

**Introduction to the Bergen Social Relationships Scale (BSRS):  
A short questionnaire for the measurement of psychosocial stress in  
epidemiological studies**

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The assessment of stress in epidemiological studies is challenging. Stress has many conceptualisations: chronic versus acute, objective versus subjective, stimulus versus response, and individual versus organisational/societal levels. The measurement of psychosocial stress may focus on physiological activation, the measurement of stressors, or the subjective stress experience. Measurement may be guided by theory, but may just as well not. Kopp, et al's (2010) overview of measures of psychosocial stress in epidemiological research focuses on demonstrably-reliable instruments "identifying predictors of health status at the population level and ... providing useful information about the psychosocial mechanisms by which stressors, perceived stress, and stress reactions might lead to deterioration of health" (ibid, p. 212).

Among the instruments reviewed by Kopp, et al (2010) is the Bergen Social Relationships Scale (BSRS), a six-item scale that has been used in English-language published studies in Norway (Aanes, et al., 2009, 2010, 2011), Romania (Bancila, Mittelmark and Hetland, 2006, Bancila and Mittelmark, 2007, 2009), Russia (Bancila, et al, 2009), the United States (Murdock, 2013) and Pakistan (Nazir, 2013). Research with the BSRS in Thailand and in Denmark has yet to be published. A number of BSRS studies published in Hungarian are also in the literature (Susánszky, et al., 2010; Ádám, 2010, Clarke, 2013; Kovacs, et al., 2013).

The BSRS measures psychological stress defined as a "transactional, cognitive process involving appraisal and not completely satisfactory coping, to resolve dissonance among cognitions about a significant others(s)" (Mittelmark, et al, 2004). The theoretical

underpinning of the BRSR is cognitive dissonance theory, and six types of social situations that could be seriously stressful to any person regardless of age, sex, culture and health status (Mittelmark, 1999):

- The 'helpless bystander' psychological situation is one in which a person is aware of a serious problem in the life of a significant other, wants to help, but feels unable to do so or feels unwelcome to assist.
- The 'inept support' situation is one in which another's genuine efforts to support one are perceived as unwanted or harmful.
- The 'performance demand' situation is one in which one's efforts seems not to meet the expectations of a significant other.
- The 'role conflict' situation is that is which a person's multiple social roles and obligations are felt to be too demanding.
- The 'social conflict' situation' is one in which there is incongruence in social regard in one's near social network.
- The 'criticism' situation in which actions by others in one's near social network as perceived as misdeeds.

Questionnaire development and testing research based on the definition, theory and prototypical psychosocial situations just mentioned led to the BRSR (Mittelmark, et al., 2004):

*Instructions: Think about everyone (children, parents, siblings, spouse or significant other, neighbours, friends, colleagues and others you know) while you answer the following:*

- There are people in my life whom I care about, but who dislike one another'
- There is a person in my life who needs my help, but whom I don't know how to help'
- There is an important person in my life who wants to support me, but who hurts my feelings instead'
- There is a person whom I have to be with almost daily who often henpecks me'
- There are people who make my life difficult because they expect too much care and support from me'
- There is a person I care about who expects more of me than I can manage'.

(Response alternatives: describes me very well, describes me quite well, does not describe very well, does not describe me at all').

The BSRS was developed in Norwegian and details of its translation into English, Romanian, Russian, and Urdu are published (Bancila and Mittelmark, 2009; Murdock, 2013; Nazir, 2013). The BSRS has been used with adolescents in Norway (Aanes, 2005) and in Romania (Bancila and Mittelmark, 2005), with young adults at university (Murdock, 2013), and with working age adults and retired persons (Mittelmark, et al., 2004; Aanes, et al., 2009, 2010, 2011; Bancila, et al., 2006, 2007, 2009).

The main empirical findings on the relationship between the BSRS and various health indicators, and some psychometric studies, are presented in the annotated reference list. The annotations are the published abstracts; not all references are annotated.

## References

Aanes, M.M. (2005). Chronic social stress and depressive symptoms in adolescents. Research Centre for Health promotion Report Number 5, 2005.06-21. ISBN-10 82-7669-108-0, <http://bora.uib.no/handle/1956/2525>.

Aanes, M. M., Mittelmark, M. B., & Hetland, J. (2009). The experience of loneliness: Main and interactive effects of interpersonal stress, social support and positive affect. *International Journal of Mental Health Promotion*, 11(4), 25-33.

*Chronic interpersonal stress is significantly related to psychological distress, loneliness being a critical mediating factor, so alleviating loneliness could reduce psychological distress even in the face of chronic interpersonal stress. It is plausible that positive affect and social support may moderate chronic interpersonal stress-loneliness, as well as having direct effects on loneliness. If so, health promotion interventions to raise positive affect and social support for people living with chronic interpersonal stress should be prioritised. In a community-based sample of 3733 Norwegian adults, direct and moderating effects of positive affect and social support were explored. Chronic interpersonal stress, loneliness, positive affect and social support were significantly interrelated. Positive affect and social support did not substantially moderate the chronic interpersonal stress-loneliness relationship. Together, chronic interpersonal stress, positive affect and social support accounted for 41% of the variance in loneliness. Thus chronic interpersonal stress, positive affect and social support are strong predictors of loneliness. Interventions to increase positive affect and social support may decrease loneliness due to direct effects, but cannot be expected to moderate the chronic interpersonal stress-loneliness relationship.*

Aanes, M. M., Mittelmark, M. B., & Hetland, J. (2010). Interpersonal stress and poor health. *European Psychologist*.

*This paper investigated whether the lack of social connectedness, as measured by the subjective feeling of loneliness, mediates the well-known relationship between interpersonal stress and psychological distress. Furthermore, a relationship between interpersonal stress and somatic symptoms was hypothesized. The study sample included 3,268 women and 3,220 men in Western Norway. The main findings were that interpersonal stress was significantly related to psychological distress as well as to*

somatic symptoms, both directly and indirectly via paths mediated by loneliness. The size of the indirect effects varied, suggesting that the importance of loneliness as a possible mediator differs for depressive symptoms, anxiety symptoms, and somatic symptoms. In the case of depressive symptoms, more than 75% of the total effect was mediated through loneliness, while in the case of somatic symptoms just over 40% of the total effect was mediated through loneliness. This study supports the hypotheses that social connectedness mediates a relationship between interpersonal stress and psychological distress. The study also provides the first link between interpersonal stress, as measured by the Bergen Social Relationships Scale, and somatic symptoms, extending earlier research on the relationship between interpersonal stress and psychological distress.

Aanes, M. M., Hetland, J., Pallesen, S., & Mittelmark, M. B. (2011). Does loneliness mediate the stress-sleep quality relation? The Hordaland Health Study. *International Psychogeriatrics*, 23(6), 994.

**Background:** Sleep problems are common in the general population. A strong association between stress due to inadequate social relationships or loneliness and sleep problems has been found. This paper aims to investigate stress in close social relationships in relation to disrupted sleep patterns in middle-aged and older adults. In addition, in exploring the underlying processes involved in poor social interactions, loneliness is assumed to be a mediator in the stress-sleep quality relation.

**Methods:** Data from a community sample of 7074 Norwegian middle-aged and older adults in the Hordaland Health Study (HUSK) were used to examine the mediating role of loneliness.

**Results:** A significant association between interpersonal stress and both nocturnal sleep problems and daytime sleepiness was found in both age groups. This relation was mediated by loneliness (indirect path) as well as effected by a direct path (RMSEA = 0.051; CFI = 0.93). The size of the indirect effect varied with age. Nocturnal sleep problems were fully mediated by loneliness in the older group, while 74% of the total effect was mediated through loneliness in the middle-aged group. For daytime sleepiness, a partial mediation of 36% and 40% was observed for the two groups respectively.

**Conclusions:** The mediation effects found in this study indicate that the wider social aspects of an individual's life should be taken into account when planning interventions for improving sleep quality in the elderly.

Ádám, S., Cserhádi, Z., Balog, P., & Kopp, M. (2010). Gender differences in the level and prevalence of stress and psycho-social well-being. *Mentálhigiéné és Pszichoszomatika*, 11(4), 277-296.

Bancila, D., & Mittelmark, M. B. (2005). Specificity in the relationships between stressors and depressed mood among adolescents: The roles of gender and self-efficacy. *International Journal of Mental Health Promotion*, 7(2), 4-14.

*The study's aim was to test for hypothesised specificity in the relationships of stressors (interpersonal stress and worries about daily living) with depressed mood among Romanian adolescents. Six hundred and thirty adolescents in grades 7, 9 and 11 in Bucharest schools participated. Structural equation models assessed the degree to which effects of stressors on depressed mood were mediated through social support and self-efficacy, and moderated by gender and self-efficacy. Neither social support nor self-efficacy had direct or mediating roles in predicting depressed mood among girls. Among boys, social support and self-efficacy played significant roles in the connection between interpersonal stress and depressed mood. Among girls, daily worries were associated with depressed mood only among those with low self-efficacy, and interpersonal stress was associated with depressed mood only among those with high self-efficacy. The data presented here show that different stressors have different relationships to a single outcome – depressed mood – conditioned by gender and self-efficacy.*

Bancila, D., Mittelmark, M. B., & Hetland, J. (2006). The association of interpersonal stress with psychological distress in Romania. *European Psychologist*, 11(1), 39-49.

*Data from a community sample in Romania are presented on how social support and stress in interpersonal relationships are related to psychological distress (depressive symptoms, anxiety, and loneliness). Other predictor variables in the study were stress from daily living, self-efficacy, age, and gender. An important feature was the inclusion of measures of positive and negative aspects of interpersonal relationships. Many studies emphasize either social support, or interpersonal stress, but rarely both. A random population based sample of 1000 was drawn from age groups 25–29, 40–44 and 75–79. A study questionnaire was mailed to the sample. The analysis sample size was 581 (63 percent of the 922 persons located). The hypothesized relationships between the stressors, the resources, and psychological distress were examined using structural equation models. All the fit statistics indicated a good fit of the data to the model. The variance in psychological distress explained by the predictor variables was 0.83. There were no statistically significant age differences in the relationship between the predictors and psychological distress. Results confirm the study's basic premise, that social support influences psychological distress levels in a protective way, as does self-efficacy, while interpersonal stress and worries about daily living are significant predictors for elevated psychological distress. The study confirms the importance of including measures of positive and of negative social ties in studies of psychological distress in community samples.*

Bancila, D., & Mittelmark, M. B. (2007). Specificity in the relationships between stressors and psychological distress among Romanian adults: A longitudinal analysis. *International Journal of Mental Health Promotion*, 9(4), 4-15.

*The aim of the study was to test for specificity in associations between psychosocial stressors (interpersonal problems, worries about daily living), distress (depressed mood, anxiety) and psychosocial resources (social support, self-efficacy). The data are from 402 Romanian adults who participated in a two-wave panel study. Structural equation models documented specific paths from (a) interpersonal stress to anxiety, (b) worries to depressive mood and to anxiety, mediated by self-efficacy, and (c) social support to*

*depressive mood. Neither gender nor self-efficacy moderated stressor–distress relationships. These results support the specificity hypothesis. In these data, psychosocial stress–distress relationships are specific, with temporal specificity demonstrated for both direct and resource-mediated relationships. Research on psychosocial stress should therefore in future concentrate on specific, rather than general, constructs/measures of stressors and of distress.*

Bancila, D., & Mittelmark, M. B. (2009). Measuring interpersonal stress with the Bergen Social Relationships Scale: Psychometric properties in studies in Norway, Romania, and Russia. *European Journal of Psychological Assessment*, 25(4), 260-265.

*This study assessed the equivalence of the Bergen Social Relationships Scale (BSRS) across three countries. The six-item BSRS was developed to measure interpersonal stress in close relationships and is grounded in Festinger's cognitive dissonance theory. In this context, interpersonal stress refers to perceived troubled relationships with significant others who cause stress even when they do not mean to (e.g., inept social support attempts, criticism, demands that are too high). Interpersonal stress is of considerable concern because community-based research indicates that levels of anxiety, depressive symptomatology, and loneliness are significantly associated with levels of interpersonal stress. Structural equation models were used to assess the equivalence of the BSRS linguistic versions used in community-based samples in Norway (n = 328), Romania (n = 581), and Russia (n = 665). Results indicate that the BSRS has satisfactory internal consistency and that the factor structure is invariant across all three linguistic adaptations. This study provides evidence that the BSRS is equivalent across countries and suitable for the assessment of interpersonal stress, both to compare population levels of interpersonal stress and to explore structural relationships with other constructs in analytical models of psychological debilitation. The BSRS is brief enough for use in survey research applications.*

Clarke, H. M. (2013). Félagslegur stuðningur og andleg líðan í kjölfar efnahagsþrenginganna á Íslandi 2008: Framsýn ferilrannsókn.

Kopp, M. S., Thege, B. K., Balog, P., Stauder, A., Salavec, G., Rózsa, S., ... & Ádám, S. (2010). Measures of stress in epidemiological research. *Journal of Psychosomatic Research*, 69(2), 211-225.

Kovács, É., Balog, P., Mészáros, E., & Kopp†, M. (2013). Married, cohabiting, and divorced marital status and mental health. *Mentálhigiéné és Pszichoszomatika*, 14(3), 205-230.

Mittelmark, M. B., Aarø, L. E., Henriksen, S. G., Siqueland, J., & Torsheim, T. (2004). Chronic social stress in the community and associations with psychological distress: A social psychological perspective. *International Journal of Mental Health Promotion*, 6(1), 5-17.

*Chronic social stress is strongly related to psychological distress in vulnerable groups such as the frail elderly and ill people. Little, however, is known about these phenomena in the general population. The validity and reliability of a new brief*

*measure, the Bergen Social Relationships Scale (BSRS), were investigated in a Norwegian county; the prevalence of chronic social stress was measured using the BSRS, and the associations of chronic social stress and social support with three measures of psychological distress were investigated. Respondents with high BSRS scores had experienced longstanding, important interpersonal relationship problems rather than fleeting stressful incidents. Women reported higher levels of chronic social stress, 60% reporting positively on at least one of the six BSRS items, compared with 50% among men. Social support was negatively and significantly associated with various measures of psychological distress. Chronic social stress was positively and significantly associated with psychological distress. These effects were independent of one another. No buffering effect of social support on social stress was observed. The present data support the importance of positive social ties to health, but suggest that social stress is an independent aspect of social environment with regard to health. If social support and social stress have direct and independent effects on mental health, as the present results indicate, intervention on the one will not necessarily modify the other. Intervention programmes may need to consider explicitly both the lighter and the darker sides of social relationships in building environments that support mental health.*

Mittelmark, M. B. (1999). Social ties and health promotion: suggestions for population-based research. *Health Education Research*, 14(4), 447-451.

Murdock, K. K. (2013). Texting while stressed: Implications for students' burnout, sleep, and well-being. *Psychology of Popular Media Culture*, 2(4), 207.

*Text messaging has become an integral part of social life, especially among adolescents and young adults. As a potentially continuously accessible form of communication, texting may affect individuals' psychosocial functioning in interesting—and unexplored—ways. The current study examines links among interpersonal stress, text messaging behavior, and 3 indicators of college students' health and well-being: burnout, sleep problems, and emotional well-being. It was proposed that high rates of text messaging may exacerbate the effects of interpersonal stress on these aspects of students' health and well-being. Participants included 83 first-year undergraduate students. Results of hierarchical regression analyses indicated that higher levels of interpersonal stress were significantly associated with compromises in all 3 areas of functioning. A higher number of daily texts was directly associated with more sleep problems. The number of daily texts moderated the association between interpersonal stress and both burnout and emotional well-being; interpersonal stress was associated with poorer functioning only at higher levels of texting. Promising future directions for research on texting behavior are discussed.*

Nazir, A., & Mohsin, H. (2013). Coping styles, aggression and interpersonal conflicts among depressed and non-depressed people. *Health promotion perspectives*, 3(1), 80.

**Background:** *The present study compared people with depressive symptoms and people without depressive symptoms with reference to their coping styles, level of aggression and interpersonal conflicts.*

**Methods:** A purposive sample of 128 people (64 depressed and 64 normal controls) was selected from four different teaching hospitals of Lahore. Both the groups were matched on four demographic levels i.e. age, gender, education and monthly income. Symptom Checklist R was used to screen out depressed and nondepressed people. The Brief COPE, the Aggression Questionnaire and the Bergen Social Relationship Scale were used to assess coping styles, aggression and interpersonal conflicts respectively. The Independent t test was used to compare the groups. Binary logistic Regression was also carried out to predict the role of research variables in causing depression.

**Results:** The results showed that level of aggression and interpersonal conflict was significantly more in people with depressive symptoms as compared to control group. On the other hand control group was using more adaptive coping styles than people with depressive symptoms but no difference was found in the use of maladaptive coping styles.

**Conclusion:** The present findings revealed that coping styles, aggression and interpersonal conflicts play important role in depression. Therefore, these dimensions must be considered while dealing with the depressive patients. Implications for preventive work are also discussed in the light of previous researches.

Susánszky, É., Susánszky, A., Szántó, Z., & Kopp, M. (2010). Quality of life and life style of people in leading positions. *Mentálhigiéné és Pszichoszomatika*, 11(4), 371-389.