1999; Prochaska et al., 1992, 1994) and working hard to improve their mental health. To help them keep working toward improving their mental health, they should be encouraged to follow their action plans and they should be made aware of the challenging situations that make action hard during the COVID-19 Pandemic and explain that the pandemic is an exceptional situation for human beings. Providing ways for avoiding and preventing negative thought patterns, like finding positive ways of seeing situations and forming new beliefs (counter-conditioning), new healthy routines, hobbies, behavior substitution, stress reduction, and environmental management could also be beneficial (Levit et al., 2016; Slater, 1999).

People who have been actively working toward maintaining and making the behavior change sustainable are considered in the maintenance level of change (MAIN in Table 1) (Prochaska et al., 1992, 1994). These individuals are keen on improving their mental health and only need to maintain their behavior(s). Indeed, the maintenance stage is the time period when individuals integrate behavioral change into their life and work to prevent relapse. Maintenance extends for an indeterminate time past the action stage and may last the period of the pandemic or a lifetime if continued vigilance is necessary to ensure the depression and other mental health issues do not take over again (Levit et al., 2016). The appropriate courses of action in this stage would be to destigmatize the recycling process and make people understand that recycling through stages is a normal part of recovery; although the process can seem devastating to many individuals; encourage people to view

recurring mental health problems during the COVID-19 Pandemic as part of the natural course and understand that slipups back into old behaviors and into depression happen but should only be temporary. Websites could include statistics of people whose depression returns and the high likelihood of depression returning if not addressed properly (more than one third of people relapse within a year and another half of sufferers can expect to relapse at some point). Websites could encourage people to stick to their new healthy routines even when they seem to feel better and/or when COVID-19 seems less of a threat; and encourage learning from setbacks, such as understanding what happened and what can be done differently next time. In this way, individuals are more likely to continue protecting their mental health and avoid relapse to serious issues (Brogan et al., 1999; Levit et al., 2016; Prochaska et al., 1992, 1994; Slater, 1999).

3 Methodology

3.1 Campaigns identification and selection

Following the methodology of Cismaru and Wuth (2018) and Nelson et al. (2011), during the months of May and June 2020, the two authors independently searched for keywords including “mental health,” “COVID”, “COVID-19”, “pandemic”, “stress,” “anxiety,” “depression,” “anxiety and stress,” “anxiety and depression,” “Transtheoretical Model of Change and mental health,” and “social marketing and mental health.” Health-related government websites such as the US Department of Health and Human Services, National Institutes of Health, and Health Canada were also searched. Links were followed from the initially located campaigns websites to locate additional websites of interest. Once identified, several inclusion and exclusion criteria were used to select campaigns, resulting in a sample of 20 campaigns promoting mental health during the COVID-19 Pandemic that have comprehensive websites: six from the UK, four from Canada, three international, two from the USA, and one each from Europe, Ireland, Scotland, Turkey and Australia (see Table 2). These campaigns were selected because they contained extensive information in English about mental health during the COVID-19 Pandemic on their websites and had specific and detailed recommendations for individuals from the general population. Campaigns that addressed mental health in general (not during COVID-19 Pandemic), those focusing on particular populations such as health workers and websites that only provided links to other websites or to campaigns previously located were excluded from the analysis.

3.2 Campaigns analysis according to the adapted TTM

Following Cismaru and Wuth (2018), Mogaji (2015) and Nelson et al. (2011) two independent coders analyzed individual campaign website information in terms of its adherence to the 25 adapted TTM criteria. The coding scheme was based on Prochaska et al. (1996) and Levit et al. (2016). For example, regarding

Table 2 List of campaigns promoting mental health during the COVID-19 pandemic

Type	Country/region	Organization	Name of the campaign	Website/document	No.
Governmental and Inter-Governmental Organizations	International	WHO	#HealyAtHome-Mental Health	https://www.who.int/news-room/campaigns/connecting-the-world-to-combat-coronavirus/healthyathome/healthyathome---mental-health?gclid=EA1aIQobChM1o7mr3FPD6QIVYV1Ch1Qzg_WEAAYASAAEgL-FID_BwE	1
	International	WHO	Mental Health and Psychosocial Considerations During the COVID-19 Outbreak	https://www.who.int/docs/default-source/coronavirus/mental-health-considerations.pdf?sfvrsn=6d3578af_10	2
	USA	Centers for Disease Control and Prevention (CDC)	Stress and Coping (on COVID-19 dedicated Website)	https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html	3
	Canada	Government of Canada	Taking Care of Your Mental and Physical Health During the COVID-19 Pandemic	https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/mental-health.html	4
	Canada	Government of British Columbia	Managing COVID-19 Stress, Anxiety & Depression	https://www2.gov.bc.ca/gov/content/health/managing-your-health/mental-health-substance-use/managing-covid-stress	5
	Canada	Gouvernement du Québec	Stress, Anxiety and Depression Associated with the Coronavirus COVID-19 Disease	https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/stress-anxiety-and-depression-associated-with-the-coronavirus-covid-19-disease/	6
	Canada	The Centre for Addiction and Mental Health (CAMH)	Mental Health and the COVID-19 Pandemic	https://www.camh.ca/en/health-info/mental-health-and-covid-19	7
	Ireland	HSE	Minding Your Mental Health During the COVID-19 Pandemic	https://www2.hse.ie/wellbeing/mental-health/covid-19/minding-your-mental-health-during-the-coronavirus-outbreak.html	8
	Australia	Victoria State Governments	Mental Health Resources—Coronavirus (COVID-19)	https://www.dhhs.vic.gov.au/mental-health-resources-coronavirus-covid-19	9
	International	Voice of Youth/ UNICEF	Corona Virus and Young Mental Health	https://www.voicesofyouth.org/campaign/covid-19-and-youth-mental-health	10

Table 2 (continued)

Type	Country/region	Organization	Name of the campaign	Website/document	No.
Non-Governmental Organizations and Universities	USA	Mental Health America (MHA)	Mental Health and COVID-19 Information and Resources	https://mhanational.org/covid19#MentalHealthInformationForDiseaseOutbreaks	11
	Turkey	Yeditepe University	Preserving the Mental and Body Health During Coronavirus Pandemic	https://www.yeditepe.edu.tr/en/announcement/preserving-mental-and-body-health-during-coronavirus-covid-19-pandemic	12
	Europe	Mental Health Europe	Minding Your Mental Health During COVID-19	https://www.mhe-sme.org/what-we-do/covid-19-and-mental-health/#1587360766649-dd1e7ca4-601d	13
	UK	Mental Health Foundation	How to Look After Your Mental Health During the Coronavirus Outbreak	https://www.mentalhealth.org.uk/coronavirus	14
	UK	MIND	Coronavirus: We Are Here for You	https://www.mind.org.uk/coronavirus-we-are-here-for-you/	15
	UK	YOUNG MINDS	Coronavirus and Mental Health	https://youngminds.org.uk/find-help/looking-after-yourself/coronavirus-and-mental-health/	16
	Scotland	SAMH	Coronavirus Mental Health Information Hub	https://www.samh.org.uk/about-mental-health/self-help-and-wellbeing/coronavirus-information-hub	17
	UK	SANE	Meeting The Challenge Of Mental Illness	http://www.sane.org.uk/home	18
	UK	C.A.L.L	Coronavirus Looking After Your Mental Wellbeing	http://www.callhelpline.org.uk/COVID19.asp	19
	UK	Rethink Mental Illness	Covid-19 and Mental Illness	https://www.rethink.org/advice-and-information/covid-19-support/	20

precontemplation, for PCON1 information regarding signs (symptoms) of stress, anxiety and depression developed or aggravated by the COVID-19 Pandemic was considered relevant. Next, information that explained how the COVID-19 Pandemic has an impact on mental health (PCON2) was sought, as well as self-assessment tools such as symptom checklists, True/False questionnaires, and scenario uses. Since the information was often spread over several pages and/or links, the analysis was complementary. For this reason, as in previous similar studies, it was considered appropriate to conduct a qualitative analysis of the materials by scanning them in their totality and looking for keywords and sentences that helped assess the presence of information considered by TTM to be important predictors of behavioral change (Cismaru et al., 2009). Each of the two independent coders created a table for each of the 20 campaigns and included the 25 criteria from the adapted TTM and the corresponding information from the specific campaign (verbatim) that seemed to address the specific criteria. “Appendix 1” illustrates one such table that shows if and how one campaign addresses each of the 25 criteria points. The approach was chosen to be mostly qualitative, rather than quantitative, as most digital content analysis is, to allow both practitioner and academic audiences an enhanced visualization of the theory applied in practice. A third researcher compared the tables for each website from the two independent coders, compiled the information, and identified inconsistencies. Disagreements were managed through discussion. Table 3 lists all 25 principles based on the adapted TTM, and specifies if the campaign addressed a criteria point in its entirety, partly addressed it, or did not address it at all, for all 20 websites.

4 Findings and discussions

Results of the content analysis according to the 25 criteria are presented below, following the TTM stages (see Tables 1, 3).

4.1 Precontemplation (PCON)

In general, campaigns provided information addressing the seven criteria points posited by TTM to encourage precontemplators move to the next stage (presented in Table 1). Indeed, nine out of 20 campaigns clearly informed readers of signs (symptoms) of stress, anxiety and depression developed or aggravated by the COVID-19 Pandemic (PCON1) and another five partly did. For example, *Preserving the Mental and Body Health During Coronavirus Pandemic*, (Yeditepe University, Turkey, No. 12) lists under their “Awareness of stress symptoms” having repetitive thoughts, the need of following the news and checking up on loved ones, changes in sleeping and eating routines, hard time focusing, want to cry frequently, tender muscles, not being able to relax, not feeling anything, numbness, isolating self, hard time in communicating, not wanting to communicate, among others.

Table 3 Campaign analysis according to the adapted TTM criteria N = No; P = Partly; Y = Yes

Campaigns	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	No	P	Yes
<i>Criteria</i>																							
PCON1	N	N	Y	Y	P	Y	P	Y	N	N	P	Y	N	P	Y	Y	Y	Y	P	N	6	5	9
PCON2	P	N	P	P	P	P	Y	P	P	P	Y	P	P	P	Y	P	Y	P	P	Y	1	14	4
PCON3	N	P	P	P	P	P	P	P	P	P	Y	P	P	P	P	P	P	P	P	Y	1	17	2
PCON4	P	Y	Y	Y	Y	Y	Y	Y	P	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	0	3	17
PCON5	N	P	Y	P	N	P	Y	Y	P	Y	P	Y	P	Y	P	P	P	P	P	P	2	12	6
PCON6	P	P	P	P	P	P	Y	P	P	Y	Y	Y	P	P	Y	Y	P	P	P	Y	0	13	7
PCON7	P	P	P	P	N	P	Y	P	P	P	P	P	P	P	P	P	P	P	P	Y	1	17	2
CON1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	Y	P	Y	Y	0	2	18
CON2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	20	0	0
CON3	N	P	N	N	N	N	Y	P	N	P	P	N	N	P	P	P	Y	N	N	P	10	8	2
CON4	P	P	P	P	Y	P	P	P	P	P	P	P	P	Y	P	P	P	P	P	Y	0	17	3
CON5	Y	Y	P	P	P	P	P	P	P	P	P	P	N	Y	P	P	P	P	P	P	1	16	3
PREP1	Y	P	P	P	N	P	P	Y	P	P	N	N	N	Y	N	N	Y	N	N	P	8	8	4
PREP2	Y	P	P	Y	Y	Y	Y	Y	Y	N	Y	P	Y	Y	Y	Y	Y	N	N	Y	3	3	14
PREP3	P	Y	Y	Y	Y	Y	Y	Y	Y	P	P	P	P	Y	Y	P	P	P	P	Y	0	9	11
PREP4	N	N	P	P	P	N	N	P	P	N	P	N	P	Y	Y	P	P	P	P	P	6	12	2
PREP5	N	N	N	N	N	N	P	Y	N	N	N	N	N	P	P	N	P	N	N	P	14	5	1
PREP6	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	P	N	P	N	N	P	16	3	1
ACT1	N	N	N	N	N	N	P	N	N	N	N	N	N	Y	P	N	P	N	N	P	15	4	1
ACT2	N	P	P	P	N	P	Y	P	P	P	P	P	P	P	P	P	P	P	P	P	2	17	1
ACT3	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	P	Y	Y	P	Y	Y	P	Y	Y	0	5	15
ACT4	N	N	N	N	N	N	Y	N	N	N	N	N	N	Y	N	N	Y	N	N	P	16	1	3
ACT5	P	P	P	N	N	N	Y	P	N	N	P	N	N	Y	N	N	N	N	N	P	12	6	2
MAIN1	N	N	P	N	N	N	N	P	N	N	N	N	N	Y	N	N	N	N	N	N	17	2	1
MAIN2	N	N	Y	N	N	N	Y	N	Y	N	N	N	N	Y	N	N	N	N	N	N	16	0	4

Table 3 (continued)

Campaigns	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	No	P	Yes	
Total																								
No	13	10	6	9	13	10	4	5	9	11	8	11	12	1	6	9	4	11	11	4				
Partly	8	10	12	10	6	9	7	11	11	10	11	9	10	8	11	10	12	12	11	11				
Yes	4	5	7	6	6	6	14	9	5	4	4	5	5	16	8	6	9	2	3	10				

Moving on to the next criteria point under the preparation stage (PCON 2), five campaigns explained how the COVID-19 Pandemic has an impact on mental health and also provided self-assessment tools such as symptom checklists, True/False questionnaires, and scenario uses (therefore fully addressing PCON2). For example, *Mental Health and COVID-19 Information and Resources* (MHA—Mental Health America, USA, No. 11), states under the heading “I feel anxious about Coronavirus”: “We’re making changes to our everyday lives. We’re inundated with news everywhere we turn. We’re making sacrifices to protect our physical health and the health of everyone around us. With that, there’s a lot of growing anxiety about the whole situation.” “Take a mental health test” follows. Fourteen other campaigns provided some type of information and only one missed it.

Only two campaigns out of 20 clearly encouraged people to recognize and admit mental health issues associated with the COVID-19 Pandemic and the measures associated with it, using powerful emotional messages to get their attention (PCON3), whereas another 17 did so partly. For example, *Covid-19 and Mental Illness* (Rethink Mental Illness, UK, No. 20) states: “The coronavirus pandemic has, and will be, traumatic for many people. For those who become unwell, their loved ones, those on the front line of caring and treating people, but also for everyone else whose way of life has been massively disrupted.”

Almost all campaigns included in this analysis (17 out of 20) provided awareness of mental health issues and increased risks of stress, anxiety and depression associated with the COVID-19 Pandemic (PCON4). The remaining three partly addressed this criteria point. For example, *Coronavirus and Mental Health* (YOUNGMINDS, UK, No. 16) states: “Feeling concerned or overwhelmed by the news is understandable, especially if you are struggling with your mental health or you have a physical illness. It might be that you’re anxious about your own health, the health of someone in your family, or what impact the virus will have on your life”.

Many websites also explained how unusual the situation is, how common it is to feel overwhelmed, anxious and depressed, and addressed stigma, reminding people that it takes courage to admit mental health issues and to pursue change (PCON5). Six campaigns addressed all issues, whereas 12 partly addressed them. For example, *Corona Virus and Young Mental Health* (UNICEF, No. 10) states under the heading of “COVID-19: your voices against stigma and discrimination”: “Feeling sad, stressed or angry while coping with COVID-19 is normal. It’s not only the fear and anxiety about the coronavirus disease but also being away from schools, friends and relatives. Adjusting to new ways of learning and working is hard. But guess what? You are not alone”.

Seven campaigns out of 20 attempted to combat hopelessness, encourage hope and also provided stories or testimonials of people who acted and/or got help and improved their mental health and wellbeing in general (PCON 6), whereas the remaining 13 covered some of these issues. For example, *Coronavirus and Mental Health* (YOUNGMINDS, UK, No. 16), under the heading titled “Young people’s self-care tips for self-isolation” provides some stories and states: “You can find lots of home workouts online and I promise that you will feel a lot better after doing

them—they will give you energy and they will take your mind away from everything that is happening”.

Finally, only two campaigns under consideration provided examples of how life with less stress, anxiety and depression during the COVID-19 Pandemic could be and also explained how, although much cannot be controlled due to the measures associated with COVID-19 prevention, there are steps that can be pursued to make life better and bearable (PCON 7). Most of the campaigns (17) partly addressed these issues. Indeed, *Mental Health and the COVID-19 Pandemic* (Centre for Addiction and Mental Health CAMH, Canada, No. 7) provides examples by providing interactive forums on “connect share and cope.” It explains the steps that can be pursued to make life better and bearable during pandemic under the headings of “Loss, grief and Healing” and “Stress and Anxiety”. *COVID-19 and Mental Illness* (Rethink Mental Illness, UK, No. 20) states: “For the next few days I am going to set myself some simple rules and to try and look after myself.” Overall campaigns showed good coverage of the information needed to encourage precontemplators to move to contemplation.

4.2 Contemplation (CON)

Many of the campaigns missed several important issues posited by TTM to encourage contemplators change their behavior. Indeed, although most campaigns (18 out of 20) properly introduced options available for dealing with stress, anxiety and depression during the pandemic (CON 1) and the remaining two partly did, none of the campaigns encouraged readers to evaluate the effects of suggested behavioral change on their mental health and quality of life during the COVID-19 Pandemic (CON 2). For example, *Minding Your Mental Health During COVID-19* (Mental Health Europe, No. 13) provides “10 Ways to cope with stress during the pandemic”, as follows, “follow a daily routine, exercise, set limits around news on COVID-19, spend time in nature, try controlled breathing, be an emphatic and compassionate team worker, limit your social media intake, reach out to others, work-life balance is key and seek professional support.” This campaign also tells people the effects of each suggested behavioral change. For example, “Talking to a friend or family member can be a helpful way to keep your stress levels under control. Plan at least one connection a day—a phone call or a chat with a colleague or friend who you can share experiences with. Consider regular virtual meetings with family and friends to check in on each other. This can be a great source of support during these times.” However, this is still a general evaluation of a proposed change; it is not an evaluation of a particular individual that would be encouraged to do based on own behavior.

In addition, only two campaigns emphasized positive effects (for self and others) of changing and provided testimonials of people who changed their behaviors and felt better, whereas eight other campaigns only partly addressed this step (CON3). The remaining 10 campaigns overlooked this information. *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7), provides testimonials of people

that changed their behaviors and felt better under the heading titled “Coping with COVID-19”, whereas *Coronavirus Mental Health Information Hub* (SAMH, Scotland, No. 17), provides testimonials of people that changed their behaviors under the heading titled “Coronavirus Blog Series”. The “Coping with changes” section also includes three videos and emphasizes positive effects of changing.

The situation is better with CON 4 and CON 5. Indeed, although only three campaigns provided easy-to-adopt recommendations, provided alternatives if costs are perceived to be high, and made it easy for people to adopt the recommended actions, the other 17 partly addressed these issues. If monetary costs were not addressed, the campaign was considered to “partly” address the issues. For example, *COVID-19 and Mental Illness* (Rethink Mental Illness, UK, No. 20) provides easy-to adopt recommendations and cost related matters under the headings of “How to budget your money during the COVID-19 outbreak” and “Managing your mental health during the Coronavirus outbreak. How to Get Treatment and Support.”

Similarly, three campaigns addressed CON 5: encouraged small actions to see improvement on mental health by increasing response efficacy, self-awareness and self-efficacy; encouraged readers to access on-line tools, such as websites, health lines, and support groups; helped people prepare for a doctor’s visit for their mental health if needed; and encouraged use of self- observation when seeking help. With one exception, all the others (16) provided some of this information. For example, *#HealtyAtHome-Mental Health* (WHO, No. 1) describes how difficult things can be to adapt to the pandemic realities, then states that “Fortunately, there are lots of things that we can do to look after our own mental health and to help others who may need some extra support and care.” This statement is likely to increase readers’ feelings of self-efficacy. Tips and advice are then provided.

Overall, most campaigns missed the important aspects needed to encourage con-templators to move into the preparation stage.

4.3 Preparation (PREP)

Websites varied in respect to covering information posited by the adapted TTM to encourage individuals moving from the preparation stage to the action stage. Indeed, only four campaigns encouraged the creation of a new life with new daily routines; a new self-image and positive self-evaluation (PREP 1), whereas another eight partly did. For example, *#HealtyAtHome-Mental Health* (WHO, No. 1) encourages the creation of new daily routines under the heading of “Keep up your daily routines” by saying “Your routine may be affected by the coronavirus outbreak in different ways. But during difficult times like this, it’s best if you can keep some structure in your day.” Self-evaluation is also encouraged by saying “Adjusting to new circumstances can take time. Be patient and find what works for you”.

In respect to PREP 2 and PREP 3, 14 out of 20 campaigns promoted more small steps to change the lifestyle and behavior (spending time outdoors, taking short walks, gardening, indoor exercises, meditation, new hobbies, taking a bath, calling

a friend) to prevent mental health issues during the COVID-19 pandemic (PREP 2), while another three partly did. In addition, 11 campaigns also encouraged seeking professional help, provided information on where to find help, provided contact numbers of telemedicine services, and gave more details on traditional treatment methods if available, therefore covering PREP 3. The remaining 11 campaigns provided some of this information. For example, *Mental Health Resources—Coronavirus (COVID-19)* (Victoria State Government, Australia, No. 9) provides a variety of health care providers contact information under the headings of “Who to call to get help”.

In respect to the other three criteria points under the preparation stage, only a few campaigns properly and entirely addressed them. Indeed, only two campaigns informed about alternative treatments and self-help, encouraged the pursuit of lifestyle changes, informed readers to seek individual support and provided information of organizational support available from non-governmental bodies, charities, foundations, associations and civil societies (PREP 4). Notably, governmental and inter-governmental campaigns did not fully address criteria PREP 4 whereas the campaigns of NGOs and universities have fully or at least partly mentioned these concepts. For example, *Coronavirus: We Are Here for You* (MIND, UK, No. 15), discusses yoga, meditation, aromatherapy, massage, reflexology, herbal treatments, Bach flower remedies, and hypnotherapy. The website states that these complementary and alternative therapies can help people “to relax or sleep better. Many chemists and health shops stock different remedies and should be able to offer advice.” They also promote a Free online “CBT during coronavirus: SilverCloud is an online self-help platform, which you can use by yourself. It’s designed to help you learn skills to manage common problems, like stress and anxiety.” Twelve other campaigns partly provided such information, whereas the remaining six did not provide any of this information.

Similarly, only one campaign, *Minding Your Mental Health During the COVID-19 Pandemic* (HSE, Ireland, No. 8), encouraged the creation of an action plan and defined the “new normal” and its rules with the framework of reopening (PREP 5). It states: “For some people, there is a sense of a ‘new normal’ and of getting used to these temporary circumstances. As the situation evolves, anxiety levels may change. Others will find it an increasingly difficult and anxious time. But for most, there will be ups and downs on a daily basis.” Five other campaigns addressed some of these issues, whereas most of them (14 out of 20) did not touch on these issues.

In addition, only one campaign *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14, presented in “Appendix 1”) asked people to commit to changes that “the new normal” will bring to the social life (i.e., putting the action plan in practice and telling others about it, setting a start date consistent with the reopening schedule declared by the state authorities) (PREP 6). Three other campaigns addressed this partly, whereas most campaigns (16 out of 20) did not do it at all. It should be underlined that governmental and inter-governmental campaigns did not address (Yes or Partly) criteria PREP 6.

Overall, significant issues aiming to encourage individuals to move from the preparation stage to action stage were not addressed by many campaigns.

4.4 Action (ACT)

Campaigns varied in respect to covering principles posited by TTM to encourage individuals moving from the action stage to the maintenance stage. Indeed, only one campaign, *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14, presented in “Appendix 1”), encouraged individuals to follow their action plans in accordance with the “new normal” and with the framework of reopening (ACT 1), made people aware of the challenging situations that make action hard during the COVID-19 pandemic, and explained that the pandemic is an exceptional situation for human beings (ACT 2). In addition, *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7), states: “it is normal to feel anxious and afraid while we deal with the effects of this pandemic. We know this situation is stressful for everyone”, therefore also addressing ACT 2. Only four other campaigns addressed ACT 1 whereas the remaining 15, the majority, failed to address it. In respect to ACT 2, 17 campaigns partly addressed it, with only two missing it.

Most campaigns (15 out of 20) focused on providing ways for avoiding and preventing negative thought patterns, like finding positive ways of seeing situations and forming new beliefs (counter-conditioning), new healthy routines, hobbies, behavior substitution, stress reduction, and environmental management (ACT 3). For example, under the heading of “Coping with changes”, the *Coronavirus Mental Health Information Hub* (SAMH, Scotland, No. 17), presents three videos that mainly provide ways of avoiding negative thought patterns. The remaining five campaigns partly addressed these issues.

In respect to ACT 4 and ACT 5, the situation is reversed. Only three campaigns praised people for their efforts and successes, encouraged taking notice of the benefits of change and improvements—in respect to their mental health, and advised them to reward themselves in healthy ways, to accept rewards and to feel good about themselves—for making changes and improving their wellbeing (ACT 4). For example, *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7), addresses ACT 4 by saying: “The strategies mentioned here can take some time to work. We need to practice them regularly and in different situations. Don’t be hard on yourself if you forget to do something or if you are not feeling better right away.” In addition, “eat healthily” and “get proper rest and sleep” are the two reward mechanisms that this campaign offers. Another campaign partly addressed these issues, whereas the majority (16 out of 20) did not mention any information like this. Similarly, only two campaigns, *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7) and *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14) encouraged people to watch what works or not for them, to become aware of warning signs of recurring mental health issues during the

COVID-19 pandemic, and of appropriate responses to better cope with them (ACT 5). Another six touched some of these issues, whereas, most campaigns (12 out of 20) did not mention any information like this. For example, *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7), states: “Sometimes, even after trying to reduce our stress and anxiety, we may continue to struggle. If you still feel significant distress around COVID-19 and feel you are not coping well, you may need extra support from someone like your family doctor or a psychologist, psychotherapist, social worker or other health professional.”

Overall, significant information was missing from many campaigns in respect to moving individuals from the action stage to the maintenance stage.

4.5 Maintenance (MAIN)

Very few campaigns addressed the maintenance stage. Indeed, only one campaign, again, *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14, presented in “Appendix 1”), attempted to destigmatize the recycling process, encouraged people to view recurring mental health problems during the COVID-19 pandemic as part of the natural course, and encouraged people to stick to their new healthy routines even when they seem to feel better and/or when COVID-19 seems less of a threat. Two other campaigns partly addressed these issues, whereas most campaigns (17 out of 20) did not address MAIN 1 at all.

The situation is a bit better for MAIN 2. Four campaigns encouraged learning from setbacks, such as understanding what happened and what can be done differently next time (MAIN 2). For example, *Stress and Coping (on COVID-19 dedicated Website)* (Centers for Disease Control and Prevention (CDC), USA, No. 3) lists some possible situations under the heading of “Recovering from COVID-19 or Ending Home Isolation”. However, the remaining 16 campaigns did not address these issues.

Overall, very few campaigns addressed the maintenance stage.

4.6 Top 3 campaigns most consistent with the adapted TTM

Three campaigns seem to be very consistent with the adapted TTM, fully addressing many of the criteria points under consideration. Indeed, *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14), fully addressed 16 out of 25 criteria points and partly addressed another eight, therefore missing only CON2, which refers to encouraging readers to evaluate the effects of suggested behavioral change on their mental health and quality of life during the COVID-19 Pandemic. *Mental Health and the COVID-19 Pandemic* (CAMH, Canada, No. 7), fully addressed 14 of the criteria and partly addressed seven more, therefore missing only four criteria. *COVID-19 and Mental Illness* (Rethink Mental Illness, UK, No. 20), fully addressed 10 criteria, and another 11 partially, being the third most consistent with the adapted TTM. “Appendix 1”

presents *How to Look After Your Mental Health During the Coronavirus Outbreak* (Mental Health Foundation, UK, No. 14) and shows how it addresses the specific principles.

5 Conclusions and recommendations for future research

Although its physical effects will decrease with vaccination, the effects of the COVID-19 Pandemic on mental health may last longer. For this reason, effective and appropriate support towards promoting mental health should be readily available, and as an accessible tool, websites can be very beneficial. In this paper, an appropriate theoretical model for the context was proposed and its applicability was illustrated with real running campaigns from around the world. As this model posits that different messages are appropriate to people found in different stages of change, while the situation unfolds, and people move from a stage of change to another, designers of such websites may want to switch focus of their messages and/or add appropriate information. For example, many people might now strive to maintain their behavior changes, therefore it would be beneficial to incorporate more communication for this particular stage to help individuals maintain their mental health. The maintenance stage was not addressed by the governmental and inter-governmental campaigns we reviewed, suggesting that the COVID-19 Pandemic has not been positioned as an ongoing situation affecting mental health, since sustainable behavior changes occur and become permanent in this particular stage. By contrast, NGO and university website campaigns are more likely to suggest that behavior change is crucial and should take place on an ongoing basis to promote mental health.

This proposed model was not tested and providing advice about ways to manage stressful situations such as the COVID-19 Pandemic is not easy especially because individuals vary widely in terms of their risk perceptions and what works for one may not work for another in terms of specific ways of dealing with stress. For this reason, a deep understanding of peoples' thoughts and feelings, attitudes, intentions and behaviors is needed. Future studies could investigate individuals' adherence to the recommendations from the campaigns and the practical applicability of the TTM and SM in a COVID-19 context, individual and cultural differences in terms of perceptions of the risk of contracting COVID-19 versus the effects on mental health of the restrictions imposed by the governments to prevent the spread of COVID, among others. The impact of the technology on peoples' mental health during the pandemic, especially on the younger populations, could also further enrich our understanding of the issues surrounding this topic. The impact of some measures such as school closures on students' and parents' mental health could also be investigated and specific advice can be incorporated in campaigns aiming to help people maintain their mental health. Longitudinal studies can also be conducted to monitor the current and post-pandemic behavior change campaigns' adherence to the TTM. These are only a few of the areas of research that may help us be better prepared to deal with situations like this in the future.

Appendix 1: illustration of if and how Campaign No. 14—*How to Look After Your Mental Health During the Coronavirus Outbreak* by the Mental Health Foundation (UK) addresses the 25 adapted TTM principles (criteria points)

Appropriate messages	Addressed (yes or no) and also how
PCON1: Inform of signs (symptoms) of stress, anxiety and depression developed or aggravated by the COVID-19 pandemic	Yes. Partly. Symptoms have been mentioned in different parts of the websites. Some of them are: <i>“Fear and anxiety are possibly the most common emotional responses”</i> ; <i>“Every time we go back to something it is going to feel unusual or even scary”</i>
PCON2: Explain how COVID-19 has an impact on people’s mental health. Provide self-assessment tools such as symptom checklists, True/False questionnaires, scenario uses, etc	Yes. It does explain how COVID-19 has an impact on people’s mental health by saying the followings; <i>“We all have mental health, and whatever our circumstance this outbreak is going to have an impact on how we think and feel about ourselves and the world we live in”</i> No. It does not provide self-assessment tools
PCON3: Encourage people to recognize and admit mental health issues associated with the COVID-19 pandemic and its associated measures using powerful emotional messages to get their attention	Yes. Partly <i>“Fear and anxiety are possibly the most common emotional responses”</i> ; <i>“Relaxing and focusing on the present can help improve your mental health and lighten negative feelings.”</i> These statements partly encourage people to admit mental health issues associated with COVID and emphasize emotional messages
PCON4: Provide awareness of mental health issues and increased risks of stress, anxiety and depression associated with COVID-19	Yes. In whole website under different headings mental health awareness is provided. For example, it says: <i>“Infectious disease outbreaks, like the current coronavirus (COVID-19), can be scary and can affect our mental health.”</i>
PCON5: Address stigma and remind people that it takes courage to admit mental health issues and to pursue change. Explain how unusual the situation is and how common it is to feel overwhelmed, anxious and depressed	Yes. It addresses the stigma for pandemic by saying <i>“Don’t judge people and avoid jumping to conclusions about who is responsible for the spread of the disease. The coronavirus can affect anyone, regardless of gender, ethnicity or sex.”</i> Yes. It says that feeling depressed is common and the situation is unusual. For example: <i>“The coronavirus pandemic and subsequent lockdown is an unprecedented situation in modern times.”</i>
PCON6: Combat hopelessness and encourage hope (suggest that feeling better and help is possible). Provide stories or testimonials of people who acted and/or got help and improved their mental health and wellbeing in general	Yes. Partly. It says the followings to combat hopelessness; <i>“Control what can be controlled”</i> ; <i>“Build up tolerance”</i> ; <i>“Focus on the present”</i> ; <i>“Talk to people you trust”</i> It does not provide stories or testimonials of people

Appropriate messages	Addressed (yes or no) and also how
PCON7: Provide examples of how life with less stress, anxiety and depression during COVID-19 can be. Explain how, although much cannot be controlled due to the measures associated with COVID-19 prevention, there are steps that can be pursued to make life better and bearable	No. It does not provide examples However, it partly explains the steps that can be pursued to make life better and bearable during pandemic by saying the followings; <i>“If you can, express your frustration quickly and privately with someone you trust, and then let it go. If we hold on to things we can get pulled into rumination—where we chew over things in our heads.”</i> and <i>“If possible, take things at your own pace—but try and challenge yourself to try something different each day or every couple of days.”</i>
CON1: Introduce available options for dealing with stress, anxiety and depression during the pandemic, without a lot of detail	Yes. It introduces available options without giving a lot of detail. Followings are the examples; <i>“Consider going for short walks in public places (while keeping a two metre distance).”</i> ; <i>“Try some different meditation or breathing exercises to see what helps. For example, sometimes we can be so tense that we do not even remember what being relaxed feels like. Progressive muscle relaxation teaches you to recognise when you are starting to get tense and how to relax.”</i>
CON2: Encourage readers to evaluate the effects of suggested behavioral change on their mental health and quality of life during the COVID-19 Pandemic	No encouragement for readers to evaluate the effects of suggested behavioral changes is provided; it just gives available options and hints
CON3: Emphasize positive effects (for self and others) of changing. Provide testimonials of people who changed their behaviors and felt better	Yes it emphasizes positive effects of changing by saying <i>“This is a challenging and sometimes lonely time, but it will pass. There will be lots of hugs, shared pots of tea, parties and celebrations in the future. For now, let’s be as kind as possible to ourselves and others.”</i> No testimonials of people those changed their behaviors have been provided
CON4: Provide easy-to-adopt recommendations. Provide alternatives if costs are perceived to be high. Make it easy for people to adopt the recommended actions	Yes. It gives easy-to-adopt recommendations BUT no alternatives have been mentioned regarding the high costs For example, it states, <i>“Create a new daily routine that prioritizes looking after yourself. You could try reading more or watching movies, having an exercise routine, trying new relaxation techniques, or finding new knowledge on the internet. Try and rest and view this as a new if unusual experience, that might have its benefits.”</i>

Appropriate messages	Addressed (yes or no) and also how
<p>CON5: Encourage small actions to see improvement on mental health by increasing response efficacy (the belief that the adoption of the recommended actions will lead to the desired outcome), self-awareness and self-efficacy (the perception that the person is capable of following the recommendations). Encourage readers to access on-line tools, such as websites, health lines, and support groups. Help people prepare for a doctor's visit for their mental health if needed. Encourage use of self- observation when seeking help</p>	<p>Yes. Response-efficacy is mentioned by saying <i>"There is a lot that feels uncertain right now, like exam marks, university, job or apprenticeship offers, and what the world will look like in a few weeks or months. It can feel scary and overwhelming when we don't know what will happen, and a lot of it will be out of our control. Trying to identify the things that you do have control over, and those that you do not, can help make this feel a bit more manageable"</i></p> <p>Self-awareness and self-efficacy have also been mentioned by saying <i>"Take it a day at a time, some days will be easier to stick to a routine than others. Don't beat yourself up if you aren't as productive as you'd like to be. Your productivity is not tied to your identity"</i> and <i>"There has been a huge amount of change to daily life, and it may not be realistic to expect yourself to be as productive as you were before. If you find yourself feeling a bit unmotivated, or like you haven't got as much done in a day as you usually would, that's okay."</i></p> <p>Yes. It encourages readers to access on-line tools by saying for example; <i>"try calling a friend, family member, health professional or counsellor to talk about your feelings"</i></p>
<p>PREP1: Encourage the creation of a new life with new daily routines; a new self-image and positive self-evaluation</p>	<p>Yes. By saying under the heading of "Mental health tips"; <i>"Create a new daily routine that prioritizes looking after yourself. More of us will be spending a lot of time at home and many of our regular social activities will no longer be available to us. It will help to try and see it as a different period in your life, and not necessarily a bad one, even if you didn't choose it. It will mean a different rhythm of life, a chance to be in touch with others in different ways than usual."</i> and <i>"Try and vary your routines so that you see different people and encounter different situations. If one supermarket makes you nervous, try another. If a walk at one time of the day is very busy, try mixing walks at busy times with walks at quieter times."</i></p>
<p>PREP2: Promote more small steps to change the lifestyle and behavior (spending time outdoors, taking short walks, gardening, indoor exercises, meditation, new hobbies, taking a bath, calling a friend) to prevent mental health issues during the COVID-19 Pandemic</p>	<p>Yes. By saying <i>"You could try reading more or watching movies, having an exercise routine, trying new relaxation techniques, or finding new knowledge on the internet."</i></p> <p>Others can be listed as; <i>"Try to stay connected"; "Talk to your children"; "Try to anticipate distress; "Try not to make assumptions"; "Try to manage how you follow the outbreak in the media"</i></p>

Appropriate messages	Addressed (yes or no) and also how
PREP3: Encourage seeking professional help, give information on where to find help, provide contact numbers of telemedicine services, give more details on traditional treatment methods if available	Yes. It provides limited numbers of health care providers contact information. Example is as follows; <i>“You could also contact Samaritans, call: 116 123 or email: jo@samaritans.org if you need someone to talk to. Join an online group or class that focuses on something you enjoy—that could be anything from an online exercise class, book club etc. “</i>
PREP4: Inform about alternative treatments and self-help, encourage the pursuit of lifestyle changes, and inform readers to seek individual support. Provide information about organizational support available from non-governmental bodies, charities, foundations, associations and civil societies	Yes. It says the followings; <i>“If you have ongoing health or mental health conditions, even if they aren’t disclosed, your employer has a duty to make reasonable adjustments. In this case this could include home working, additional support from managers, or equipment.”</i> <i>“If you have self-care techniques that work for you, try and make sure that you have what you need. You may need to think differently—for example doing exercise workouts from videos instead of attending classes. You may want to consider looking at mindfulness practice or finding ways to help others in your community. Self-compassion, and support for others is going to be very important.”</i> <i>“Mindfulness techniques may also help you focus on the present rather than dwelling on unhelpful thoughts (though they may not be helpful for those experiencing more severe depression).”</i>
PREP5: Encourage the creation of an action plan. Define the “new normal” and its rules with the framework of reopening	Yes. Partly by saying under the heading of “Plan your day”; <i>“We are all adjusting to a new, rather strange, way of life. This can be a risk to our mental wellbeing. As tempting as it might be to stay in pajamas all day, regular routines are essential for our identity, self-confidence and purpose. Try to start your day at roughly the same time you usually would and aim to set aside time each day for movement, relaxation, connection and reflection.”</i>

Appropriate messages	Addressed (yes or no) and also how
<p>PREP6: Ask people to commit to changes that “<i>the new normal</i>” will bring to the social life (i.e., putting the action plan in practice and telling others about it, setting a start date consistent with the reopening schedule declared by the state authorities)</p>	<p>Yes. By stating the followings; <i>“There has been a lot of talk of a ‘new normal’—but normal is changing and uncertainty, and managing risk, is going to be the reality for the foreseeable future. This is not something that’s comfortable for many of us, particularly when we’re only just about coping with our mental health.”</i> <i>“‘New normal’ for most of us will mean ‘what we need to get through today, or this week’—it’s going to be very difficult to predict what the course of the rest of the year will look like, and with so much of the media talking about possibilities and stages without certainty, it’s easy to get caught up in ‘what-ifs.’”</i> <i>“It can help to focus on the things we have learned and achieved in the last few months.”</i> <i>“Most of us have been tested in ways we never imagined, have passed those tests and found new ways to manage—or even flourish. For many of us lockdown has challenged our values and what is important to us. The life, values, and attitudes we had in early March might not be the ones we want to return to in July, and there may be opportunities for us to make positive changes in our lives as well.”</i></p>
<p>ACT1: Encourage people to follow their action plans in accordance with the “<i>new normal</i>” and with the framework of reopening</p>	<p>Yes by saying; “<i>Focus on making a plan that feels manageable for you as you are right now.</i>”</p>
<p>ACT2: Make people aware of the challenging situations that make action hard during the COVID-19 Pandemic and explain that the pandemic is an exceptional situation for human beings</p>	<p>Yes. Partly. By saying the followings; “<i>We should be prepared for the fact that the end of lockdown might be as hard for us as the start was.</i>”</p>
<p>ACT3: Provide ways for avoiding and preventing negative thought patterns, like finding positive ways of seeing situations and forming new beliefs (counter-conditioning), new healthy routines, hobbies, behavior substitution, stress reduction, and environmental management</p>	<p>Yes. Especially it says; “<i>Focus on the positive aspects of your life and things you can control. Be kind and compassionate to yourself and others. Make time every day to reflect on what went well. It’s important to recognize your successes and the things you are grateful for, no matter how small. Consider keeping a gratitude journal each day where you could write two or three of these things every night before you go to bed. Mindfulness techniques may also help you focus on the present rather than dwelling on unhelpful thoughts (though they may not be helpful for those experiencing more severe depression).</i>”</p>
<p>ACT4: Praise people for their efforts and successes and encourage taking notice of the benefits of change and improvements—in respect to their mental health. Advise them to reward themselves in healthy ways, to accept rewards and to feel good about themselves—for making changes and improving their wellbeing</p>	<p>Yes. By saying; “<i>Try and rest and view this as a new if unusual experience, that might have its benefits.</i>”</p>

Appropriate messages	Addressed (yes or no) and also how
ACT5: Encourage people to watch what works or not for them; to become aware of warning signs of recurring mental health issues during the COVID-19 Pandemic and of appropriate responses to better cope with them	Yes. By mentioning the followings it underlines the warning signs of mental health issues; <i>“For many of us, coming out of lockdown is not a choice. Across the country people are being called to return to work, even when the official advice is to work from home wherever possible. For many of us this isn’t possible and the prospect of return carries with it a need to weigh up the potential safety risks to ourselves and family, with the need to earn money, restart the economy and/or provide service to others.”</i>
MAIN1: Destigmatize the recycling process; encourage people to view recurring mental health problems during the COVID-19 Pandemic as part of the natural course. Encourage people to stick to their new healthy routines even when they seem to feel better and/or when COVID-19 seems less of a threat	Yes. By underlying the possible lockdown risks it -indirectly-encourages people to stick their new health routines by saying; <i>“The idea of coming out of lockdown when the scientific debate is ongoing may also be worrying for those of us who are more at risk from the virus or living with mental health problem”</i>
MAIN2: Encourage learning from setbacks, such as understanding what happened and what can be done differently next time	Yes. It encourages learning from setbacks and understanding what can be done differently next time by saying the followings; <i>“.....lockdown is easing in different ways and at different times. As we begin to come out of lockdown many of us are faced with both challenges and opportunities” “For many of us, the gradual easing of lockdown brings longed-for opportunities (even if at a social distance)—to see friends, play sports, resume contact with family in ‘real space’ or get back to work that we value. But for many of us, even the happy, much anticipated changes can be difficult for our mental health”</i>

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