ความวิตกกังวลและความซึมเศร้าระหว่างสถานการณ์การระบาดของโควิด 19 ในประชากรไทย และเทคนิคการผ่อนคลาย

Anxiety and Depression during the Outbreak of Coronavirus Disease 2019 (COVID-19) among the Thais and their Relaxation Techniques

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Abstract: Due to the outbreak of coronavirus disease 2019 (COVID-19), people have changed normal lifestyle to home quarantine and social distancing which can make them feel isolated and lonely leading to more stress and anxiety. The objectives of this study were to investigate the anxiety and depression among Thai people during the outbreak of COVID-19 and determine factors related to anxiety and depression. The participants were 655 Thai people who responded online questionnaires during May to June 2020. The outbreak of COVID-19 caused Thai people to work from home (29.47%). Their lifestyle was changed (78.78%) leading to more stress. They were afraid about the return of COVID-19 pandemic (41.98%) and felt more concerned about getting depressed (43.97%). The stress level was found to be related with anxiety and depression significantly. The popular activity to reduce and manage stress was social media usage (32.18%) and most participants interested in listening to music for stress management (65.50%).

Keywords: COVID-19, anxiety, depression, stress, Thai

บทคัดย่อ: การระบาดของไวรัสโคโรนา 2019 (โควิด 19) ประชาชนต้องเปลี่ยนวิถีชีวิตมาอยู่บ้านและเว้นระยะห่างทางสังคม ทำให้เกิดความรู้สึกแยกตัวและโดดเดี่ยวก่อให้เกิดความเครียดและวิตกกังวลมากขึ้น งานวิจัยนี้มีวัตถุประสงค์เพื่อสำรวจความวิตกกังวลและความซึมเศร้าของประชากรไทยระหว่างการระบาดของโควิด 19 และหาปัจจัยที่มีความสัมพันธ์กับความวิตกกังวลและความซึมเศร้า กลุ่มตัวอย่างคือประชากรไทยจำนวน 655 คน ที่ตอบแบบสอบถามออนไลน์ระหว่างเดือนพฤษภาคม ถึงเดือนมิถุนายน 2020 การระบาดของโควิด 19 ทำให้กลุ่มตัวอย่างต้องทำงานที่บ้าน (ร้อยละ 29.47) การเปลี่ยนวิถีชีวิตเป็นสาเหตุให้เกิดความเครียดมากขึ้น (ร้อยละ 78.78) กลุ่มตัวอย่างร้อยละ 41.98 รู้สึกวิตกกังวลกับการระบาดของโควิด 19 ระลอกใหม่ และมีแนวโน้มซึมเศร้ามากขึ้น (ร้อยละ 43.97) ระดับความเครียดส่งผลต่อความวิตกกังวลและความซึมเศร้าอย่างมีนัยสำคัญ กิจกรรมที่ใช้ในการลดความเครียดมากที่สุดคือการใช้สื่อสังคมออนไลน์ (ร้อยละ 32.18) และกลุ่มตัวอย่างสนใจใช้เพลงเพื่อจัดการความเครียด (ร้อยละ 65.50)

คำสำคัญ: โควิด 19 วิตกกังวล ซึมเศร้า เครียด ไทย

Introduction

Since December 2019, coronavirus disease 2019 (COVID-19) epidemic first broke out in Wuhan City, Hubei province in China. It is caused by a beta-coronavirus that can spread to humans through intermediate hosts such as bats. Human-to-human transmission is transmitted through virus-laden respiratory droplets. It can cause symptoms including fever, chills, cough, sore throat, difficulty in breathing, invasive lesions on lungs, muscle pain, nausea, vomiting, and diarrhea. Severe cases may lead to heart injuries, respiratory failure, acute respiratory illnesses, and death (Rosenbaum, 2020; Wang *et al*., 2020). The first case outbreaks outside of China was detected on January 2020 in Thailand (Tantrakarnapa and Bhopdhornangkul, 2020) and in the following days, the outbreak has spread throughout the world (Boldog *et al*., 2020).

During the outbreak of COVID-19, people have changed normal lifestyle to social distancing for contain the virus (Elhai *et al*., 2020). Social distancing, such as home quarantine, school closures, and business closures, can make people feel isolated and lonely leading to negative psychological effects (Mukda and Kuensman, 2018; Duong *et al*., 2020). Previous studies revealed that the continuation of COVID-19 pandemic around the globe has caused significant psychological distress (anxiety, stress, and depression) and mental health problems which will result in dire health problems and stress levels among the population (Wang *et al*., 2020). Fear of getting infected with the virus and anxiety about a new disease can be overwhelming and cause strong emotions in adults and children (Rehman *et al*., 2020).

The aims of this study were to examine anxiety and depression among Thai people during the outbreak of COVID-19 and determine factors related to anxiety and depression as well as suggestion other relaxation techniques for management of anxiety. The information from this study will be useful for people in the community who are suffered from stress, anxiety and depression due to long-term of COVID-19 pandemic. Health education or consulting programs might be set up and provide to the community health volunteers for anxiety and depression management.

Methods

Survey design

This research was a cross-sectional descriptive study. The inclusion criteria were Thai people aged 15 years and over who used social networks. They were able to read and write Thai language. Definition of sample size was done with consideration of the formula of Cochran (1963) at a confidence level of 95%, p = 0.5, z= 1.96 and e = 0.05. The consideration of sample group size gave a value of 384.16. The questionnaire was distributed online for 1 month and there were 655 participants responded to the questionnaire.

Questionnaire

The questionnaire was developed by the researcher and constructed based on the Google forms and distributed online via link (https://forms.gle/RH9TDgHnuXkJppSX6). It was distributed via Facebook, Twitter, and Line from 8th May to 8th June 2020. This questionnaire was used to investigate the situation of participants during the outbreak of COVID-19. The questionnaire consisted of four parts: (1) general characteristics of participants such as gender, age, occupation and status of participants during the outbreak of COVID-19; (2) sources of COVID-19 news, impact of COVID-19 and level of stress; (3) level of anxiety and depression determined by Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith, 1983); (4) stress management of participants during the outbreak of COVID-19 and guideline of the healthy ways for coping with stress during COVID-19.

HADS has 14 items and each item has 0-3 scale. Item 1, 3, 5, 7, 9, 11, and 13 were used for anxiety measurement and item 2, 4, 6, 8, 10, 12, and 14 were used for depression measurement. The level of anxiety and depression consist of three levels include normal range (0-7 scores), borderline (8-10 scores), and abnormal (11 or over scores). The HADS Cronbach's alpha value for the total HADS was 0.884, 0.829 for anxiety and 0.840 for depression. Construct validity measured by item-scale correlations ranged from 0.540 to 0.804 (Michopoulos *et al*., 2008).

The questionnaire was pretested to evaluate the clarity and sequence of content before the actual survey among 30 persons whose characteristics were reasonably similar to the survey participants.

The participants were informed about the study purpose and answered the questionnaire anonymously; they were free to skip any item they did not wish to answer. They were completed the questionnaire online and submitted to transmit the survey responses. The data were collected automatically by the survey program and exported to Microsoft Excel format for further analysis.

Data analysis

Descriptive statistics were used to describe the general characteristics, information of participants during the outbreak of COVID-19, level of anxiety and depression, as well as relaxation techniques for stress management. The results were presented as a percentage. Pearson's chi-square with 0.05 statistical significance level was used to determine the relationship between anxiety and depression and factors related to anxiety and depression of participants. SPSS version 23 was employed for all data analyses.

Results

1. Demographic characteristics

The demographic characteristics of the participants were presented in Table 1. There were 655 participants responded to the online questionnaire. More than half of them were female (67.94%). The most participants aged between 45 to 64 years (31.60%). They were government officer (28.86%) The pandemic of COVID-19 caused Thai people to work from home (29.47%).

2. Information of participants during the outbreak of COVID-19

The information of participants during the outbreak of COVID-19 were presented in Table 2. A large majority of people obtained most information about Covid-19 from social media (95.57%). COVID-19 had an impact on lifestyle change (78.78%). They were quite a lot of stress during the outbreak of COVID-19 (38.62%). The causes of stress among them were the return of COVID-19 pandemic (41.98%).

3. Anxiety and depression of participants during the outbreak of COVID-19

Anxiety and depression of participants during the outbreak of COVID-19 were presented in Table 3. The level of anxiety and depression were measured by using HADS questionnaire. There were 384 participants (58.63%) classified in normal anxiety range, 205 participants (31.30%) classified in borderline abnormal anxiety levels and 66 participants (10.07%) classified in abnormal anxiety levels. On the contrary, there were 147 participants (22.44%) classified in normal depression level, 220 participants (33.59%) classified in borderline abnormal depression level and 288 participants (43.97%) classified in abnormal depression level. Pearson's chi-squared test was used to find the relationship between anxiety and depression. The result revealed the statistically independent ($p<0.05$) between anxiety and depression.

Table 1. Demographics of participants

Characteristics	Frequency (N=655)	Percentage (%)
Sex		
Male	210	32.06
Female	455	67.94
Age (years)		
15-24	181	27.63
25-44	189	28.86
45-64	207	31.60
More than 65	78	11.91

Table 1. Demographics of participants (continue)

Characteristics	Frequency (N=655)	Percentage (%)
Occupation		
Government officer	189	28.86
Student	162	24.73
Business owner/ self-employed	149	22.75
Company employee	76	11.60
Other e.g. retirement, housewife, unemployed	79	12.06
Status of participants during the outbreak of COVID-19		
Work from home	193	29.47
Work at company	173	26.41
Online-learning	162	24.73
Stay at home	127	19.39

Table 2. Information of participants during the outbreak of COVID-19

Variables	Frequency	Percentage (%)
Most obtain Covid-19 information*		
Social media	626	95.57
Television	528	80.61
Radio	77	11.76
Newspaper	58	8.85
None	2	0.31
Impact of COVID-19*		
Lifestyle change	516	78.78
Financial problem	372	56.64
Working status	257	39.24
Education status (online learning)	167	25.50
Not effect	35	5.34

* More than one answer can be cho

Table 2. Information of participants during the outbreak of COVID-19 (continue)

Variables	Frequency	Percentage (%)
Stress level (N=655)		
Slight	30	4.58
Moderate	175	26.72
Quite a lot	253	38.62
The most	197	30.08
Cause of stress (N=655)		
The return of COVID-19 pandemic	275	41.98
Economic crisis	134	20.46
Governmental regulation and restrictions	88	13.44
Financial status	68	10.38
Education status	56	8.55
Employment status	34	5.19

* More than one answer can be chose

Table 3. Anxiety and depression of participants during the outbreak of COVID-19 (N=655)

Level	Anxiety		Depression		Chi-Square	p-value
	Frequency	Percentage (%)	Frequency	Percentage (%)		
Normal	384	58.63	147	22.44	60.927	0.000*
Borderline	205	31.30	220	33.59		
abnormal	66	10.07	288	43.97		
Abnormal						

* Determined by Pearson's chi-square. The level of significance was at p<0.05

4. Factors related to anxiety and depression of participants during the outbreak of COVID-19

The relationship between demographics of participants and their anxiety or depression were determined and presented in Table 4. The result found that sex, age, occupations and status of participants during the outbreak of COVID-19 were not related with anxiety and depression in individuals. Despite the stress level was found to be related with anxiety and depression (p<0.05)

5. Stress management of participants during the outbreak of COVID-19

The open questions were used to ask about the participants' activities for reducing stress during the outbreak of COVID-19. The activities of participants were presented in Table 5. More than half of them (79.24%) had activities for reducing and managing their stress. The most popular

activity stress reduction was social media usage (32.18%) and this activity could help most of the relaxation in participants (50.10%). The relaxation techniques were recommended for reducing and managing stress. It was found that participants were the most interested in listening to music (65.50%) for stress management and most of them (82.75%) chose to recommend these activities to other people.

Table 4. Factors related to anxiety and depression of participants during the outbreak of COVID-19

Variables	Anxiety					Depression				
	Normal	Borderline	Abnormal	Chi-Square	P	Normal	Borderline	Abnormal	Chi-Square	P
Sex										
Male	124	63	22	0.218	0.897	49	69	91	0.180	0.914
Female	260	142	44			98	151	197		
Age (years)										
15 – 24	103	64	14	9.655	0.140	56	57	68	11.341	0.078
25 – 44	102	67	20			37	66	86		
45 – 64	128	58	21			37	72	98		
> 65	51	16	11			17	25	36		
Occupation										
Government officer	108	65	16	13.104	0.108	44	64	81	13.228	0.104
Student	91	58	13			48	52	62		
Business owner/ self employed	94	40	15			25	57	67		
Company employee	40	27	9			13	20	43		
Other	51	15	13			17	27	35		
Status of participants during the outbreak of COVID-19										
Work at home	106	67	20	7.101	0.312	39	71	83	5.761	0.450
Work at company	100	58	15			37	52	84		
Online study	92	51	19			45	51	66		
Stay at home	86	29	12			26	46	55		
Stress level										
Slight	23	5	2	15.399	0.017	15	11	4	37.922	0.000
Moderate	117	47	11			53	63	59		
Quite a lot	144	82	27			48	88	117		
The most	100	71	26			31	58	108		

Table 5. Stress management of participants during the outbreak of COVID-19

Variables	Frequency	Percentage (%)
Activities for reducing and managing stress (N=655)		
Yes	519	79.24
No	136	20.76
Activities for reducing and managing stress (N=519)[a]		
Using social media	167	32.18
Gardening	151	29.09
Watch movies, series, dramas	136	26.20
Listen music	102	19.65
Read a book	101	19.46
Exercise	61	11.75
Do housework	53	10.21
Cooking	47	9.06
Playing games	28	5.39
Do hobbies (such as painting, DIY and crafts)	24	4.62
Family activities	22	4.24
Playing with their pets	20	3.85
Meditation, praying	15	2.89
Do part-time jobs	10	1.93
Take online courses	9	1.73
Sleep	5	0.96
Reducing in stress after doing activities (N=519)		
Least	1	0.19
Moderate	28	5.39
Quite a lot	230	44.32
The most	260	50.10
Relaxation techniques to reduce and manage anxiety (N=655)[b]		
Music	429	65.50
Sleep	381	58.17
Exercise	285	43.51
Eating	285	43.51
Talking to someone	254	38.87
Playing with pet	226	34.50
Room decoration	183	27.94
Meditation	167	25.50
Time management techniques	104	15.88
Leave alone to find the cause of problem and solve them	101	15.42
Relaxation massage	97	14.81
Increase confidence by dressing	59	9.01
Aromatherapy	58	8.85
Make up and dress up	57	8.70
Yoga	43	6.65
Color therapy	18	2.75
The participants will recommend these activities to other people		
Recommend	542	82.75
Not recommend	113	17.25

[a] Opened question and more than one activity can be answered; [b] More than one answer can be chosen

Discussion

COVID-19 had become a pandemic raising concerns of widespread panic and increasing anxiety and stress in individuals all over the world. The outbreak of COVID-19 caused Thai people to stay at home for working from home. All schools and universities were closed. Students have to study based on online-learning. Thai people obtained information about COVID-19 on social media such as Facebook, Twitter and Instagram followed by from television. COVID-19 had an impact on lifestyle change, financial problem and working status. Thai people become more stressed after the outbreak of COVID-19. There are various factors that contribute to the increase in stress, including: afraid about the return of COVID-19 pandemic, economic crisis, governmental regulation and restrictions, financial status, education status and employment status. It was found in the present study that stress is significantly associated to anxiety and depression. Most participants had anxiety in normal level while had depression in abnormal level. Therefore, the outbreak of COVID-19 might be impacted on more depressed among Thai people. Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration (Kitthanarut and Thoppradit, 2019). Various relaxation techniques for coping with stress were suggested in the current study. These techniques include a number of practices such as listening to music, exercise, sleep, eating, talking to someone, pet therapy, meditation, aromatherapy, yoga, art activities and color therapy (Guetin *et al*., 2009; Javnbakht *et al*., 200; Bae *et al*., 2018; Mukda and Kuensman, 2018; Saramart *et al*., 2020). It was found that participants were the most interested in listening to music. The previous study reported that listening to music for 20 to 30 minutes can reduced anxiety, depression, enhanced mood, elevated endorphin and cortisol levels (Guetin *et al*., 2009). Exercise and physical activity have been shown to be associated with decreased symptoms of depression and anxiety (Broman-Fulks *et al*., 2004). In addition, the practice of mindfulness meditation can reduce stress, anxiety, and depression (Song and Lindquist, 2015). The spread of COVID-19 can impact the mental health of people in different communities. Thai people become more stressed and depressed during times of COVID-19 lockdown. Thus, it is essential to preserve the mental health of individuals. Self-monitoring and stress-reduction techniques are recommended for managing anxiety and depression from the COVID-19 pandemic.

Conclusion

The outbreak of COVID-19 caused Thai people to work from home. Their lifestyle was changed leading to more stressed. They were afraid about the return of COVID-19 pandemic and more prone to depression. Their stress level was related to anxiety and

depression. The popular activity to reduce and manage stress was social media usage. The various relaxation techniques were recommended for reducing and managing stress. It was found that most Thai people interested in listening to music for stress management and they will recommend these relaxation techniques to other people. The information from this study will be useful for people in the community who are suffered from stress, anxiety and depression due to long-term of COVID-19 pandemic.

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