Evaluation of the effects of Covid 19 on the mental health of staff in a private hospital for coronary patients

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Abstract

Background: Corona epidemic and quarantine enforcement, various effects on the psychological and social aspects of the population has left. The aim of this study is to investigate the relationship between depression, anxiety and relationship with medical staff and mental health is caused by corona.

Methods: For this purpose, samples of 650 health personnel of private hospitals were selected. Inventory DASS, HADS, and the Internet and through social media networks were evaluated. To analyze the data, Pearson correlation and regression analysis were used.

Results: The results showed that straw anxiety corona) to negative (and social cohesion caused by corona) to positive (mental health correlates. It was also found that anxiety caused by Corona, respectively 47 and 26 percent predict changes in mental health.

Conclusion: These results show the positive and negative effects of psychosocial interventions in quarantine and it have practical implications in the development of the epidemic crisis is Corona.

1. Background

In December 2019 a new type of virus, coronavirus (nCoV-2019) in Wuhan, China identify and quickly throughout China expanded according to the Commission's National Health China, to February 4, 2020, about 24,324 people living with the disease were (National Commission for Health China, 2020).. The scope of the epidemic from the city of Wuhan in 30 provinces of China and then other countries expanded so that in a short time zones in South-East Asia (Thailand, Singapore, Malaysia, Vietnam, Philippines and Cambodia), East Asia (Japan and Korea South), South Asia (India, Nepal, and Sri Lanka), west Asia (UAE, Iran), Europe (Italy, Germany, Britain, France, and Spain), Latin America (Canada and the states of America) and even Australia outbreaks were met [1].

One of the most important symptoms of this disease is acute respiratory symptoms, which in 2% of cases leads to the death of the patient. Due to the prevalence and transmission of the disease, the World Health Organization declared a state of emergency on February 4 and recommended that countries reduce the transmission of the disease from person to person by reducing contact, especially with patients and staff in patients' care and treatment departments. Control its global expansion [2]. Unfortunately, this method alone did not work, and the growing number of patients showed that in addition to the burden of patients, there are a large number of asymptomatic carriers in the community. This forced some regions to carry out full quarantine (such as China and Italy) or to implement preventive care at the national and national levels (such as Iran, UAE, and South Korea) in the city, province or even the whole country [3]. Implementation of health policies despite positive outcomes, psychological causes negative effects on the society. Fear of disease, fear of death, news of false rumors, interference with daily activities, curfew or travel restrictions and traffic, the reduction of social relations (colleagues, friends, family (problems of jobs and financial consequences of this conditions, threatens the mental health community [4]. Undoubtedly, one of the most important of these factors is anxiety related to

coronary heart disease. Studies show that the development of diseases such as respiratory diseases due to serious physical problems and reduced quality of life of patients will cause anxiety due to the disease [5]. Most anxiety research focuses on patients, but the fact is that during an epidemic of a disease such as coronary heart disease, fear of disease and fear of death, along with disruption of daily activities, causes healthy people to become involved with anxiety [3]. These can be signs of serious clinical disorders created. Increased feelings of loneliness, loss of social support, decreased life expectancy [6] and the feeling of fear and anxiety stress and anxiety, clinical, obsession and action associated with the disease [7]and even symptoms of post-traumatic stress has been seen in the same situation [8]. Depression is associated with psychological distress and mental anguish and physical activity disrupted, resulting in the disruption of social relationships [9]. Stress is a psychological state that the incidence of physical or psychological threat against perceived health [10]. Stress reduces efficiency, reduce costs and increase the quality and quantity of care taken by the health sector [11]. Reaction anxiety in the face of ambiguous danger is internal and unknown and has an unconscious and uncontrollable origin in which many factors are involved [12]. Usually people are anxious about the future in terms of psychological anxiety; worry and disappointment are one of the most important reactions in the patients [13]. Employee health risk factors that cause depression and stress in staff, the risk factors of job characteristics such as lack of independence of staff working on tasks and high demands arise [14].

Depression, anxiety and stress as psychiatric symptoms and disorders can be discussed in this context. Depression is a disorder that is characterized by changes in appetite and weight, sleep and activity levels, decreased energy, guilt, difficulty thinking and decision-making, and recurring thoughts about death and decision-making, Anxiety, which is experienced by all human beings, means experiencing an unpleasant and diffuse unpleasant feeling that is often accompanied by involuntary symptoms such as headache, sweating, increased heart rate, shortness of breath, abdominal discomfort, and restlessness with signs of inability to sit or Standing for a long time is determined. The combination of these factors can vary from person to person[15]. Also, the stress of events in which one to believe that the position demands and expectations from him are beyond the resources, facilities and capabilities at his disposal[16]. Anxiety and depression in 23% of men and 59% of women with asthma[17]. Increasing mental health can affect the quality of services provided to patients and ultimately affect the treatment process. Research has shown that stress levels are associated with depression and anxiety among hospital staff[11]. From what has been said, it can be concluded that the conditions of the epidemic crisis can cause positive and negative psychological and social effects that in some way affect the mental health of people in society. The purpose of this study is to assess the role of anxiety) is a psychological (and social solidarity), social factors (on mental health care workers during a flu epidemic Corona and the assumption measures that anxiety and social cohesion caused by the corona can mental health treatment staff at the time of the epidemic predict.

2. Materials And Methods

The design of this study was descriptive-correlational and its statistical population included all medical staff of a private hospital that was reserved for coronary patients. The minimum number of samples was

650. Due to the special conditions of the society and the limitations of traffic and social communication, the sampling and implementation method of the Internet was used. The method was that the questionnaire was designed online and published through social networks (Telegram and What Sapp). After eliminating the incomplete cases and matching the accident based on the degree and economic status, the minimum number of samples was required. Data were analyzed using SPSS-25 software and regression analysis.

2.1. Research tools

2.1.1. The DASS-21 questionnaire was used to assess the level of stress, anxiety and depression of hospital treatment staff in the care of Covid-19 patients. Depression, Stress, Anxiety Scale DASS-21 This questionnaire is a set of three self-report scales for assessing negative emotional states in depression, stress and anxiety [18]. Henry and Crawford used the Cronbach's alpha of the overall scale of 0.93, the Depression Report of the Stress Scale of 0.90 and the Anxiety Scale of 0.88 with a total of 0.88 [19], respectively.. Each question with four options is generally (score 0,)quantitative (score 1,) average, high (score 2) high (score 3 (critical)) Depression status scores in one of the normal categories (score 9 - Depression (mild), 0−14: stress, 0−7: anxiety, 0 medium), 15−18: stress, 8−9: anxiety, 10-13-25: stress, 10−14: anxiety, 14−20: depression: (Anxiety, 27 − 21: Depression severe), 19 Stress: 33 − 16 (and very severe) Depression: 28 and more, Anxiety: 20 and more, Stress: 33 and more [20].

2.1.2. The Anxiety and Depression Inventory is very special in patients with physical symptoms, because the questionnaires related to these conditions generally focus on physical symptoms. In order to solve this problem, Zigmund and Sneet in 1983 designed the "Hospital Anxiety and Depression Scale (HADS)" as a very appropriate and practical self-report tool to study anxiety and depression in patients with physical and mental problems. The advantages of this questionnaire are shortness, easy scoring and relative sensitivity to change [21]. This questionnaire has 14 questions and consists of two parts, 7 of which measure the cause of anxiety and the other 7 questions measure the cause of depression. Each question has 4 options that the subject chooses one of them based on his / her feelings. Each of these options is assigned a weight between 3 − 0. Scoring weights for expressions that indicate the presence of anxiety or depression are such that a score of 3 indicates a high presence of anxiety or depression and a score of zero indicates a low presence of anxiety or depression. Scoring weights are inverse for expressions that indicate no anxiety or depression; expressions that indicate no anxiety or depression and are weighed in reverse when scoring are: 12−12 9 − 7−4 − 2 The total score of each of the 2 scales of anxiety or depression is in the range between 0−21 that scores of 11−21 in each of the two scales are clinically suspected of having a disorder, scores 8 to 10 Intermediate and abnormal and a score of 0 to 7 are considered healthy. [22] According to the recommendations, if a questionnaire has a minimum internal consistency [1] measured with a Cronbach's alpha coefficient of about 0.60, the necessary reliability as an « It also has a self-reporting tool. It also has the necessary reliability as a "screening tool" if a questionnaire has a minimum internal consistency measured with a Cronbach's alpha coefficient of about 0.80. Numerous studies have concluded that the Hospital Anxiety and Depression Scale is calculated according to Cronbach's alpha for the Anxiety Scale (HAD-A = 0.78−0.93) and the Depression

Scale (HAD-D = 0.82-90) It has these criteria as a self-reporting and screening tool. In addition, the internal correlation between the two scales of depression and anxiety based on Pearson correlation coefficient between 0.49–0.63 has been reported[22]. This questionnaire was translated and standardized into Persian in 2003 in Iran by Dr. Montazer et al. To evaluate the reliability [2], Dr. Montazer et al. Used internal consistency measured through Cronbach's alpha formula, which calculated Cronbach's alpha was equal to or greater than 0.70. Validity [3] also performed the test by comparing and calculating the convergence of groups[23].

2.1.3. Participation and social solidarity due to coronary heart disease: This variable was assessed using some items of the Keys Community Welfare Questionnaire [24]. 13 items related to the following, correlation scales and social participation were selected from the Social Welfare Questionnaire and each item the items were scored according to Likert degree (completely disagree = 1 to strongly agree = 5). The validity and reliability of the main questionnaire in Iran were examined and its validity was confirmed through content validity and factor analysis. Also, its reliability was obtained by using Cronbach's alpha method for the whole questionnaire of 0.85 & 0.88 was obtained for the correlation and social participation subscales, respectively.

3. Results

In this study, 650 men and women were examined questionnaires that were matched in terms of qualification and social status. The mean age of the subjects was 38 5 5. Descriptive statistical analysis variables are presented in Table 1.

Table 1: Mean and standard deviation of the variables of the study subjects			
Standard deviation	mean	Count	Variable
3.22	20.02	650	DASS
8.85	18.45	650	HADS
5.23	38.13	650	Participation and social cohesion

As Table 2 shows, the average scores of the DASS 37.2 (higher scores indicate mental health is lower (participation and social cohesion caused by a coronavirus 30.12 and anxiety Corona 18.41, respectively. The correlation between these variables through the Pearson correlation coefficient was investigated.

Table 2: Correlation of research variables			
Participation and social cohesion	HADS	DASS	
		1	DASS
	1	0.703*	HADS
1	-0.117	-0.415*	Participation and social cohesion

Results Table 2 shows that social cohesion and anxiety caused by corona and mental health relationship) anxiety, negative correlation relationship (with. To test the hypothesis and investigate the relationship between predictor variables) social cohesion and anxiety caused by Corona (with variable criteria) scores DASS) regression was used. Before performing the test, the assumptions of normality of criterion variable, independence of errors, and non-linearity of predictor variables were examined and confirmed. Regression analysis is presented in Tables 3 and 4.

Table 3 shows that the prediction of mental health is significant based on the correlation between community and anxiety caused by coronary heart disease and this model is able to explain 54% of mental health changes.

Table 3: Results of regression prediction model DASS scores					
Significance level	F	Mean Square	sum of squares	R2	R
0.001	21.33	1506.15	3127.68	0.549	0.739

The impact factors variables monitored between Table 4 shows that cooperation and solidarity society is capable of up to 26 percent of the variance in mental health to determine the form that for an increase of 1 standard deviation ranging between communities of Corona, variable mental health as 0.26 Standard increases. Similarly, anxiety can determine 47% of the variance in mental health, so that for every 1 standard deviation of the coronary anxiety variable, the mental health variable decreases by 0.47 standard deviation. Higher DASS scores indicate lower mental health.

Table 4: regression coefficients social cohesion and anxiety scores in predicted scores of Corona DASS				
VF	p	β	B	Predictor variables
1	0.008	0.46	0.82	Anxiety
1	-0.02	-0.27	-0.62	Solidarity and social participation

4. Discussion

In the present study, the relationship between mental health and anxiety and community correlation due to coronary heart disease was investigated. The results showed that mental health has a significant correlation with anxiety and social correlation, so that the correlation of corona-induced community has a significant positive relationship, and corona anxiety has a significant negative relationship with mental health. The results of regression analysis also showed that anxiety and social correlation determine 26% and 47% of the variance of mental health, respectively. Although the literature on psychological research in Iran in relation to epidemics of infectious diseases in general and coronary heart disease in particular is very small, but can be considered the major role of community anxiety and well-being on mental health in general and in community crises. Pay attention and use them to explain these results. According to new perspectives, health means a high level of physical, mental and social health, so that deficiency in

each leads to shortcomings in other dimensions, and the factors influencing each case will have a significant impact on other dimensions. [24], therefore, it is necessary to study and explain the changes in mental health according to psychological and social factors.

In times of crisis, the social and individual structures of life are disrupted. Disturbance of individual structures means a decrease in a person's control, and a decrease in the predictability of the flow of life (Robin and Weissal), for example, during home quarantine, a person's life routine is disrupted and as a result he can less predict his future and Plan it. People feel that their control over the flow of life is reduced and this situation makes them feel insecure. Maslow considers security as one of the basic human needs and defines it as the power of predicting the future [25]. According to new perspectives, health means a high level of physical, mental and social health, so that deficiency in each leads to shortcomings in other dimensions, and the factors influencing each case will have a significant impact on other dimensions. [26], therefore, it is necessary to study and explain the changes in mental health according to psychological and social factors. In times of crisis, the social and individual structures of life are disrupted. Disturbance of individual structures means a decrease in a person's control, and a decrease in the predictability of the flow of life [7], for example, during home quarantine, a person's life routine is disrupted and as a result he can less predict his future and Plan it. People feel that their control over the flow of life is reduced and this situation makes them feel insecure. Maslow considers security as one of the basic human needs and defines it as the power of predicting the future [25]. This insecurity will cause anxiety. Anxiety is the most basic characteristic of crisis situations and the unpredictability of the future plays the biggest role in creating it[8]. Of course, these conditions can include fear of getting sick, fear of death, fear of material problems Adding job loss and the like [6]. So it is clear that this anxiety will have a negative impact on the mental health of people in the community, as the results of the present study confirm this. On the other hand, disruption of social structures also causes social unrest, and although natural disasters do not appear to be the subject of sociological issues, it should be borne in mind that the social consequences of such events are social unbalance. They contradict the normal currents of social life and the repetitive patterns of human activity, in fact the conventional patterns of social life of the people collapse and are replaced by new structures.

Structures that are skeptical based on the circumstances of the crisis, the values and goals of the dependent community [27]show the impact of these conditions on the community, different and dual consequences and effects. On the other hand, they cause confusion in society and weaken the rules of society, and increase the difference between society and selfishness and individualism. But on the other hand, it may strengthen social solidarity, cooperation of people, development of charitable activities and people's organizations, strengthening emotional relations and relationships, strengthening family and the need to increase motivation for work and effort, participation and altruism and altruism and lead to In general, increase participation and social solidarity.[28] In fact, new structures may be incompatible or compatible with mental health. For example, reducing community relationships may increase feelings of loneliness or decrease a person's perception of social support. Research has shown that in such situations a person's mental health will be endangered [28]because community support has positive effects on psychological structure and quality of life [29], Adaptive structures may also be skeptical in

these crisis situations. For example, a crisis situation causes all members of society to have a common goal and adopt common values in a coordinated movement: prevention and control of the disease. In other words, the crisis situation creates a new meaning in the life of the community that has not existed before or has been very low. In this new sense, the behavior of all members of society has the same function and especially depends on us. The feeling that a person's behavior has a profound effect on society is a positive feeling that may not have previously existed in people's lives. In these circumstances, even the severance of community ties is considered a community action with a completely positive value [30]. Examines health from both hedonistic and functionalist perspectives and equates community health with life satisfaction and a positive sense of it, and in a functional perspective emphasizes the importance of the individual, the meaning of life, and the readiness to play the role of community [31]. Therefore, although the usual community structures are disrupted by behaviors or dexterity, stronger community structures and more positive functioning can emerge in the community [32]. Practice disease prevention Corona, the new target is the social life of the people affected, and makes people feel that compliance with them can be not only the health of the body, which They should also dominate the health of the society and see themselves as the rulers of the conditions and not the victims. This is common sense, in terms of solidarity and community involvement called sociology. sees consensus as a criterion for doubting social solidarity and believes that society does not really exist unless its members have the same beliefs [3]. another study from Hongwei He in 2020, also believes that social solidarity and national harmony are based on values and moral rules and the acceptance of these values by the majority of society and individualism is a great scourge of social harmony, translation In Iranian society, with attention To the collectivist culture and national values and religion based on unity and solidarity, we have always witnessed in critical situations that new structures based on these values have been doubted and have led to the adaptation and solidarity of society and participation [33].

5. Conclusion

Research shows that community solidarity will improve mental and community well-being and the results of the present study also confirmed that part of the mental health changes are affected by the same correlation of society and has led to resistance to mental disorders and injuries. Therefore, it is clear that the conditions of the Corona epidemic crisis, in addition to increasing negative factors such as anxiety, have led to positive factors such as solidarity and community participation, which have a negative and positive effect on mental health. Therefore, it is suggested to use this important social capacity to maintain and promote the mental health of the community. This study was conducted in the Medical staff in Isfahan and it is suggested that such studies be conducted in other areas as well to determine the health priorities and implementation of the same areas. Due to the epidemic conditions, this study was conducted in absentia and through virtual networks. Many adults, who did not have the ability or access to use virtual networks, did not participate in this study. The dynamic and changeable nature of research variables was one of the most important limitations of the conclusion in this study. Therefore, it is necessary to consider this dynamic and repeat it at appropriate intervals to clarify the changes in mental health and the people affected by it.

Abbreviations

DASS: Depression Anxiety Stress Scales

HADS: Hospital Anxiety and Depression Scale

Declarations

Ethics approval and consent to participate: This study was approved by the Research Center of Shahid Sadoughi University of Medical Sciences in Yazd in 2020

Consent for publication: All authors agree to publish the article.

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Authors' contributions: H.A participated in the study design, analysis, and wrote the manuscript. H.A & RJ also conducted data collection. M.NZ also participated in the preparation of the draft of the paper, revised the draft of the manuscript, and supervised the project. M.NZ also conducted data analysis. All authors participated in the development of the manuscript and data interpretation. R.J participated in the study design, interpretation of findings, and also wrote the manuscript. All authors read and approved the final manuscript.

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References

[1] S. Baidya, D. Paul, P. Chowdhury, COVID-19: An Epidemiological Puzzle, AIJR Preprints, (2020).

[2] W. Coronavirus, https://covid19. who. int, in, Accessed, 2020.

[3] S.A. Fard, M. Saffarinia, The prediction of mental health based on the anxiety and the social cohesion that caused by Coronavirus.

[4] C.L.M. Keyes, Social well-being, Social psychology quarterly, (1998) 121-140.

[5] Z. Wu, J.M. McGoogan, Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention, Jama, 323 (2020) 1239-1242.

[6] J. Shigemura, K. Nakamoto, R.J. Ursano, Responses to the outbreak of novel influenza A (H1N1) in Japan: risk communication and shimaguni konjo, in, 2009.

[7] G.J. Rubin, S. Wessely, The psychological effects of quarantining a city, Bmj, 368 (2020).

[8] V.H. Menec, J.G. Chipperfield, R.P. Perry, Self-perceptions of health: A prospective analysis of mortality, control, and health, The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 54 (1999) P85-P93.

[9] A. Ozkan, M. Ozdevecioglu, Y. Kaya, F.Ö. Koç, Effects of mental workloads on depression–anger symptoms and interpersonal sensitivities of accounting professionals, Revista de Contabilidad, 18 (2015) 194-199.

[10] M.K. Jahromi, S. Minaei, S. Abdollahifard, M. Maddahfar, The effect of stress management on occupational stress and satisfaction among midwives in obstetrics and gynecology hospital Wards in Iran, Global journal of health science, 8 (2016) 91.

[11] R.F. AbuAlRub, Job stress, job performance, and social support among hospital nurses, Journal of nursing scholarship, 36 (2004) 73-78.

[12] H.A.H. OMIDI, E.A.A. ABBASI, RELATIONSHIP BETWEEN NIGHT SHIFT AND NURSES'DEPRESSION AND ANXIETY, (2015).

[13] H. Mahmoudi, A. Ebadi, S.H. Salimi, S. Najafi Mehri, J. Mokhtari Noori, F. Shokrollahi, Effect of nurse communication with patients on axiety, depression and stress level of emergency ward patients, J Crit Care Nurs, 3 (2010) 3-4.

[14] M.S. Spoorthy, S.K. Pratapa, S. Mahant, Mental health problems faced by healthcare workers due to the COVID-19 pandemic–A review, Asian journal of psychiatry, 51 (2020) 102119.

[15] B. Anjazab, F. Farnia, Survey relationship between job stress with behavioral and mental responses in midwives working in public hospitals of Yazd in 1999, J Shaheed Sadoughi Univ Med Sci, 10 (2000) 32-38.

[16] M.E. AZAD, F.M. GHOLAMI, Reliability and validity assessment for the HSE job stress questionnaire, (2011).

[17] V. Di Martino, Relationship between work stress and workplace violence in the health sector, ILO Geneva, 2003.

[18] P.F. Lovibond, S.H. Lovibond, The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories, Behaviour research and therapy, 33 (1995) 335-343.

[19] J.D. Henry, J.R. Crawford, The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample, British journal of clinical psychology, 44 (2005) 227-239.

[20] A. Nouroozi Kushali, Z. Hajiamini, A. Ebadi, F. Khamseh, Z. Rafieyan, A. Sadeghi, Comparison of intensive care unit and general wards nurses' emotional reactions and health status, Advances in Nursing & Midwifery, 23 (2013) 15-23.

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

[22] L.E. Dreer, T.R. Elliott, D.C. Fletcher, M. Swanson, Social Problem-Solving Abilities and Psychological Adjustment of Persons in Low Vision Rehabilitation, Rehabilitation Psychology, 50 (2005) 232.

[23] W.B. Jaffee, T.J. D'Zurilla, Adolescent problem solving, parent problem solving, and externalizing behavior in adolescents, Behavior Therapy, 34 (2003) 295-311.

[24] C.L. Keyes, A.D. Shapiro, Social well-being in the United States: A descriptive epidemiology, How healthy are we, 15 (2004) 350-372.

[25] T.L.-P. Tang, A.H.S. Ibrahim, W.B. West, Effects of war-related stress on the satisfaction of human needs: The United States and the Middle East, International Journal of Management Theory and Practices, 3 (2002) 35-53.

[26] C.L.M. Keyes, C.D. Ryff, Subjective change and mental health: A self-concept theory, Social Psychology Quarterly, (2000) 264-279.

[27] T.-J. John, K. Hassan, H. Weich, Donning and doffing of personal protective equipment (PPE) for angiography during the COVID-19 crisis, European heart journal, (2020).

[28] S. Valero-Moreno, L. Lacomba-Trejo, S. Casaña-Granell, V.J. Prado-Gascó, I. Montoya-Castilla, M. Pérez-Marín, Psychometric properties of the questionnaire on threat perception of chronic illnesses in pediatric patients, Revista latino-americana de enfermagem, 28 (2020).

[29] A.H. Pakpour, M.D. Griffiths, C.-Y. Lin, Assessing psychological response to the COVID-19: the fear of COVID-19 Scale and the COVID Stress Scales, International Journal of Mental Health and Addiction, (2020).

[30] A.S. Waterman, S.J. Schwartz, B.L. Zamboanga, R.D. Ravert, M.K. Williams, V. Bede Agocha, S. Yeong Kim, M. Brent Donnellan, The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity, The Journal of Positive Psychology, 5 (2010) 41-61.

[31] A.S. Waterman, Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment, Journal of personality and social psychology, 64 (1993) 678.

[32] X.-Y. Dong, L. Wang, Y.-X. Tao, X.-l. Suo, Y.-C. Li, F. Liu, Y. Zhao, Q. Zhang, Psychometric properties of the Anxiety Inventory for Respiratory Disease in patients with COPD in China, International journal of chronic obstructive pulmonary disease, 12 (2017) 49.

[33] H. He, L. Harris, The Impact of Covid-19 Pandemic on Corporate Social Responsibility and Marketing Philosophy, Journal of Business Research, (2020).