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THE EFFECTS OF PERCEIVED SOCIAL SUPPORT ON LONELINESS

Abstract: The principal objective of this research is to test the effects of perceived social support on loneliness with various age-dependent respondents during the COVID-19 pandemic. The sample is made up of 442 respondents (41% male), who are arranged into five age categories: up to 25, 26-35, 36-45, 46-55, over 55 years old. These subsamples are administered according to the UCLA Loneliness Scale (Russell et al., 1980) and The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988), which measures perceived social support from three sources – family, friends, and significant other. The results of regression analysis show that in all five models the perceived support of a friend is a statistically significant negative predictor of loneliness, while the perceived support of family is a significant negative predictor of loneliness with respondents up to 25, from 36 to 45 and over 55. Support of significant other is a statistically significant negative predictor only in the sample of respondents from 46 to 55 years old. Results show that a significant predictor of loneliness for respondents of a specific age category is the sense of support from a person who is largely not fulfilling that role.

Key words: loneliness, perceived social support, old age, COVID-19 pandemic

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1. Introduction

Loneliness as a universal experience of every person during his or her lifetime is one of the indicators of mental health. During the still on-going COVID-19 pandemic which has caused changes in psychosocial functioning of humanity, the question not only of physical, but also mental health comes to the forefront. For the feeling of loneliness lack of social interactions which can gratify one of the basic human needs – the need for emotional attachment and love is of crucial importance (Weiss, 1974). According to Maslow (Maslow, 1954) persons who do not succeed in gratifying needs of companionship and love are prone to feel abandoned, alienated and rejected; in other words, the frustration of these needs forms the core of inadaptability.

1.1 Loneliness

Even though there is no consensus in literature about the definition of loneliness, it can be qualified as an unpleasant emotional state which occurs when a person feels rejected, alienated or misunderstood by others and when a person longs for company, for social activities and emotional intimacy (Rook, 1984).

Still, loneliness should be differentiated from other forms of alienation such as states of physical seclusion, isolation and solitude. Loneliness can be defined as a perceived frustration regarding the number and quality of interpersonal relationships (Peplau, Russell, & Heim, 1979; Anderson, 1998). These frustrations appear when the support network is less satisfactory than the person desires. Similarly to these authors, the social-cognitive model (Sermat, 1978) views loneliness as incongruence between the person's actual and desired levels of interpersonal relationships. This model takes into consideration the possibility that the person does not feel loneliness in spite of the objectively low frequency of social contacts and vice-versa, that someone feels loneliness despite a high frequency of social activity. On the other hand, the interactionist approach (Weiss, 1973, 1974) emphasizes interactional effects of personal and social factors on the phenomenon of loneliness. This approach distinguishes between emotional and social loneliness.

Emotional loneliness occurs as a consequence of an individual lacking close, intimate, romantic relations and is accompanied by anxiety, restlessness, sense of emptiness and abandonment. Social loneliness occurs as a consequence of non-involvement in a social network, that is to say, lack of friendship and togetherness, accompanied by boredom and a sense of social marginalization.

When examining differences among age groups regarding loneliness, the results of previous studies show that the curve showing the relation between age group and loneliness has a U-shaped form (Anderson, 1998). This means that the greatest contrasts regarding loneliness are found among adolescents and persons older than 75. However, the results of some studies point towards a negative connection between age and loneliness (Woodward & Frank 1988), the results of other studies display a positive connection between these variables (Brage & Meredith 1994), while yet another study does not support a connection of any kind (Brennan & Auslander, 1979). Some studies, on the other hand, suggest not only that loneliness is especially prominent in adolescence and preadolescence (Goossens, 2006), but also that there are differences within adolescent age groups (Brage, Meredith & Woodward, 1993).

One study during the COVID-19 pandemic (Luchetti, Lee, Aschwanden, Sesker, Strickhouser, Terracciano, & Sutin, 2020) focused on changes regarding loneliness as a response to social limitation measures taken in the effort to suppress the spread of the coronavirus. Contrary to expectations, there were no significant changes. The respondents noticed an increase in support of others during the period. Older adults reported that they felt lonely less frequently in comparison to younger age groups, but increasingly so during the acute phase of the outbreak. Individuals who live alone and those with at least one chronic condition reported that they felt lonelier in the beginning, but their loneliness did not exacerbate during social distancing measures. In spite of a certain negative effects on individuals at risk, this sample did not show significant escalation regarding loneliness but rather exceptional resilience as a response to COVID-19.

Considering psychological correlates of loneliness, previous research established a positive connection of various indices of loneliness

with shyness (Jackson, Fritch, Nagasaka & Gunderson, 2002), negative aspects of perfectionism (Arslana, Hamartaa, Ürea, & Özyeúila, 2010), pessimism (Ivanov, Penezić, & Gregov, 1998), alienation (Bruno, Lutwak, & Agin, 2009), depression (Levin & Stokes, 1986), neuroticism (Loucks, 1974; Stokes, 1986), social anxiety (Neto & Barros, 2000; Weiss, 1973, Parkes, 1973) and alcoholism (Medora & Woodward, 1991). Loneliness is negatively related to self-respect (Lacković-Grgin, Penezić, & Šorić, 1998), extraversion (Levin & Stokes, 1986), social competence (Jackson et al., 2002), measure of self-efficiency (Ivanov et al. 1998) and perception of social support (Jackson, Soderlind, & Weiss, 2000).

There have been many attempts to determine the cause of loneliness and to define its taxonomy. The most comprehensive model of the causes of loneliness (Rokach, 1989) comprised three clusters, which include eight factors. One of the clusters, identified as lack of interpersonal relationships is made up of three factors: social alienation, inadequate system of social support, and problematic relationships. The first factor refers to the experience of physical isolation of the person from the familiar environment, the second to the lack of friends and persons who care about the individual and the lack of social support that would gratify the individual's needs, while the third factor refers to disharmonious intimate relationships.

1.2. Perceived social support

Most individuals have limited capacities of their own resources. When unwanted life events occur, the individual expects to use personal capacities of the members of his or her social network thus supplementing his or her own capacities through the process of social support. This process can appease the negative effects of stressful life events on health. Many authors differentiate perceived social support regarding source and have conducted research on consequences of perceived social support from different sources. Some researchers (Turner & Lloyd, 1999; Turner & Marino, 1994) measured perceived support from the partner, relative, friend and co-worker. Their findings suggest that perceived support has, for the most part, negative effects both on symptoms of depression and on more complex depression disorders. These findings

are mediated by variables such as sex, age, marital status, and socioeconomic status. Other studies report similar findings. Perceived social support (e.g. having someone to talk to) brings forth suppressive effects on depression, and mediates certain positive effects on marriage and education, but not on family income (Ross & Mirovski, 1989). Spousal support diminishes the depression effect in all five types of stressors studied, while the support of a friend takes a similar role only in two types of stressors (Jackson, 1992). Partner support has a mainly suppressive effect on depression among respondents of both sexes, while co-worker support has a significant effect on depression only among men, as it reduces the short term positive depression effect only in the male sample (Roxburgh, 2006).

Authors of the multidimensional scale of perceived social support MSPSS;(Zimet, Dahlem, Zimet, & Farley, 1988) differentiate three sources of support: family, friends and significant other. Results of some studies using this Psychometric scale show that the perceived social support of the significant other and of the family significantly positively predicted the quality of life and health (Arkar, Sari, & Fidaner, 2004), and thus the perceived support from all three sources negatively correlate with loneliness; with which support of friends being the strongest and the family support the weakest correlate with loneliness (Duru, 2007). The same research ascertained the negative correlation between family support and age.

The study conducted during the COVID-19 pandemic (Mariani, Renzi, Di Trani, Trabucchi, Danskin, & Tambelli, 2020) probed the effect of confrontation strategies and perceived social support on symptomatology of depression and anxiety. It was concluded that family support reduces the feeling of loneliness and has an explicit role in alleviating the symptoms of depression.

1.3. Research problem and aim

The problem of this research is to find out whether perceived social support has any effects on the experience of loneliness during the COVID-19 pandemic within different age groups of the respondents. The goal of this research is to determine partial contributions of per-

ceived family support, support of friends and of the significant other to the explanation of loneliness within different age groups of the respondents during the pandemic.

1.4. Research hypothesis

General hypothesis: Perceived social support is a statistically significant negative predictor of loneliness.

Specific hypotheses:

H1. Perceived support of (a) friend, (b) family and (c) significant other is statistically significant negative predictor of loneliness in the sample of respondents up to 25 years of age.

H2. Perceived support of (a) friend, (b) family and (c) significant other is statistically significant negative predictor of loneliness in the sample of respondents from 26 to 35 years of age.

H3. Perceived support of (a) friend, (b) family and (c) significant other is statistically significant negative predictor of loneliness in the sample of respondents from 36 to 45 years of age.

H4. Perceived support of (a) friend, (b) family and (c) significant other is statistically significant negative predictor of loneliness in the sample of respondents from 46 to 55 years of age.

H5. Perceived support of (a) friend, (b) family and (c) significant other is statistically significant negative predictor of loneliness in the sample of respondents over the age of 55.

2. Method

2.1 Sample

We relied on an ad-hoc sample comprising 442 respondents of which 41% are male. 170 respondents have a high school diploma, 172 university bachelor's degrees, 80 master's studies completed, while 20 respondents have completed master or doctoral studies. Of the total number of respondents 71.9% were employed. The average age of respondents is 38.31 years with the range of 20 to 82 years of age. 82

respondents are in the up to 25 years old group, 112 respondents are in the 26 to 35 group, 91 respondents were in the 46 to 55 group while 35 respondents were over 55 years of age.

2.2 Variables and instruments

In the present study, the criterion variable was loneliness operationalized by the UCLA Loneliness Scale (University of California, Los Angeles - UCLA Loneliness Scale; Russell, Peplau, & Cutrona, 1980). This one-dimensional scale contains 20 four-point Likert items relating to situations described by the specific item, while respondents determine on a four-point scale how often they experience the situations described in the item questions. For instance: *How often do you feel you are alone?*

The predictor variable is operationalized by the multidimensional scale of perceived social support (Multidimensional Scale of Perceived Social Support – MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) intended to measure perceived social support from three sources: family, friends, and the significant other. It consists of 12 five-point Likert scale items assessing the extent to which respondents agree or disagree with the particular statement. An example of an item for measuring perceived social support from different sources is the following: family – *My family is really trying to help me;* friends - *I can count on my friends when things take a bad turn;* significant other - *There is a significant other in my life whom I can depend on when I need to.*

The categorial variable of age is defined in five categories: *up to 25 years old; from 26 to 35; from 36 to 45; from 46 to 55; over 55 years old.*

2.3 Research procedures

The study was conducted from January to March 2021 using Google Forms surveys distributed to respondents by recommendation through social networks with informed consent. Informed consent covers giving information about the purpose of the study, assurance of anonymity and the way data will be used.

2.4 Data analysis

All analyses are done on five subsamples of respondents categorized by age groups. Intercorrelations of psychometric scales are assessed utilizing bivariate correlation analysis, the distribution of scores on all scales with a descriptive analysis, and the reliability of scale by Cronbach's coefficient of internal consistency. Multiple regression analysis is used to check predictor values of perceived social support from the three sources.

3. Results

Table 1 shows the results of correlational analysis, results of descriptive statistics and the reliability coefficients on the sample of respondents in five age categories.

Table 1 – Correlations between scales of perceived social support and loneliness, mean and standard deviation on scales and the reliability scale of the sample of respondents of different age groups

Age group	Variable	SO	Fam	Fri	AS	SD	α
up to 25 (N=82)	SO	1			4,33	0,84	0,73
	Fam	0,42**	1		4,29	0,86	0,89
	Fri	0,36**	0,12	1	4,16	1,00	0,92
	Loneliness	-0,31**	-0,33**	-0,62**	2,04	0,51	0,90
From 26 to 35 (N=112)	SO	1			4,44	0,80	0,74
	Fam	0,43**	1		4,40	0,87	0,90
	Fri	0,38**	0,41**	1	4,32	0,72	0,87
	Loneliness	-0,36**	-0,40**	-0,54**	1,90	0,49	0,90
From 36 to 45 (N=122)	SO	1			4,46	0,72	0,78
	Fam	0,55**	1		4,43	0,78	0,90
	Fri	0,44**	0,29**	1	4,29	0,75	0,89
	Loneliness	-0,28**	-0,34**	-0,52**	1,87	0,46	0,91

	SO	1			4,35	0,77	0,80
From 46 to 55 (N=91)	Fam	0,71**	1		4,40	0,73	0,89
	Fri	0,60**	0,58**	1	4,19	0,79	0,90
	Loneliness	-0,64**	-0,59**	-0,66**	1,88	0,46	0,91
	SO	1			4,46	0,80	0,75
Over 55 (N=35)	Fam	0,35*	1		4,41	0,70	0,84
	Fri	0,44**	0,44**	1	4,41	0,62	0,86
	Loneliness	-0,52**	-0,59**	-0,69**	1,88	0,48	0,92

Note: SO – perceived social support of significant other; Fam – perceived social support of family; Fri – perceived social support of friend;
* $p - < 0,05$; ** $p - < 0,01$

Correlation analysis shows that social support from all three sources is a statistically significant negative correlate to loneliness. The perceived support of friends consistently stands out in all five age group categories as the strongest correlate. Apart from that, there is intercorrelation of perceived social support from all three sources in all sub-samples; all samples are statistically significant and positive with the exception of the correlation between family support and friend support in the sample of respondents up to 25, which failed to reach statistical significance. On the basis of descriptive indicators, it can be noticed that respondents up to 45 and above 55 years of age evaluate the support of the significant other as most present, while in respondents from 46 to 55 years old family support is the most prevalent. Among respondents of all age groups, friend support is least represented. Loneliness is somewhat more prominent among respondents up to 25 years of age, while there were no statistically significant differences with respect to loneliness among the remaining four age groups.

Table 2 and Figure 1 show the results of multiple regression analysis results on the sample of respondents in five age categories with predictor variables of the three sources of perceived social support and loneliness as the criterion variable.

Table 2 – Regression analysis

Predictors		Respondent age categories				
		Up to 25	26-35	36-45	46-55	Over 55
SO	β	0,01	-0,13	0,51	-0,30**	-0,21
Fam	β	-0,26**	-0,18	-0,23*	-0,15	-0,33*
Fri	β	-0,59**	-0,42**	-0,48**	-0,39**	-0,43**
	R^2	0,45	0,34	0,31	0,54	0,59
	ΔR^2	0,42	0,32	0,30	0,53	0,55
	F	20,85	18,63	17,94	34,19	14,82

Note: Criterion variable: Loneliness; SO – perceived social support of significant other, Fam – perceived social support of family, Fri – perceived social support of friend; $p_{(F)} < 0,01$; *p – < 0,05; ** p – < 0,01

Figure 1 – Partial contribution of perceived social support
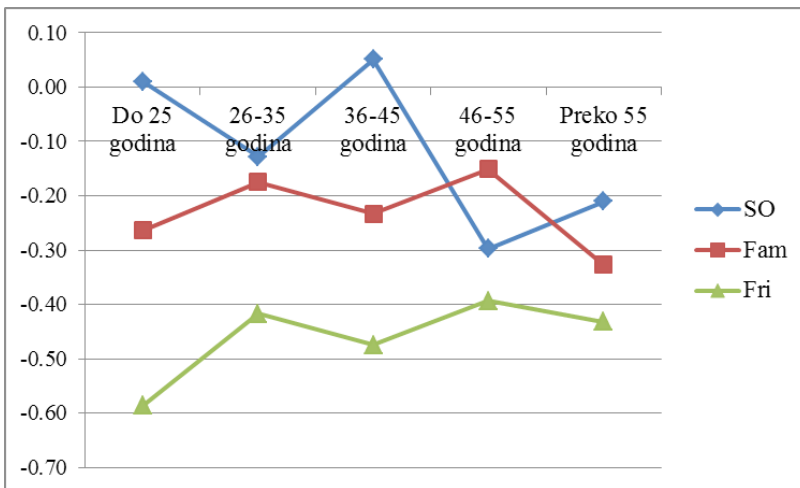
Note: Criterion variable: Loneliness; SO – perceived social support of significant other, Fam – perceived social support of family, Fri – perceived social support of friend;

71

On the basis of the results of multiple regression analysis it can be concluded that the regression models of all five samples of respondents of various age categories within which perceived social support from the three sources predicts loneliness are statistically significant. That is, the models explain 30-55% of the total variance of loneliness. Perception of social support plays the most important role in the explanation of loneliness among the respondents older than 45.

The perceived support of friends is a statistically significant negative predictor of loneliness in all five models and among the respondents of all age categories the perceived support from this source stands apart as the strongest predictor of loneliness. The perceived support of family is a statistically significant negative predictor of loneliness among respondents up to 25, from 36 to 45 and older than 55, while the support of the significant other is a statistically significant negative predictor only among the respondents of the sample from 46 to 55 years of age. Thus, 9 out of 15 hypotheses were confirmed. These are the hypotheses 1(a), 1(b), 2(a), 3(a), 3(b), 4(a), 4(c), 5(a), and 5(b).

4. Discussion

The aim of this research has been to test the connection between perceived social support and loneliness during the COVID-19 pandemic with respondents of various ages. In other words, the objective has been to determine which of the three sources of perceived social support, family, friends or significant other, is the strongest negative predictor of loneliness within each respondent age group. Of the initial 15 hypotheses which assume that perceived social support from all three sources is a statistically significant negative predictor of loneliness for respondents of five age categories, 9 were confirmed. Now a short discussion of the results of the descriptive and correlation analysis which were not encompassed by the hypotheses will follow. Based on descriptive indicators a slight drop regarding loneliness can be noticed among the respondents more advanced in age in comparison to those up to 25. This distribution of scores is up to a certain point in accordance with the results of the research conducted during the period of COVID-19 pan-

demic (Luchetti et al., 2020); then older adults were reported to complain less frequently about loneliness in comparison with younger age groups. Moreover, the descriptive indicators of variables of perceived social support point toward more prominence among respondents older than 25, that is to say, older persons, up to a point, had a greater feeling of support from all three sources.

Since the correlation analysis indicates that there is a negative connection between social support from all three sources and loneliness in all five subsamples, the importance of the network of social support from all three sources has been demonstrated. In specific, persons who perceive support from friends, family and significant other have a less pronounced feeling of loneliness, that is to say, abandonment, alienation or being misunderstood by others. This distressing emotional state is in correlation with other unfavourable aspects of psychological functioning, with depression, among others (Levin & Stokes, 1986). The absence of emotional attachment defined through the support from the social environment has a significant impact on the individual's feeling of being maladapted in social relationships, more specifically, that an individual feels lonely. These findings correspond to the results of previous studies (e.g. Jackson et al., 2000).

Furthermore, the data demonstrate that, even though there is a statistically significant negative connection between all three sources of perceived support and loneliness, the regression model singles out support of friends as the consistent and strongest negative predictor of loneliness. These results are in accordance with the results of some previous investigations which had the support of friends stand out as the strongest (negative) correlate of loneliness (Duru, 2007).In our sample, support of friends is markedly least represented. Regardless of the age of the respondent, support of significant other and family, the lack of engagement with a group of friends that give support represents the strongest risk factor for loneliness. This confirms hypotheses 1(a), 2(a), 3(a), 4(a) and 5(a). Moreover, within the groups of respondents up to 25, those from 36 to 45 and over 55, perceived support of family also stands out as a statistically significant predictor of loneliness which confirms hypotheses 1(b), 3(b) and 5(b). In the above-mentioned samples, family support is less represented than the significant other support but more

so than the support of friends. According to these results, it can be concluded that for persons in the categories mentioned, apart from support of friends, the absence of family support is of key importance for the feeling of loneliness. This agrees with the findings of the research done during COVID-19 pandemic that show that it is exactly the family support that lessens the feeling of loneliness and has an exclusive role in decreasing symptoms of depression (Mariani et al., 2020). In the end, with respondents between 45 and 55 years of age, besides support of friends, the support of significant other stands out as a statistically significant negative predictor of loneliness which confirms hypothesis 4(c). Among respondents between 26 and 35 years of age only the absence of friend support contributes to the feeling of loneliness. Therefore, as most significant predictors of loneliness among respondents of all age categories show, those that stand out are the sources which are assessed as the least supportive. In other words, lack of support from a specific source largely leads to the feeling of loneliness. This finding corroborates Maslow's hypothesis that frustration of the gratification of a need for belonging and love leads to maladaptation (Maslow, 1954), or in the present study to loneliness. On the other hand, support from a source which is largely assessed as represented in every one of the five samples of respondents does not stand out as a significant predictor of loneliness. Thus it appears that what have been specified are the risk factors for the feeling of loneliness and not the capacities for its overcoming.

5. General Conclusion

On the basis of the results of the present study conducted during the COVID-19 pandemic it can be concluded that the perceived support of family, friends and significant other is a negative correlate of loneliness. However, the sense of support present mostly among respondents of a specific age category does not stand out as a significant predictor of loneliness. Thus it seems that our data call attention to risk factors for loneliness, but not to the capacities for overcoming it. The perceived support of friends, whose absence is noticeable for the respondents within all age groups, is, at the same time, consistently the strongest negative predictor of loneliness.

5.2. Limitations and recommendations for further research

One of the limitations of this research is related to an ad-hoc sample which was convenient and relatively small, especially when it comes to respondents in the 55+ category. Considering this limitation, the results cannot be generalized. Secondly, the research was conducted during the COVID-19 pandemic, which is to be considered another limitation, due to altered conditions of social and psychological life of the respondents. Thirdly, even though it was established that those sources of support which were evaluated as for the most part frustrated stood out as significant predictors of loneliness, the recommendation is that in some future study the interactive effects of the sources of perceived social support on the feeling of loneliness should be studied.

5.3. Practical implications

This research has practical implications above all else in the domain of human mental health specifically for psychotherapists, counsellors and psychologists whose clients have a problem with loneliness. They can identify the source of support least represented and to direct the work with their client towards strengthening the network of support from the given source.

References:

Anderson, L. 1998. Loneliness research and interventions: a review of the literature. *Aging and Mental Health, 2*(4), 264–74

Arkar, H., Sari, Ö., & Fidaner, H. (2004). Relationships between Quality of Life, Perceived Social Support, Social Network, And Loneliness in a Turkish Sample. *Yeni Symposium: psikiyatri, nöroloji ve davraniş bilimleri dergisi, 42*(1), 20–27.

Arslana, C., Hamartaa, E., Ürea, Ö., & Özyeúila, Z. (2010). An investigation of loneliness and perfectionism in university students. *Procedia Social and Behavioral Sciences, 2,* 814–818.

Brage, D. & Meredith, W. (1994). A causal model of adolescent depression. *Journal of Psychology*, *128*, 455– 468.

Brage, D., Meredith, W., & Woodward, J. (1993). *Correlates of loneliness among Midwestern adolescents. Adolescence, 28*(111), 685–693.

Brennan, T. & Auslander, N. (1979). *Adolescent loneliness: An exploratory study of social and psychological predispositions and theory*. Washington, DC: National Institute of Mental Health, Behavioral Research Institute.

Bruno, S., Lutwak, N., & Agin, M. A. (2009). Conceptualizations of guilt and the corresponding relationships to emotional ambivalence, self-disclosure, loneliness and alienation. *Personality and Individual Differences, 47*, 487–491.

Duru, E. (2007). Re-examination of the psychometric characteristics of the multidimensional scale of perceived social support among Turkish university students. *Social Behavior and Personality, 35*(4), 443-452.

Goossens, L. (2006). Affect, emotion, and loneliness in adolescence. In S., Jackson and L. Goossens (Eds.), *Handbook of adolescent development* (pp. 51-70). Psychology Press: New York.

Ivanov, L., Penezić, Z., i Gregov, Lj. (1998). Relacije usamljenosti i samoefiksanosti s nekim osobnim varijablama. *RFFZd, 37*(14), 53-66.

Jackson, P. (1992). Specifying the buffering hypothesis: Support, strain, and depression. S*ocial Psychology Quarterly*, *55*, 363-78.

Jackson, T., Fritch, A., Nagasaka, T., & Gunderson, J. (2002). Towards explaninig the association between shyness and loneliness: A path anaysis with american college students. *Social Behavior and Personality: An International Journal, 30*(3), 263–270.

Jackson, T., Soderlind, A., & Weiss, K. E. (2000). Personality traits and quality of relationships as predictors of future loneliness among American college students. *Social Behavior and Personality: An International Journal, 28*(5), 463-470.

Lacković-Grgin, K., Penezić, Z., Sorić, I. (1998). Usamljenost i samoća studenta: uloga afilijativne motivacije i nekih osobnih značajki. *Društvena istraživanja, 7*, 543-558.

Levin, I. & Stokes, J. P. (1986). An examination of the relation of individual difference variables to loneliness. *Journal of Personality, 54(4),* 717–733.

Loucks, S. (1974). The dimensions of loneliness: A psychological study of affect, self-concept, and object-relations. *Dissertation Abstracts International, 35*(6-B), 3024.

Luchetti, M., Lee, J. H., Aschwanden, D., Sesker, A., Strickhouser, J. E., Terracciano, A., & Sutin, A. R. (2020). The trajectory of loneliness in response to COVID-19. *American Psychologist, 75*(7), 897–908.

Mariani, R., Renzi, A., Di Trani, M., Trabucchi, G., Danskin, K., & Tambelli, R. (2020). The Impact of Coping Strategies and Perceived Family Support on Depressive and Anxious Symptomatology during the Coronavirus Pandemic (COVID-19) Lockdown. *Front. Psychiatry,* 11:587724.

Maslow, A. H. (1954). *Motivation and Personality.* New York: Harper & Row.

Medora, N. P. & Woodward, J. C. (1991). Factors associated with loneliness among alcoholics in rehabilitation centers. *The Journal of Social Psychology, 131*(6), 769-779.

Neto, F. & Barros, J. (2000). Psychosocial concomitants of loneliness among students of Cape Verde and Portugal. *The Journal of Psychology, 134*(5), 503–514.

Parkes, C. M. (1973). Separation anxiety: An aspect of the search for a lost object. In R. S. Weiss (Ed.), *Loneliness: The Experience of Emotional and Social Isolation* (pp. 53-67). Cambrige: MIT Press.

Peplau, L. A., Russell, D., & Heim, M. (1979). The experience of loneliness. In I. Frieze, D. Bar-Tal, & J. S. Carroll (Eds.), *New Approaches to Social Problems: Applications of Attribution Theory* (pp. 53–78). San Francisco, CA: Jossey-Bass.

Rokach, A. (1989). Antecedents of loneliness: A factorial analysis. *The Journal of Psychology: Interdisciplinary and Applied, 123*(4), 369-384.

Rook, K. S. (1984). Research on social support, loneliness, and social isolation: Toward an integration. *Review of Personality & Social Psychology, 5,* 239–264.

Ross, C., & Mirowsky, J. (1989). Explaining the social patterns of depression: Control and problem solving or support and talking? *Journal of Health and Social Behavior, 30*, 206-219.

Roxburgh, S. (2006). „I wish we had more time to spend together…": The distribution and predictors of perceived family time pressures among married men and women in the paid labor force. *Journal of Family Issues, 27*(4), 529-553.

Sermat, V. (1978). Sources of loneliness. *Essence, 2*, 271–276.

Stokes, J. P. (1985). The relation of social network and individual difference variables to loneliness. Journal of Personality and Social Psychology, 48, 981–990.

Turner, R. J., & Marino, F. (1994). Social support and social structure: A descriptive epidemiology. Journal of Health and Social Behavior, 35(3), 193–212

Turner, R. J, & Lloyd, D. A. (1999). The stress process and the social distribution of depression. *Journal of Health and Social Behavior, 40*, 374-404.

Weiss, R. S. [1973]. Loneliness: The experience of emotional and social isolation. Cambridge, MA: MIT Press

Weiss, R.S. (1974). *The provisions of social relationship*. New York: Prentice – Hall.

Woodward, J. & Frank, B. (1988). Rural adolescent loneliness and adolescent coping strategies. *Adolescence, 23*, 559 –565.

Zimet, G. D., Dahlem., N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*, 30-41.