

Factors Influencing Loneliness during COVID -19 among Early Adults

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Loneliness is the most growing problem in the whole world and becomes horrible during the COVID-19 period, especially among early adults. It has been linked to poor psychological well-being and common mental disorders. Certain behaviours can be both an influencing factor and a consequence of loneliness. Loneliness is a transient experience in people's lives because it is influenced by circumstances and changes. So, it is necessary to find out the factors influencing loneliness during the COVID-19 period. Purposive and snowball sampling selected 260 adults aged 20 to 40 years (mean = 25.80, SD = 4.32). Participants of the study were administered through Google Form by the UCLA loneliness scale, Preference for solitude scale, Pittsburgh sleep quality index-short Form, Cognitive failure questionnaire, and Psychological general well-being index measures. Descriptive statistics, Pearson correlation, and hierarchical multiple regression analysis were run through SPSS. Results: Participants' education, psychological well-being, and preference for solitude are the best predictors of loneliness. The correlation coefficient shows that participants' age, education, health satisfaction, and diet satisfaction were significantly correlated with loneliness. Loneliness was not associated with gender, occupation, marital status, living status, medicine intake, previous health issues or diseases, and sunlight exposure during the COVID pandemic. Among early adults' loneliness was predicted by their education level, psychological well-being, and solitude preferences. The present study has practical implications for developing diversified interventions to alleviate loneliness and enhance well-being.

Keywords: Cognitive Failure, Loneliness, Sleep Quality, Solitude, Psychological Well-being.

Loneliness is a transient experience in people's lives that is influenced by their surroundings, changes, and the places where they live. (Qualter et al., 2020; Shovestul et al., 2020) job performance, and productivity. The study of personality is relevant in this area of research, because personality has been consistently related to burnout. Beyond the objective nature of the work, employees tend to perceive the work environment favorably or unfavorably depending on their personality characteristics. Personality factors also interact with job demands and resources in predicting burnout. Recent research has indicated that burnout symptoms may vary from day to day, depending on the prevalence of daily work characteristics and daily emotional states. This opens the door to new research that sheds light on the process of burnout, and on possible interventions that may prevent burnout.

Loneliness is a potent predictor of negative health outcomes, making it important to identify risk factors for loneliness. Though extant studies have identified characteristics associated with loneliness, less is known about the cumulative and relative importance of these factors, and how their interaction may impact loneliness. Here, 4,885 individuals ages 10–97 years from the US completed the three-item UCLA Loneliness Survey on TestMyBrain.org. Using census data, we calculated the population and community household income of participants' census area, and the proportion of individuals in the participant's census area that shared the participant's demographic characteristics (i.e., sociodemographic density). It is an unpleasant experience that has been linked to a variety of negative outcomes, including poor mental health, (Werner et al., 2021) low quality of life, (Rumas et al., 2021). (Rumas et al., 2021) morbidity, illness, and disorders. (Ferreira-Alves et al.,

2014) During the pandemic, cases of loneliness and other negative emotional experiences have increased dramatically. (Werner et al., 2021) Physical distance and limited outings decreased the people's interactions and contact. A study conducted during COVID-19 shows that less regularity of meeting with friends and fewer leisure activities is associated with loneliness and low life satisfaction. (Kekkonen et al., 2020) aged 13–18 years

According to loneliness prevalence findings, 6% of people experienced extreme loneliness, while 56% experienced moderate-to-severe loneliness. And environmental mastery was the main predictor of their loneliness feelings. (Mansour et al., 2021) Studies indicated that loneliness was the major outcome of this pandemic, which affected health and well-being. (Werner et al., 2021; Williams, 2022) Findings further revealed that some people feel lonelier than others. So, there is a need to identify the other risk factors of loneliness at the individual level to manage its negative outcomes. (Luchetti, 2020)

Studies related to determinants of loneliness in a specific age group revealed inconsistent findings. (Bu et al., 2020; Ferreira-Alves et al., 2014; Rumas et al., 2021; Shovestul et al., 2020) it is therefore vital that research considers the impact of the current COVID-19 pandemic on loneliness to provide necessary support. But it remains unclear, who is lonely in lockdown? Methods: This study compared sociodemographic predictors of loneliness before and during the COVID-19 pandemic using cross-cohort analyses of data from UK adults captured before the pandemic (UK Household Longitudinal Study, n = 31,064) The majority of studies focused on adolescents and older populations over the age of 60. Little research has been conducted on the loneliness of early adults. (Child & Lawton, 2019; Mund et al., 2020) Additionally, investigations into the role of demographic variables are also scarce. (Bu et al., 2020) Loneliness experiences change over time and are influenced by many physical, psychological, social, and geographical changes. The sample and measurement tools used in these studies were also quite different and noteworthy. (Bu et al., 2020; Shovestul et al.,

2020) Considering these issues is worthwhile to investigate the prevalence of loneliness and its causal factors in a sample of early adulthood.

On the above basis, the present study aimed to examine the prevalence of loneliness and the role of demographic and health-related factors, solitude preference, cognitive failure, sleep quality, and psychological well-being in the prediction of loneliness among early adults during COVID-19.

Materials and Methods

Study design

The present study was based on a cross-sectional survey design. Data collection was done between 22 March to 1 June 2021, online with the help of Google Forms. Participants who come from the 20 to 40 age group, are comfortable with the English language, and have internet access were included in this study. While participants with serious physical and mental disorders were excluded from the study. This study received approval from the institutional ethics committee (ref. no. Dean/2021/EC/3100).

Participants: The present study comprised 260 adults aged between 20 to 40 years (mean = 25.80, SD = 4.32). Participants were 46.2% male and 53.8% female. And 85% of participants lived with their families, and the remaining 15% lived without family during the pandemic. Table 1 presents the characteristics of the participants.

Study tools

Personal data sheet: It was created to collect the participants' sociodemographic information, such as age, gender, marital status, education, occupation, living status, and socioeconomic status. In addition to these, participants' lifestyle and health-related information, namely duration of sunlight exposure, medicine intake, previous health injuries, health satisfaction, and diet satisfaction, were also taken. Participants' health and diet satisfaction were assessed on a self-constructed five-point Likert scale, ranging from strongly satisfied to strongly dissatisfied. Socioeconomic status was assessed through a modified form of the Kuppuswamy scale. (Saleem, 2020) Questions of this scale were related to the head of the family's income, education, and occupation.

The UCLA Loneliness Scale: It was developed by Russell et al. in 1996. It is a four-point self-reported measure including 20 items. That assesses personal feelings of loneliness. The response on this scale ranges from never to often, indicating an individual's loneliness feelings. Response 'never' scores "1", "rarely" scores "2", "sometimes" scores "3", and "often" scores "4". Items no. 1, 5, 6, 9, 10, 15, 16, 19, and 20 are reverse-scored items. The overall score on loneliness falls in the range of 20 to 80. Cronbach's alpha for this scale ranges from 0.89 to 0.94, and this test has significant convergent validity. (Russell, 1996)nurses, teachers, and the elderly, analyses of the reliability, validity, and factor structure of this new version of the UCLA Loneliness Scale were conducted. Results indicated that the measure was highly reliable, both in terms of internal consistency (coefficient α ranging from .89 to .94

The Cognitive Failure Questionnaire (CFQ): The cognitive function of everyday activities can be measured by the cognitive failure questionnaire. It is a self-reported 25-item scale developed by Broadbent et al. in 1982. It assesses subjective cognitive impairments over the past six months. It is a five-point scale ranging from never to very often (0 to 4). All items are positively worded to indicate cognitive failure. A high score on the scale indicates high cognitive impairment in daily life. (Broadbent et al., 1982) memory, and motor function. Responses to all questions tend to be positively correlated, and the whole questionnaire correlates with other recent measures of self-reported deficit in memory, absent-mindedness, or slips of action. The questionnaire is however only weakly correlated with indices of social desirability set or of neuroticism. It is significantly correlated with ratings of the respondent by his or her spouse, and accordingly does have some external significance rather than purely private opinion of the self. The score is reasonably stable over long periods, to about the same extent as traditional measures of trait rather than state. Furthermore, it has not thus far been found to change in persons exposed to life-stresses. However, it does frequently correlate with the number of current psychiatric symptoms reported by the

same person on the MHQ; and in one study it has been found that CFQ predicts subsequent MHQ in persons who work at a stressful job in the interval. It does not do so in those who work in a less stressful environment. The most plausible view is that cognitive failure makes a person vulnerable to showing bad effects of stress, rather than itself resulting from stress.

The cognitive failures questionnaire (CFQ) Psychological general wellbeing index (PGWBI). The PGWBI assesses psychological well-being and health in a general subjective manner. It was developed by H.J. Dupuy (1984). It is a 22-item Likert scale that consists of six dimensions: anxiety, depressed mood, self-control, positive well-being, general health, and vitality. A high score on the anxiety dimension displays a low level of anxiety; the same high score on the depression dimension indicates a low level of depression. While high scores on other dimensions show a high level of self-control, positive well-being, general health, and vitality. A score on all domains represents the best achievable psychological well-being, ranging from 0 to 110. Cronbach's alpha for this scale ranged from 0.90 to 0.94. (Chassany et al., 2004)population and disease severity for three specific HRQoL instruments: the Women's Health Questionnaire (WHQ

Pittsburgh sleeps quality index – short form. The Pittsburgh Sleep Quality Index (PSQI), developed by Deniel J. Buysse in 1989, is a self-reported questionnaire that assesses sleep quality over the past month. In this study, a short form of PSQI is used that was developed by Famodu et al. in 2018. That showed good psychometric properties in agreement with the original PSQI. It is a 13-item scale that consists of five components: sleep latency, sleep duration, sleep efficiency, sleep disturbance, and daytime dysfunction. Subjective items 1 to 4 cover information on timing to go to bed, falling asleep, getting up in the morning, and actual hours of sleep, while objective items 5 to 7 cover information related to sleep trouble during the past month. All five components together indicate global PSQI. The total score ranges from 0 to 15. In which a score greater than four (4) indicates poor sleep quality. Both

the reliability and validity of the scale are satisfactory.(Famodu et al., 2018)

Preference for solitude: The preference for solitude scale was originally developed by Burger in 1995. It is a 12-item dichotomous scale that covers the need for solitude, enjoyment of solitude, and productivity during solitude. Score 1 indicates an individual's preference for solitude, and score 0 indicates no preference for solitude. The total score ranges from 0 to 12. (Burger, 1995)

Study Procedure

Data collection for this study followed the purposive and snowball sampling during the COVID-19 second wave. A Google form was first created with all the necessary information: objectives of study, instruction, and required questionnaires. Google forms link were shared via WhatsApp and email. Each form collects responses on questionnaires with informed consent from participants. Final data only included the responses of those participants who checked the 'yes' option of consent. Participants were not rewarded for participation. No funding was obtained for this study. Participants' anonymity was maintained.

Statistical analysis

Statistical analysis was run by SPSS software (version 23). The normality assumptions were checked through the standard z-score, Q-Q plot, kurtosis, and skewness. Statistics for tolerance (ranging from 0.53 to 0.99), VIF (1.01 to 1.88), and the Durbin-Watson test (2.03) were in their acceptable ranges.(Field, 2009) Herman's one-factor test disclosed a 16.96% variance, which was acceptable for this study (below the threshold of 50%). Furthermore, descriptive statistics were used to understand demographic and health-related characteristics of participants regarding loneliness. After that t-test and f-test were used to analyse mean differences in participants' loneliness in relation to their demographics and health-related characteristics. Correlation coefficient analyses were done to find the association between research variables, and hierarchical regression analysis was run to know predictors of loneliness during COVID-19.

Results

T-test and f-test were used to analyse the mean difference in loneliness regarding demographics and health-related variables (table-1). The percentage of loneliness feelings in adults revealed that 4.20% of adults experienced high loneliness, 62.30% were between high to moderate loneliness, and the rest, 33.50% of adults experienced moderate loneliness. In table 1 significant mean difference found only regarding participants education level (F =7.917, df = 2, 257, P 0.000), health satisfaction (F =4.812, df = 4, 255, P 0.001) and diet satisfaction (F =6.244, df = 3, 256, P 0.000) for loneliness.

The results of the correlation coefficient between loneliness and participants' demographics and health-related characteristics show in table 2. Findings reveal that only age (r = -.146, P 0.018), education (r = -.224, P 0.000), health satisfaction (r = -.238, P 0.000) and diet satisfaction (r = -.223, P 0.000) were associated with loneliness.

Table 3 shows that loneliness was positively but weakly associated with poor sleep quality (r =.209, P 0.001), and solitude preference (r =.242, P 0.000), and moderately associated with cognitive failure (r =.362, P 0.000), whereas strongly and negatively associated with psychological well-being (r = -.517, P 0.000). The result also shows that poor sleep quality is weakly connected with cognitive failure (r=.228, P 0.000) and poor psychological well-being (r=.209, P 0.000).

The results of the regression analysis predicted the criterion variables.

A hierarchical regression analysis (block-wise) was run to explore the predictors of loneliness. In the first stage, demographics and health-related variables were added, then psychological well-being, cognitive failure, preference for solitude, and sleep quality were added in the second stage (table-4). Results indicated that coefficients of education, health satisfaction, and diet satisfaction were found significant in the regression model (F= 9.597, df=4, 255, P 0.000, $\Delta R^2=.131$) and accounted for 13.1% of the variation in the prediction of loneliness. Adding all independent variables namely psychological well-being, cognitive

Table 1. Participants' demographics and health-related characteristics

Variables	Level	(N%)	Loneliness		
			Mean	SD	T test/F test
Age	20-40	260	25.80	4.32	
Gender	Male	46.2	45.13	8.09	t (258) =1.682
	Female	53.8	43.22	10.15	
Marital status	Married	20.8	43.05	8.38	t (258) =-0.934
	Unmarried	79.2	44.38	9.51	
Education	Intermediate	3.5	45.66	7.41	F (2, 257) =7.917**
	Under graduate	46.5	46.38	8.08	
	≥ post graduate	50	41.87	9.95	
Occupation	Fulltime Job	26.9	43.27	8.07	F (2, 257) =1.299
	Students	58.8	44.86	9.74	
	Others	14.2	42.56	9.44	
Religion	Hindu	92.3	44.52	9.27	
	Muslim	3.8	37.50	9.43	
	Sikh	0.4	52	-	
	Christian	1.9	37.40	6.26	
	Other	1.5	42	4.96	
Living status	With family	85	43.93	9.56	t (258) =-0.706
	Without family	15	45.07	7.61	
Socioeconomic Status (SES)	Lower	3.1	43.92	7.99	F (4, 255) =1.465
	upper lower	15.8	44.85	9.73	
	lower middle	25	41.80	9.31	
	upper middle	45.8	45.48	8.65	
	Upper	10.4	44.10	8.27	
Sunlight	< 20 minutes	69.2	44.09	9.13	F (2, 257) =1.066
	20 to 30 minutes	17.3	42.80	8.79	
	> 30 minutes	13.5	45.85	10.64	
Medicine intake	No	83.1	43.99	9.07	t (258) =-0.431
	Yes	16.9	45.65	10.39	

Health injuries	No	90	43,94	9.19	t (258) =-0.849
	Yes	10	45.57	10.23	
Health satisfaction	Strongly dissatisfied	1.2	43.33	11.54	F (4, 255) =4.812**
	Dissatisfied	9.6	47.84	10.35	
	Neutral	22.7	47.22	6.41	
	Satisfied	51.2	43.12	9.63	
	Strongly satisfied	15.4	40.50	9.22	
Diet satisfaction	Strongly dissatisfied	00	45.17	10.79	F (3, 256) =6.244**
	Dissatisfied	6.5	47.72	7.24	
	Neutral	26.2	43.18	9.33	
	Satisfied	53.1	40.43	9.88	
	Strongly satisfied	14.2	44.10	9.29	

Note. N=260, *p<.05, **p<.01

Table 2. Correlation coefficients between loneliness and demographic and health-related variables

V	2	3	4	5	6	7	8	9	10	11	12	13
1	-.054	-.166**	.329**	-.574**	-.061	.054	.069	.063	0.092	0.071	0.009	-.146*
2		.230**	.244**	-.018	.044	-.238**	-.105	.109	.154*	-.132*	-0.04	-0.102
3			.069	.078	.004	-.241**	.008	.026	0.006	-0.089	-0.002	0.001
4				-.132*	.031	-.003	-.029	.046	0.066	-0.064	-0.015	-.224**
5					.027	.056	-.099	-0.022	-0.082	-0.119	-.153*	0.058
6						-.072	-.001	0.011	.129*	0.022	0.006	-0.115
7							-.04	0.069	-0.068	0.013	-0.114	0.044
8								-.253**	-.337**	.160**	.446**	-.238**
9									.362**	-.133*	-.211**	0.027
10										-.194**	-.157*	0.053
11											.214**	-0.003
12												-.223**

Note: V- Variables, 1-Age, 2- Gender, 3- Occupation, 4- Education, 5- Marital status, 6- Religion, 7- Living status, 8- Health satisfaction, 9 - Medicine intake, 10- Previous health issues, 11- Sunlight exposure, 12- Diet satisfaction, 13- loneliness (*p <.05, **P<.01)

Table 3. Relationship between loneliness and different predicting variables

variables	Mean \pm SD	Preference for solitude	Cognitive failure	Psychological well-being	Loneliness
Poor Sleep Quality	3.66 \pm 2.12	-.007	.228**	-.465**	.209**
Preference for solitude	6.12 \pm 2.60		.057	-.054	.242**
Cognitive failure	38.19 \pm 17.58			-.492**	.362**
Psychological well-being	64.22 \pm 16.11				-.517**

Note. ** $p < 0.01$, * $p < 0.05$ (two-tailed)

Table 4. Summary of Hierarchical regression analysis predicting loneliness (N-260)

Variables	B	SE	β	t	R ²	Adjusted R ²	ΔR^2
Step 1					0.131	0.117	0.131***
(Constant)	69.578	4.547	-	15.302			
Age	-0.138	0.133	-0.064	-1.036			
Education	-3.448	1.018	-0.210***	-3.386			
Health Satisfaction	-1.827	0.688	-0.174**	-2.654			
Diet satisfaction	-1.772	0.780	-0.148*	-2.273			
Step 2					0.349	0.328	0.218***
(Constant)	63.450	5.372	-	11.811			
Age	-0.042	0.117	-0.020	-0.360			
Education	-2.316	0.918	-0.141**	-2.523			
Health Satisfaction	-0.104	0.637	-0.010	-0.163			
Diet satisfaction	-0.530	0.698	-0.044	-0.759			
Psychological wellbeing	-0.250	0.040	-0.434***	-6.215			
Cognitive failure	0.053	0.032	0.101	1.683			
Preference for Solitude	-0.738	0.183	0.207***	4.035			
Sleep Quality	-0.180	0.253	-0.041	-0.710			

Note. N = 260; * $p < .05$, ** $p < .01$, *** $p < .001$

failure, preference for solitude, and sleep quality in the regression model explained a 21.8% variation in loneliness and this R² change significantly predict loneliness in the regression model (F = 16.818, df = 8, 251, P 0.000). Results (table-4) further suggested that diet and health satisfaction were weak and insignificant when other variables were entered into the model. Similarly, cognitive failure and sleep quality were

not found to be significant in a regression model.

Discussion

The present study examined the role of psychological well-being (PWB), preference for solitude, cognitive failure, sleep quality, and some demographic and health-related variables in predicting loneliness. Many factors have influenced loneliness, but exploring these factors

again in the context of the COVID pandemic has unique importance. Young people are at risk of loneliness and poor health due to restrictions and lockdown during pandemics.(Bu et al., 2020; Werner et al., 2021)

The present study suggests that PWB, solitude for preference, and education have affected loneliness more than other factors during COVID-19. The result is supported by previous studies in which PWB is negatively associated with loneliness.(Cecen & Cenkseven, 2007; Doman & Le Roux, 2012) It is the sum of low anxiety, low depression, vitality, self-control, positive well-being, and general health. When a person is psychologically healthy, he or she has a positive self-image. It aids in the development of social relationships with others, which reduces feelings of loneliness. PWB improves interpersonal relationships and helps people cope with loneliness.(Bhagchandani, 2017). On the other hand, depression and anxiety are the symptoms of poor PWB and the most commonly occurring problems during COVID-19.(Robb et al., 2020) Both are potential risk factors for loneliness.(Hoffart et al., 2020)as a result of the social distancing protocols, loneliness is likely to increase. This study investigates (a At the same time, the desire for liveliness, an optimal level of self-control, good health, and well-being are protective factors against loneliness.

The present study further shows that a preference for solitude is a favourable and significant predictor of loneliness. Preference for solitude refers to a pleasant situation in which he or she enjoys his or her own company and feels upbeat. However, in high solitude, individuals tend to avoid other companies' presence, which often leads to loneliness. A study revealed that individuals with a high preference for solitude generate ostracism experiences that demonstrate potentially harmful interpersonal consequences, (Ren & Evans, 2021) and solitude seekers do not need to belong to others. Other research indicates that a preference for solitude and loneliness are negatively associated with positive affect. Mediation analysis of that research revealed that a strong desire for solitude was linked to feelings of loneliness, leading to low positive affect.(Toyoshima & Sato, 2015)

Regarding demographic and other health variables, the analysis suggested that age, education, health satisfaction, and diet satisfaction are significant predictors of loneliness. This result shows resonance with previous studies.(Bu et al., 2020; Macià et al., 2021; Shovestul et al., 2020) Studies indicated that students were at a high risk of loneliness compared to full-time employed participants. Along these lines, students at the graduation level feel lonelier than participants with intermediate and higher-level education. The reason behind this may be that at this stage, adults go through a transition period in which they desire employment, higher education, and the opportunity to connect with others. A restriction unmet this desire and provokes emotional disturbance, behavioural issues, and adaptive issues. A study reveals that students also face difficulties in learning. The online class environment is different from that of physical and face-to-face interaction and learning in a college or institute. Students do not find physical exploration and face the fear of loss in their studies.(Singh & Quraishi, 2021)

Participants with higher health satisfaction and diet satisfaction levels felt less loneliness. This outcome is entirely congruent with the previous finding that suggests that poor health status and lifestyle are associated with loneliness.(Macià et al., 2021) A cross-sectional study by Wu et al. found that high food insecurity leads to a high level of loneliness.(Wu et al., 2022) This study found no association between loneliness and gender, (Macià et al., 2021) occupation, marital status, living status, medicine intake, previous health issues or diseases,(Sampogna et al., 2021)but it is expected to have a protracted and severe consequences for younger populations. The pandemic has had several consequences on mental health including anger and irritability, depressive symptoms and somatic complaints, insomnia, lack of motivation, and loneliness. In particular, loneliness and its related negative feelings are thought to be particularly pronounced during young adulthood because of the many social changes that young people deal with during this period of life. Therefore, it is essential to evaluate the type of impact of the pandemic on the

mental health of young people and their levels of loneliness experienced during the first phase of the lockdown. Based on the largest Italian study on the effects of the COVID-19 pandemic on the mental health of general population, in this paper we aim to: (1 and sunlight exposure during the COVID pandemic.

Limitations and Strengths

This study was conducted on cross-sectional data. A longitudinal study would be required for causal inferences. The sample size was not too large to generalize the findings. Only those participants included in this study were able to understand English. Although English is a globally accepted language, it has developed a bias in research. Besides these limitations, this study has several merits, such as using validated, reliable survey methods and adequate sample size. The findings suggest that intervention based on the explored factors in this study may be helpful. Installing a healthy lifestyle and improving PWB, as well as a balanced solitude thought, would be extremely beneficial in managing loneliness.

Conclusion

Loneliness is a growing global concern among public health practitioners, influenced by personal and geographical characteristics. PWB, solitude, age, education, health satisfaction, and diet satisfaction play a significant role in loneliness. The prevalence rate suggests that assistance and intervention plans should be ready for the people suffering from loneliness and pandemics. Our findings could help to promote loneliness alleviation through an intervention based on the early adult population.

References

- Bhagchandani, R. K. (2017). Effect of loneliness on the psychological well-being of college students. *International Journal of Social Science and Humanity*, 7(1), 60–64. <https://doi.org/10.18178/ijssh.2017.7.1.796>
- Broadbent, D. E., Cooper, P. F., FitzGerald, P., & Parkes, K. R. (1982). The cognitive failures questionnaire (CFQ) and its correlates. *British Journal of Clinical Psychology*, 21(1), 1–16. <https://doi.org/10.1111/j.2044-8260.1982.tb01421.x>
- Bu, F., Steptoe, A., & Fancourt, D. (2020). Who is lonely in lockdown? Cross-cohort analyses of predictors of loneliness before and during the COVID-19 pandemic. *Public Health*, 186(2020), 31–34. <https://doi.org/10.1016/j.puhe.2020.06.036>
- Burger, J. M. (1995). Individual differences in preference for solitude. *Journal of Research in Personality*, 29(1), 85–108. <https://doi.org/10.1006/jrpe.1995.1005>
- Cecen, R., & Cenkseven, F. (2007). Psychological well being in predicting loneliness among university students. *C.U. Sosyal Bilimler Enstitüsü Dergisi*, 16(2), 109–118. <https://dergipark.org.tr/tr/download/article-file/50377>
- Chassany, O., Dimenas, E., Dubois, D., & Wu, A. (2004). The psychological general well-being index (PGWBI) user manual. www.iqod.org
- Child, S. T., & Lawton, L. (2019). Loneliness and social isolation among young and late middle-age adults : Associations with personal networks and social participation associations with personal networks and social participation. *Aging & Mental Health*, 23(2), 196–204. <https://doi.org/10.1080/13607863.2017.1399345>
- Doman, L. C. H., & Le Roux, A. (2012). The relationship between loneliness and psychological well-being among third-year students: A cross-cultural investigation. *International Journal of Culture and Mental Health*, 5(3), 153–168. <https://doi.org/10.1080/17542863.2011.579389>
- Famodu, O. A., Barr, M. L., Holásková, I., Zhou, W., Morrell, J. S., Colby, S. E., & Olfert, M. D. (2018). Shortening of the Pittsburgh sleep quality index survey using factor analysis. *Sleep Disorders*, 2018, 1–9. <https://doi.org/10.1155/2018/9643937>
- Ferreira-Alves, J., Magalhães, P., Viola, L., & Simoes, R. (2014). Loneliness in middle and old age: Demographics, perceived health, and social satisfaction as predictors. *Archives of Gerontology and Geriatrics*, 59(3), 613–623. <https://doi.org/10.1016/j.archger.2014.06.010>
- Field, A. (2009). *Discovering statistics using SPSS*. In sage (3rd ed.). SAGE Publications.
- Hoffart, A., Johnson, S. U., & Ebrahimi, O. V. (2020). Loneliness and social distancing during the COVID-19 pandemic: Risk factors and

- associations with psychopathology. *Frontiers in Psychiatry*, 11(November), 1–9. <https://doi.org/10.3389/fpsy.2020.589127>
- Kekkonen, V., Tolmunen, T., Kraav, S. L., Hintikka, J., Kivimäki, P., Kaarre, O., & Laukkanen, E. (2020). Adolescents' peer contacts promote life satisfaction in young adulthood — A connection mediated by the subjective experience of not being lonely. *Personality and Individual Differences*, 167(July), 110264. <https://doi.org/10.1016/j.paid.2020.110264>
- Luchetti, M. (2020). Study : Loneliness Did Not Appear to Increase During COVID-19 Pandemic Read the. 2020–2022. <https://www.apa.org/news/press/releases/2020/06/loneliness-covid-19>
- Macià, D., Cattaneo, G., Solana, J., Tormos, J. M., Pascual-Leone, A., & Bartrés-Faz, D. (2021). Meaning in life: A major predictive factor for loneliness comparable to health status and social connectedness. *Frontiers in Psychology*, 12(February), 1–12. <https://doi.org/10.3389/fpsyg.2021.627547>
- Mansour, K. A., Greenwood, C. J., Biden, E. J., Francis, L. M., Olsson, C. A., & Macdonald, J. A. (2021). Pre-pandemic predictors of loneliness in adult men during COVID-19. *Frontiers in Psychiatry*, 12(December), 1–11. <https://doi.org/10.3389/fpsy.2021.775588>
- Mund, M., Freuding, M. M., Möbius, K., Horn, N., & Neyer, F. J. (2020). The Stability and Change of Loneliness Across the Life Span: A Meta-Analysis of Longitudinal Studies. *Personality and Social Psychology Review*, 24(1), 24–52. <https://doi.org/10.1177/1088868319850738>
- Qualter, P., Maes, M., & Nowland, R. (2020). Loneliness. In *The Wiley Encyclopedia of Personality and Individual Differences: volume 3, first edition.* (pp. 1339–1344). <https://doi.org/10.1002/9781119547181>
- Ren, D., & Evans, A. M. (2021). Leaving the loners alone : Dispositional preference for solitude evokes ostracism. *Personality and Social Psychology Bulletin*, 47(8), 1294–1308. <https://doi.org/10.1177/0146167220968612>
- Robb, C. E., de Jager, C. A., Ahmadi-Abhari, S., Giannakopoulou, P., Udeh-Momoh, C., McKeand, J., Price, G., Car, J., Majeed, A., Ward, H., & Middleton, L. (2020). Associations of social isolation with anxiety and depression during the early COVID-19 pandemic: A survey of older adults in London, UK. *Frontiers in Psychiatry*, 11(September), 1–12. <https://doi.org/10.3389/fpsy.2020.591120>
- Rumas, R., Shamblaw, A. L., Jagtap, S., & Best, M. W. (2021). Predictors and consequences of loneliness during the COVID-19 Pandemic. *Psychiatry Research*, 300(2021), 113934. <https://doi.org/10.1016/j.psychres.2021.113934>
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. In *Journal of Personality Assessment* (Vol. 66, Issue 1, pp. 20–40). https://doi.org/10.1207/s15327752jpa6601_2
- Saleem, S. M. (2020). Modified Kuppuswamy socioeconomic scale updated for the year 2021. *Indian Journal of Forensic and Community Medicine*, 7(1), 1–3. <https://doi.org/10.18231/ijfcm.2021.001>
- Sampogna, G., Giallonardo, V., Del Vecchio, V., Luciano, M., Albert, U., Carmassi, C., Carrà, G., Cirulli, F., Dell'Osso, B., Menculini, G., Belvederi Murri, M., Pompili, M., Sani, G., Volpe, U., Bianchini, V., & Fiorillo, A. (2021). Loneliness in young adults during the first wave of COVID-19 lockdown: Results from the multicentric COMET study. *Frontiers in Psychiatry*, 12(December), 1–10. <https://doi.org/10.3389/fpsy.2021.788139>
- Shovestul, B., Han, J., Germine, L., & Dodell-Feder, D. (2020). Risk factors for loneliness: The high relative importance of age versus other factors. *PLoS ONE*, 15(2), 1–18. <https://doi.org/10.1371/journal.pone.0229087>
- Singh, G., & Quraishi, S. (2021). COVID-19 lockdown : Challenges faced by Indian students. *Psychological Studies*, 66(3), 303–307. <https://doi.org/10.1007/s12646-021-00608-9>
- Toyoshima, A., & Sato, S. (2015). Examination of the relationship between preference for solitude and emotional well-being after controlling for the effect of loneliness. *Shinrigaku Kenkyu*, 86(2), 142–149. <https://doi.org/10.4992/jjpsy.86.13234>
- Werner, A. M., Tibubos, A. N., Mülder, L. M., Reichel, J. L., Schäfer, M., Heller, S., Pfirrmann, D., Edelmann, D., Dietz, P., Rigotti, T., & Beutel, M. E. (2021). The impact of lockdown stress and loneliness during the COVID-19 pandemic

- on mental health among university students in Germany. *Scientific Reports*, 11(1), 1–11. <https://doi.org/10.1038/s41598-021-02024-5>
- Williams, B. (2022). Understanding loneliness and its relationship with mental health issues. *Mental Health Practice*. <https://doi.org/10.7748/mhp.2022.e1601>
- Wu, H., Gu, Z., Zeng, L., & Guo, T. (2022). Do global adolescents with food insecurity feel lonely? *Frontiers in Public Health*, 10(February), 1–7. <https://doi.org/10.3389/fpubh.2022.820444>

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