

## Impactful Social Media on Family Living with Mentally Disordered Members in Rural Areas

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### Abstract

**Objective:** This study explores the impact of social media on family who live with mentally disordered members in rural areas of Ponorogo, East Java Province. Various efforts have been made to determine whether or not social media can help families in rural areas deal with serious stress because of living with their mentally disordered members. **Method:** This study involves 160 members with mental disorder and their family. Stress is measured based on Lazarus and Folkman theory. Data are analyzed using the Sperman test with SPSS software. **Results:** Using Beck criteria, it was found that 60% (N = 160) of families feel stressed. Interestingly, there was a significance difference of stress experienced by the social media users and non-social media users (p value= 0.002). There are 31.3% of social media users who are less stressed while 68.7% non-social media users felt more stressed. **Conclusion:** This study verifies the stress experienced by families who live with mentally disordered members. It can be concluded that the families who use social media are less stressed even though they live with mentally disordered members. It means social media can prevent stress. In addition, it is recommended that counseling and psychological training should be designed by considering participants' gender and level of education.

**Keywords:** Social media; Mental health; Family; Rural area; Stress.



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### 1. Introduction

Approximately 50-90% mentally disordered patients live with their families (Von Kardorff *et al.*, 2016). It was estimated that 43.5 million Americans need caregivers with 19-hour work per week (National Alliance for Caregiving, 2009). About 1% of the population in the UK are people with mental disorder (Smith, 2015). The prevalence of severe mental disorders in Indonesia is 1.7 per 1000 population while the prevalence of that in East Java Province is 2.2 per 1000 population. East Java Province is ranked as the 4th for the highest number of mental disorders after DIY and Aceh (2.7), South Sulawesi (2.6), Bali and Central Java (2.3). The number of mentally disordered people in East Java province was 83,612 (Risksedas, 2013). Ponorogo Regency had a total of 1,321 people with severe mental disorders out of 600,336 people in the productive age. It means the prevalence of severe mental disorders in Ponorogo was 2.2 per 1000 population (Nasriati, 2017). The prevalence of mental disorders in Paringan Sub-District, Ponorogo Regency was 11.2 per 1000 population. Out of 5980 residents, 67 people were found to suffer from mental illness (Mashudi *et al.*, 2016).

Family is a complex functional unit in which each member influences positively and negatively other members (Kerr, 1988). One of the negative influences is stress. Stress is defined as the interaction between individuals as family members and surroundings, assumed as a threat which requires them to find sources to deal with to deal (Lazarus and Folkman, 1984). Stress is one of the most common symptoms afflicting family who live with mentally disordered members. Masulani-Mwale *et al.* (2018), studied the prevalence of stress among parents whose children suffer from intellectual disabilities in Malawi.

eHealth is a term defined as delivering health services and information on Internet using technology (Mclendon, 2000). Looking for reliable online health information to support decisions on someone's health gives them a sense of control over the diagnosis and self-empowerment (Grando and Rozenblum, 2015). Jorgo (2010) stated that empowering people by sharing responsibility managing health conditions may increase medical outcomes at lower cost especially for chronic and expensive diseases, such as mental disorders (Knapp and Mangalore, 2004).

Globally, 2.34 billion people use social media. By 2020, it is expected that more than 2.95 billion Internet users will use social networking websites (Statista, 2019). The study done by Eysenbach *et al.* (2004) studied about online peer support. Fisher *et al.* (2015), researched about social media can prevent suicide. Griffiths and Calear (2009) conducted a study about an online support group for depression. Meanwhile, Best *et al.* (2014) researched about online communication, social media and youth welfare. A study about social networking and online care for depression was conducted by Kavanagh *et al.* (2014). Moritz *et al.* (2016), discussed the effect of online

interventions for depression in schizophrenia, and [Leung Ricky \(2015\)](#) studied social media from the mental health needs of Asian immigrants. However, the effects of social media intervention have not been much investigated ([Fisher et al., 2015](#)), especially for people affected by mental illness ([Kaplan Robert, 2011](#)). Therefore, because social media penetration is very high, it is necessary to understand the impact and potential benefits of social media for health care ([Jose et al., 2017](#)). In this study, the prevalence of stress among families with members experiencing mental disorders is investigated based on social media users and non-social media users. This raises questions whether they can overcome stress by using social media due to living with mentally disordered members.

## 2. Materials and Method

This study is descriptive, involving 160 participants in rural areas of the health care sector in Ponorogo, East Java Province from October to December 2018. The participants were selected using random sampling. Those who are categorized as social media users were interviewed with approval and involved in this study. Only those with literacy skills and age between 18 and 80 years old were included in this study. Questionnaires used to measure stress are designed based on Lazarus and Folkman theory. The questionnaires consist of 6 multiple choices (own reports), and each choice describes four situations. Each choice is rated from 0 to 4 with a total score of 0 to 24. Beck adjusts these questionnaires according to two factors consisting of stress signs and symptoms in forms of danger and challenges.

In this study, for the validity and reliability test, the questionnaires are translated into Indonesian. If the test results in a cut-off score of 12 or above, the participant will be considered stressful. Participants' personal information, including gender, age, duration of illness, level of education, and use of social media are considered. Afterwards, the data are analyzed using SPSS for Windows version 16 with p value less than 0.05 which is considered statistically significant. The Spearman test is used to compare groups and examine the hypotheses.

## 3. Results

In this study, 160 families (81 females and 79 males) living with mentally disordered members aged 18-80 years old were investigated. The average age of the participants is  $29.8 \pm 9.17$  years, and 66 participants (37 females and 29 males) are social network users. [Table 1](#) shows the demographic characteristics of participants.

The prevalence of stress is 61% (N = 192), and about 46 males (47.9%) and 50 females (52.1%) experienced stress. The difference of stress between females and males is statistically significant ( $p = 0.158$ ). Seen from the use of social media, there is a significant difference of stress experienced by families who use social media and do not ( $p = 0.002$ ). About 31.3% of social media users and 68.7% of non-social media users experienced stress. However, there is no significant relationship between gender, age, and job with stress. The participants were divided into two groups according to the level of education. It was found that there is a significant difference between the level of education and the use of social media ( $p = 0.002$ ). [Table 1](#) shows the frequency of stress symptoms experienced by families living with mentally disordered members.

**Table-1.** The Frequency of Stress Experienced by 160 Families with Mentally Disordered Members

Variables	Total Families N (%)	Stressed (n=96)	UnStressed (n=64)	Results
Gender				
Males	81(50.6%)	46 (47.9%)	35(54.6%)	p=0.158
Females	79 (49.4%)	50 (52.1%)	29 (45.4%)	
Age				
Under 35 years old	76 (47.6%)	44 (45.8%)	32 (50%)	p=0.284
Above 35 years old	84 (52.4%)	52 (54.2%)	32 (50%)	
Education				
Basic education	134(83.8%)	77 (80.2%)	57 (89.1%)	p=0.000
Higher education	26 (16.2%)	19 (19.8%)	7 (10.9%)	
Job				
Civil	1 (0.6%)	0 (0%)	1 (1.6%)	p=0.784
Private	20 (12.5%)	3 (3.1%)	17 (26.6%)	
Others	139 (86.9%)	93 (96.9%)	46 (71.8%)	
Use of Social Media				
Users	66 (41.3%)	30 (31.3%)	36 (56.3%)	p=0.002
Non-users	94 (58.7%)	66 (68.7%)	28 (43.7%)	

## 4. Discussion

The results obtained have revealed that the majority of families with members who suffer from mental disorders is stressed out. This is in line with the report of critical article reviews done by [Ponnet and Wouters \(2014\)](#) stating that various levels of income may cause stress. Cognitive function of individuals with dementia is inversely

proportional to the burden of care while family stress is inversely proportional to mental health, and mental health is significantly related to the quality of care (Morlett Paredes *et al.*, 2017). Web-Based Psychoeducation Interventions can increase knowledge of schizophrenia, so it can decrease stress of people with schizophrenia and their family (Rotondi *et al.*, 2014). Schizophrenic families tend to use problem coping focused to deal with stress (Mashudi *et al.*, 2019). Positive family coping in the form of changing aspects of maintaining family integrity, cooperation, looking at the situation positively, and understanding the medical situation, communication with others, as well as consultation with health workers (Yusuf *et al.*, 2012).

However, some limitations need to be considered. For example, the types of mental disorders, other clinical data and the intensity of appropriate social media usage are not properly assessed. Also, this analysis does not involve various types of mental disorders. Therefore, further analysis on variables which are not researched in this study will be interesting. Some studies found that using social media for non-cancer patients causes depression (Primack *et al.*, 2017; Shensa *et al.*, 2017; Sidani *et al.*, 2016). Therefore, further investigation is required to assess the effect of each social media towards stress that families living with mentally disordered members feel.

According to some studies, the high prevalence of stress experienced by families living with mentally disordered members, easy access to social media, and available facilities may increase the effectiveness of health care. In addition, it is recommended to consider gender and level of education if psychological skill counseling and training are given as the intervention to decline stress among families with mentally disordered members.

## 5. Conclusion

The families who use social media are less stressed even though they live with mentally disordered members. It means social media can prevent stress.

## Funding Statement

This research was funded by LPDP Indonesia through BUDI DN

## Informed Consent

Informed consent was obtained from all participants involved in this study.

## Ethical Approval

All procedures in this study involving human participants are in accordance with the ethical standards of the research committee at the Faculty of Public Health, Airlangga University.

## Acknowledgments

The authors would like to thank LPDP as a BUDI DN Indonesia scholarship funder

## References

- Best, P., Manktelow, R. and Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, 41: 27–36. Available: <https://doi.org/10.1016/j.chilcyouth.2014.03.001>
- Eysenbach, G., Powell, J., Englesakis, M. and Rizo Carlos, S. A. (2004). Health related virtual communities and electronic support groups: systematic review of the effects of online peer to peer interactions. *B. M. J.*, 328(7449): 1166.
- Fisher, S., Herrman, H., Rodrigues, M., Bailey, E., Cox, G., Hetrick, S. and Robinson, J. (2015). Social media and suicide prevention: a systematic review. *Early Intervention in Psychiatry*, 10(2): 103–21. Available: <https://doi.org/10.1111/eip.12229>
- Grando, M. A. and Rozenblum, R., B. D. F. (2015). *Information technology for patient empowerment in healthcare*. Walter de Gruyter GmbH.
- Griffiths, K. M. and Calear, A. B. M. (2009). Systematic review on Internet Support Groups (ISGs) and depression (1): Do ISGs reduce depressive symptoms? *Journal of Medical Internet Research*, 11(3): e40.
- Jorgo, C. (2010). Why patients should be more empowered: A european perspective on lessons learned in the management of diabetes. *Journal of Diabetes Science and Technology*, 4(6): 1570–73.
- Jose, F., Iii, G., Hons, B. H. K., Sheps, S. and Eysenbach, G. (2017). Social media : A review and tutorial of applications in medicine and health care background qualitative method results summary. *Ncbi. Nlm. Nih. Gov*: Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3936280/>
- Kaplan Robert, P. M. (2011). The big idea: How to solve the cost crisis in health care. Available: <https://hbr.org/2011/09/howtosolve-the-cost-crisis-in-health-care>
- Kavanagh, D., Park, M., Rice, S. M., Goodall, J., Hetrick, S. E., Parker, A. G. and Alvarez-Jimenez, M. (2014). Online and social networking interventions for the treatment of depression in young people: A systematic review. *Journal of Medical Internet Research*: Available: <https://doi.org/10.2196/jmir.3304>
- Kerr, M. E. B. M. (1988). *Family evaluation: An approach based on bowen theory*. Norton: New York.
- Knapp, M. and Mangalore, R. S. J. (2004). The global costs of schizophrenia. *Schizophrenia Bulletin*, 30(2): 279–93.
- Lazarus, R. S. and Folkman, S. (1984). *Stress, appraisal and coping*. Springer Publishing Company, Inc.: New York.

- Leung Ricky, L. J. (2015). Using social media to address Asian immigrants' mental health needs: A systematic literature review. *Journal of Nature and Science*, 1(4): e66.
- Mashudi, S., Widiyahseno, B. and P (2016). *The crazy village model*. 1st edn: UMP Press: Ponorogo.
- Mashudi, S., Yusuf, A. and Subarniati Triyoga, R. (2019). Improving health services affecting coping mechanism of the family of skizofrenia patients. *International Journal of Healthcare and Medical Sciences*, 5(56): 26–29. Available: <https://doi.org/10.32861/ijhms.56.26.29>
- Masulani-Mwale, C., Kauye, F., Gladstone, M. and Mathanga, D. (2018). Prevalence of psychological distress among parents of children with intellectual disabilities in Malawi. *BMC Psychiatry*, 18(1): 1–7. Available: <https://doi.org/10.1186/s12888-018-1731-x>
- Mclendon (2000). E-commerce and HIM: ready or not, here it comes. *Journal of the American Health Information Management Association*, 71(1): 22–23.
- Moritz, Schröder, Klein and Lincoln, A. (2016). Effects of online intervention for depression on mood and positive symptoms in schizophrenia. *Schizophrenia Research*, 175(1-3): 216-22. Available: <https://doi.org/10.1016/j.schres.2016.04.033>
- Morlett Paredes, A., Perrin, P. B., Peralta, S. V., Stolfi, M. E., Morelli, E. and Arango-Lasprilla, J. C. (2017). Structural equation model linking dementia cognitive functioning, caregiver mental health, burden, and quality of informal care in Argentina. *Dementia*, 16(6): 766–79. Available: <https://doi.org/10.1177/1471301215617080>
- Nasriati, R. (2017). Stigma and family support in caring for people with mental disorders (ODGJ). *Jurnal Ilmiah Ilmu - Ilmu Kesehatan*, 16(1): 56–65. Available: <http://Jurnalnasional.ump.ac.id/index.php/medisains/article/download/1628/1391>
- National Alliance for Caregiving (2009). Caregiving in the U.S.A focused look at those caring for the 50 + november 2009 national alliance for caregiving in collaboration with aarp. Available: <https://www.caregiving.org/research/caregivingusa/>
- Ponnet, K. and Wouters, E. (2014). Stress and mental health in families with different income levels: A strategy to collect multi-actor data. *Journal of Medical Internet Research*: Available: <https://doi.org/10.2196/resprot.2832>
- Primack, B. A., Shensa, A., Escobar-Viera, C. G., Barrett, E. L., Sidani, J. E., Colditz, J. B. and James, A. E. (2017). Use of multiple social media platforms and symptoms of depression and anxiety: A nationally-representative study among U.S. young adults. *Computers in Human Behavior*, 69: 1–9. Available: <https://doi.org/10.1016/j.chb.2016.11.013>
- Riskesdas (2013). *Basic health research*. Litbang: Jakarta.
- Rotondi, A. J., Anderson, C. M., Haas, G. L., Eack, S. M., Spring, M. B., Ganguli, R. and Rosenstock, J. (2014). Web-based psychoeducational intervention for persons with schizophrenia and their supporters: One-year outcomes. *Psychiatric Services*, 61(11): 1099–105. Available: <https://doi.org/10.1176/ps.2010.61.11.1099>
- Shensa, E.-V. C. G., Sidani, J. E., Nicholas, D., Bowman, M., Marshal, P. and B, A. P. (2017). Problematic social media use and depressive symptoms among u.S. Young adults: A nationally-representative study. *Soc. Sci. Med.*, 176(5): 139–48. Available: <https://doi.org/10.1016/j.physbeh.2017.03.040>
- Sidani, A. S., eth Hoffman, Janel, H. and B, A. P. (2016). The association between social media use and eating concerns among u.S. Young adults. *J. Acad. Nutr. Diet.*, 116(9): 1465–72. Available: <https://doi.org/10.1016/j.physbeh.2017.03.040>
- Smith, G. (2015). *Skizofrenia*. In i. Peate (ed.), *mental health nursing at a glance*. 1st edn: John Wiley and Sons, Ltd: UK.
- Statista (2019). Number of social media users worldwide from 2010 to 202. Available: <https://www.statista.com/statistics/278414/number-of-worldwidesocial-network-users/>
- Von Kardorff, E., Soltaninejad, A., Kamali, M. and Eslami Shahrbabaki, M. (2016). Family caregiver burden in mental illnesses: The case of affective disorders and schizophrenia - A qualitative exploratory study. *Nordic Journal of Psychiatry*, 70(4): 248–54. Available: <https://doi.org/10.3109/08039488.2015.1084372>
- Yusuf, A., Putra, S. T. and Probowati, Y. (2012). Increased family coping in treating mental patients through spiritual therapy direction, obedience, and acceptance (DOA). *Jurnal Ners*, 7(2): 201–07. Available: <http://eprints.ners.unair.ac.id/632/1/ah%20yusuf-coping%20keluarga%20spiritual%20gangguan%20jiwa.pdf>