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Indonesian Older Adults' Mental Health: An Overview

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Abstract

Many studies have been conducted on the prevalence of common psychological problems among older adults, but most of them were in a Western setting. This study aims to provide some data on the mental health of Indonesian older adults, specifically those related to stress, chronic pain acceptance, depression, and insomnia. Results show a high prevalence of psychological problems among older Indonesian adults, which is comparable to the findings of Western studies. This means that these older adults are at risk for psychological disorders; 46.28% experienced stress, 31.72% were depressed, 33.69% suffered from insomnia, and 16.84% had difficulty dealing with chronic pain. However, access to psychological services in Indonesia remains far below the Western standard.

Keywords

Chronic pain acceptance, depression, Indonesian older adults, insomnia, stress

The older-adult population (60 years and above) in Indonesia is on the rise. The 2010 national census showed that older adults were 7.58% of the population (Statistics Indonesia, 2012). Older adults are projected to constitute one-fifth of the Indonesian population by 2025 (Megarani, 2007). This warrants the attention of every profession, including psychologists.

The aging population in Indonesia is a success indicator of country development, but it also poses a challenge for the government. Elderly people have different life problems, such as physical decline, and are more vulnerable to certain diseases (The Ministry of Women's Empowerment and Child Protection, 2009).

The aging process makes older adults prone to developing general health problems. Papalia, Olds, and Feldman (2009) attribute this condition to the decrease in organic functions and systemic immunity as age increases. One of the issues often faced by the elderly is chronic disease, such as pain that is experienced continuously for six months or more (Sarafino & Smith, 2011). The duration of chronic disease, which is relatively long, affects the sufferer's physical, psychological, and social life, often affecting their daily living activities (Morrison & Bennett, 2009).

The impact of chronic disease on the elderly is wide-ranging. For example, elderly people can become more sensitive and are thus more easily offended than people who are classified as healthy (Godsoe, 2008). Also, aside from affecting older adults' interpersonal relationships (Morrison & Bennett, 2009), chronic disease influences their financial condition. Previous research has shown that the

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elderly's economic situation is one of the factors that shape their discipline when it comes to their treatments (O'Toole, Buckel, Redihan, DeOrsey, & Sullivan, 2012). The lack of savings to pay for treatments make them less willing to undergo treatment.

Older adults with chronic disease usually experience changes in various aspects of their lives (Hopko, Cannity, McIndoo, File, Ryba, Clark, & Bell, 2015), which can make them vulnerable to symptoms of depression (Edelstein & Segal, 2011). A study found that the decline in health among older adults tends to expose them to anxiety, dementia, alcoholism, and stress (Knight, Kaskie, Shurgot, & Dave, 2006). In line with previous studies, a Malaysian study reported a high prevalence of depression, anxiety, and stress among older adults (27.8%, 22.6%, and 8.7%, respectively) because of their poor general health (Abdul Manaf, Mustafa, Abdul Rahman, Yusof, & Abd Aziz, 2016).

A further study showed an 11.19% prevalence of depression among older adults, which is associated with dementia and pain severity (Steffens, Fisher, Langa, Potter, & Plassman, 2009) and often overlaps with anxiety (McIntyre, J., Cheal, K., Bartels, S., et al., 2008). Those suffering from anxiety usually feel some limitations in social function and a decline in well-being (Upadhyaya, Lyness, Cox, Seidlitz, & Caine, 2000). A recent study also found that the causes of anxiety among the elderly are daily hassles such as a rented house, pension fund, stressful life events, poor physical health, and low social contact with family and friends (Kang, Bae, Kim, et al., 2016). When older adults feel anxious in their daily lives, they also tend to be stressed and depressed.

Stress in older adults has a negative relation with well-being, quality of life, and physical health (Archer, Tony Lim, Teh, Chang, Annabel Chen, 2015; Wiernik et al., 2014; Burns & Machin, 2013). Stress can trigger emotional, physiological, or behavioral responses and impair the cognitive function of older people. It leads the elderly to experience some difficulties in their daily lives, such as fatigue, memory disturbance, irritability, negative mood, and worry (Smyth, Zawadzki, & Gerin, 2013). All these effects can disrupt daily living activities, which then leads to even more stress. This situation shows how stress creates a vicious

cycle in older adults' lives.

Sleep disturbance is another potential problem for the elderly (Smyth, 2008). A previous study reported that this condition is caused by several worries, including fears about accidents, health, and domestic management, such as problems at work, the inability to complete daily tasks, and arguments with family or friends (Willis, Yearall, Gregory, 2011). Furthermore, the impact of sleep disturbance is unusually high among the elderly; it includes lower quality of life, impaired concentration and memory, cognitive decline, higher incidence of medical and psychological disorders, and increased mortality (Dragioti, Levin, Bernfort, Larsson, & Gerdle, 2017). Daily inconveniences can also cause sleep problems among the elderly, leading to discomfort as they live their everyday lives.

This study will focus on understanding chronic pain, stress, depression, and sleep disturbances among the elderly. A study of mental health status among Indonesian adults was conducted in 1992, but it only measured their general mental health (Bahar, Henderson, & Mackinnon, 1992). Meanwhile, many recent studies have been done on psychological problems, but most of them are in a Western context. Therefore, this study aims for a more specific measure of mental health, that is, acceptance of chronic diseases, stress, depression, and sleep disorders, among Indonesian older adults.

Methods

Participants. The participants in this study were adults who were at least 60 years old and identified as suffering from chronic pain. It involved 190 elderly residents in Depok, which has one of the largest older-adult populations in Indonesia. An important point to consider is that Depok has a life expectancy of 73 years old, which is more than the national life expectancy of 70.7 (Suriastini et al., 2013). The participants ranged from 60 to 84 years old ($M = 62.47$, $SD = 9.13$) and were 74.7% female and 22.1% male. The vast majority were married (67.9%), followed by widowed (25.1%) and unmarried (3.2%). Most of them finished senior high school (41.9%) and university (31.2%). As for household expenditure per month, 55.4% spent

Table 1. Descriptive data and reliability of the measures

Measure	Minimum	Maximum	Means	SD	Reliability
Perceived Stress Questionnaire	0	0.65	0.29	0.14	0.83
Center for Epidemiological Studies Depression Scale	0	19	6.51	3.84	0.47
Insomnia Severity Index	0	24	6.15	4.90	0.87
Chronic Pain Acceptance Questionnaire	0	56	29.56	13.78	0.57

Rp 1,000,001 (US\$ 67) to Rp 3,500,000 (US\$ 235) while 21.5% spent Rp 500,000 (US\$ 33) to Rp 1,000,000 (US\$ 67).

Research Design. This study was a field survey using self-report questionnaires. Assistance was given to those who wished to participate but could not fill out the questionnaire for various reasons (e.g., forgot to bring their glasses). The questionnaires were given in an outdoor setting (e.g., in a sports field, in a park, and on the terrace of a health center) under guided instructions. No incentives were given for the respondents' voluntary participation.

Measures. This research involved several adopted measures with assistance from a certified translator. To ensure the instruments fit the context of the study, we did readability tests with some individuals who had the same characteristics as the participants. We also obtained the opinions of several aging and clinical psychology experts in Indonesia.

The Perceived Stress Questionnaire (PSQ) was used to measure stress, defined as a person's subjective reaction to external events or demands from their environment (Levenstein, Prantera, & Varvo, 1993). The PSQ consists of 20 items with a four-point Likert scale ranging from 0 (Never) to 4 (Very Often). The higher the score, the more stressed the participant is.

Next, the Center for Epidemiological Studies Depression Scale (CES-D) was used to measure depressive symptoms in the general population. This research used the short version of the scale (CES-D 10) to ease the participants' burden of filling out the questionnaires (Irwin, Artin, & Oxman, 1999). The CES-D 10 has 10 items with a four-point Likert scale ranging from 0 (less than 1 day in a week) to 4 (5–7 days in a week). The cut-off score for the presence of depression is 10, with a high score indicating greater depressive

symptoms.

In addition, the Insomnia Severity Index (ISI) was used to measure a range of insomnia symptoms (Morin & Espie, 2004). It includes seven items with a five-point Likert scale from 0 (None) to 4 (Very Severe). The optimum cut-off score for the presence of insomnia is 10, where a higher score indicates a higher severity of insomnia.

Lastly, the short form of the Chronic Pain Acceptance Questionnaire (CPAQ – 8) was used to measure individuals' degree of acceptance of their chronic pain (Fish, McGuire, Hogan, Morrison, & Stewart, 2010). The measure has eight items with a seven-point Likert scale from 0 (Not true) to 6 (Always true); a higher score indicates a higher level of acceptance of chronic pain.

Table 1 presents the descriptive data and the reliability of the measure. The scores indicate that the short-form scales (CES-D 10 and CPAQ-8) suffer from low reliability, but this may be due to the tendency of Cronbach's alpha to show low reliability among scales with a small number of items.

Procedure. To recruit participants, we went to several gathering points of Indonesian older adults in Depok, West Java, Indonesia, such as pengajian, sports activities (senam), choir groups, and arisan. We informed them about the research after they finished their activities. Those who wanted to participate were asked to fill out a set of questionnaires. At every gathering, five researchers handed out the questionnaires. In each activity, we waited for the participants to finish the surveys and stood by the site to provide any necessary assistance. The entire survey took about an hour to complete.

Data Analysis. To achieve the purpose of this

Table 2. Epidemiological data regarding stress, depression, insomnia, and chronic pain acceptance

Prevalence	Upper Group					Lower Group				
	N	Mean	SD	Min.	Max.	N	Mean	SD	Min.	Max.
Stress	87	0.40	0.08	0.32	0.65	101	0.19	0.07	0.02	0.30
Depression	59	11.10	2.98	8	19	127	4.38	1.78	0	7
Insomnia	62	11.77	3.59	8	24	122	3.29	2.34	0	7
Chronic Pain Acceptance	32	1.94	4.29	0	15	158	35.16	6.16	22	56

study, we used Ward's method to perform hierarchical cluster analysis. After obtaining the cluster for each variable, we used ANOVA to test whether each cluster is meaningful and distinct. From this method, we expected to obtain more detailed epidemiological data regarding the prevalence of each psychological problem studied in this research.

Results

This section presents a rough estimate of the prevalence of stress, depression, insomnia, and chronic pain in the sample.

Epidemiological data. Prevalence of stress. The cluster analysis of the Perceived Stress Questionnaire (PSQ) showed two groups: the high-stress group and the low-stress group. The high-stress group consisted of 87 older adults (46.28%) with scores ranging from 0.32 to 0.65 and a mean score of 0.40 (SD = 0.08). On the other hand, the low-stress group consisted of 101 older adults (53.19%) with a mean score of 0.19 (SD = 0.07) and a score range of 0.02 to 0.30. The ANOVA showed that both groups have a statistically significant difference ($F(1, 186) = 353.88, p < 0.01$).

Prevalence of depression. Investigation of the CES-D using Ward's hierarchical clustering analysis yielded two clusters: the risk-depression group and the no-depression group. The risk-depression group consisted of 59 older adults (31.72%) with a mean score of 11.10 (SD = 2.98) and a score range of 8 to 19. In contrast, the no-depression group consisted of 127 older adults (67.55%) with scores ranging from 0 to 7 and a mean score of 4.38 (SD = 1.78). The ANOVA showed a statistically significant difference between the risk-depression group and the no-depression group ($F(1, 184) = 366.94,$

$p < 0.01$).

Prevalence of insomnia. Analysis of the ISI using hierarchical cluster analysis (Ward's method) resulted in two groups: the risk-insomnia group and the no-insomnia group. The risk-insomnia group consisted of 62 older adults (33.69%) with a mean score of 11.77 (SD = 3.59) and scores ranging from 8 to 24. On the other hand, the no-insomnia group consisted of 122 older adults (66.30%) with a mean score of 3.29 (SD = 2.34) and scores ranging from 0 to 7. The ANOVA showed that both groups have a statistically significant difference ($F(1, 182) = 371.94, p < 0.01$).

Prevalence of chronic pain acceptance problem. Analysis of the CPAQ-8 using Ward's hierarchical cluster analysis showed two groups: the chronic pain acceptance problem group and the no chronic pain acceptance problem group. The former consisted of 32 older adults (16.84%) with a mean score of 1.94 (SD = 4.29) and scores ranging from 0 to 15, while the latter consisted of 158 older adults (83.16%) with a mean score of 35.16 (SD = 6.16) and scores ranging from 22 to 56. These results indicate that older adults can come to terms with their chronic pain. The ANOVA shows a statistically significant difference between the two groups ($F(1, 188) = 844.87, p < 0.01$).

Discussion

The results showed a relatively high prevalence of psychological disorders among at-risk Indonesian older adults in Depok. This means that the Indonesian elderly in Depok are vulnerable to psychological problems because of their health conditions. Among at-risk older adults, the pervasiveness of high stress (46.28%), depression (31.72%), insomnia (33.69%), and chronic pain acceptance problems (16.84%) has

reached alarming numbers. Although the study participants were inclined to accept their chronic pain conditions, it was not enough to protect them from stress, depression, and insomnia. This is something that we must be aware of to help the elderly continue living normal lives.

The prevalence of depression (31.72%) among Indonesian older adults in Depok is higher than those in epidemiological studies from the United States. The pervasiveness of depression among American older adults is estimated to be at approximately 6%–24% (Gellis & McCracken, 2008). However, the low reliability of the CES-D 10 calls for some discretion when interpreting this result.

Also, there is a high prevalence of insomnia among Indonesian older adults in Depok (33.69%). This result is quite similar to that of a previous study from the Philips Health and Well Being Index 2010, which estimated that 20% of the Indonesian population have trouble sleeping (The Philips Center for Health and Well-Being, 2010). In the United States, meanwhile, the prevalence of insomnia is much higher at 50% of the population (Foley et al., 1995).

The lack of health insurance, along with declining health and high medical costs, is assumed to be one of the significant contributors to psychological problems. Elderly care must be viewed holistically, not just from a psychological standpoint. Chronic pain experienced by the elderly can interfere with their daily functioning, affecting their ability to independently fulfil their needs. Lack of independence can lead to feelings of helplessness, which then leads to depression (Sares, 2008; Whitbourne & Whitbourne, 2011). This condition can also affect their financial situation, as savings are depleted in the process of complying with medical treatments. When this happens, elderly people usually tend to become uncooperative when undergoing medical treatments (O'Toole et al., 2012). Some older adults may need to rely on their children or relatives for assistance, but this could also cause increased feelings of helplessness and stress.

This study has several limitations. First, the sample size is minimal for epidemiological research and population generalizability. Second, the reliability of the CES-D 10 and CPAQ-8 is below expectations, which means

interpreting depression and chronic pain acceptance data may be difficult and doubtful. However, because of the scarcity of studies on psychological disorder prevalence in Indonesia, this data may still shed some light on the topic, especially considering that the most recent epidemiological data on Indonesian mental health status among adults was published in 1992 (Bahar, Henderson, & Mackinnon, 1992).

Furthermore, the high prevalence of psychological disorders among Indonesian older adults shows an urgent need for psychological disorder management. For example, insomnia has been associated with an increased risk of mortality (Dew, Hoch, Buysee, et al., 2003). Therefore, it is imperative to take necessary actions toward psychological disorder management for Indonesian older adults, an example of which would be incorporating psychological services in the elderly care system so that affected older adults can arrange consultations with psychologists.

Declaration of conflicting interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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References

- Abdul Manaf, M. R., Mustafa, M., Abdul Rahman, M. R., Yusof, K. H., & Abd Aziz, N. A. (2016). Factors influencing the prevalence of mental health problems among Malay elderly residing in a rural community: a cross-sectional study. *PLoS ONE*, 11, 6. E0156937. Doi:10.1371/journal.pone.0156937.

- Alexopoulos, G.S. (2005). Depression in older adults. *Lancet*, 365, 1961-1970.
- Archer, J. A., Tony Lim, Z. M., Teh, H. C., Chang, W. C., Annabel Chen, S. H. (2015). The effect of age on the relationship between stress, well-being and health in a Singaporean sample. *Ageing International*, 40, 4, 413-425. Doi: 10.1007/s12126-015-9225-3.
- Bahar, E., Henderson, A. S., & Mackinnon, A. J. (1992). An epidemiological study of mental health and socioeconomic conditions in Sumatera, Indonesia. *Acta Psychiatrica Scandinavica*, 85: 257-263. doi: 10.1111/j.1600-0447.1992.tb01466.x
- Burns, R. A., & Machin, M. A. (2013). Psychological wellbeing and the diathesis-stress hypothesis model: the role of psychological functioning and quality of relations in promoting subjective well-being in a life events study. *Personality and Individual Differences*, 54, 3, 321-326. Doi: 10.1016/j.paid.2012.09.017.
- Dew, M. A., Hoch, C. C., Buysee, D. J., et al. (2003). Healthy older adults' sleep predicts all-cause mortality at 4 to 19 years of follow-up. *Psychosomatic Medicine*, 65, 63-73.
- Dragioti, E., Levin, L. -A., Bernfort, L., Larsson, B., & Gerdle, B. (2017). Insomnia severity and its relationship with demographics, pain features, anxiety, and depression in older adults with and without pain: cross-sectional population-based results from the Pain65+ cohort. *Annals of General Psychiatry*, 16, 15, 1-10. Doi: 10/1186/s12991-017-0137-3.
- Edelstein, B. A., & Siegal, D. L. (2011). Assessment of emotional and personality disorders in older adults. In K. W. Schaie & S. L. Willis (Eds.), *Handbook of the psychology of aging (7th edition)* (pp. 325-337). San Diego: Elsevier Inc.
- Fish, R. A., McGuire, B., Hogan, M., Morrison, T. G., Stewart, I. (2010). Validation of the chronic pain acceptance questionnaire (CPAQ) in an internet sample and development and preliminary validation of the CPAQ-8. *Pain*, 149, 435-443.
- Foley, D. J., Monjan, A. A., Brown, S. L., Simonsick, E. M. Wallace, R. B., Blazer, D. G. (1995). Sleep complaints among elderly persons: an epidemiologic study of three communities. *Sleep*, 18, 6, 425-432.
- Gellis, Z. D., & McCracken, S. G. (2008). Depressive disorder in older adults. In S. Diwan (ed.), *Mental Health*. Washington, DC: CSWE Gero-Ed Center. Master's Advanced Curriculum Project. Accessed in 19 June 2018. https://www.cswe.org/getattachment/Centers-Initiatives/Gero-Ed-Center/Initiatives/Past-Programs/MAC-Project/Resource-Reviews/Mental-Health/MH-Ch3-Depressive_Disorders.pdf.aspx
- Godsoe, M. R. (2008). *Acceptance of chronic pain, attachment style, affectivity and treatment use*. New Hampshire: Antioch University New England. Accessed in 19 June 2018. <http://search.proquest.com/docview/304324906>
- Hapsari, T. (2009). Depok Berpeluang Menjadi Kota Ramah Lansia. *Tempointeraktif.com*. Accessed on 4 March 2012, from <http://www.tempointeraktif.com/share/?act=TmV3cw==&type=UHJpb>
- Hopko, D. R., Cannity, K., McIndoo, C. C., File, A. A., Ryba, M. M., Clark, C. G., & Bell, J. L. (2015). Behavior Therapy for Depressed Breast Cancer Patients: Predictors of Treatment Outcome. *Journal of Consulting and Clinical Psychology*, 83, 1, 225-231. <http://dx.doi.org/10.1037/a0037704>
- Irwin, M., Artin, K.H, Oxman, M.N. (1999). Screening for depression in the older adult: Criterion validity of the 10-Item Center for Epidemiological Studies Depression Scale (CES-D). *Arch Intern Med*, 159, 1701-1704.
- Kang, H.-J., Bae, K.-Y., Kim, S.-W., Shin, I.-S., Yoon, J.-S., & Kim, J.-M. (2016). Anxiety symptoms in Korean elderly individuals: a two-year longitudinal community study. *International Psychogeriatrics*, 28(3) 423-433.
- Knight, B.G., Kaskie, B., Shurgot, G.R., & Dave, J. (2006). Improving mental health of older adults. In J.E. Birren & K. W. Schaie (Eds.). *Handbook of the psychology of aging* (pp. 407-424). Amsterdam, Netherlands: Elsevier. <http://dx.doi.org/10/1016/B978-012101264-9/50021-5>.
- Levenstein, S., Prantera, C., Varvo, V., Scribano, M.L., Berto, E., Luzzi, C., & Andreoli, A. (1993). Development of the Perceived Stress Questionnaire: a new tool for psychosomatic research. *Journal of Psychosomatic Research*, 37, 19-32.
- McIntyre, J., Cheal, K., Bartels, S., et al. (2008). Anxiety and depressive disorders in older primary care patients: defining a clinical

- severity gradient corresponding to differences in health status, functioning, and health service use. *Ageing International*, 32(2) 93-107. Doi: 10.1007/s12126-008-9011-6.
- Megarani, A.M. (2007). Pada 2025, seperlima penduduk Indonesia Lansia. *Tempo Interaktif*, Senin, 12 November 2007. Accessed in 9 November 2010. <http://www.tempointeraktif.com/hg/nasional/2007/11/12/brk,20071112-111401,id.html>
- Morin, C. M. & Espie, C. A. (2004). *Insomnia: A clinical guide to assessment and treatment*. New York: Kluwer Academic Publishers.
- Morin, C. M., Belleville, G., Belanger, L., & Ivers, H. (2011). The insomnia severity index: psychometric indicators to detect insomnia cases and evaluate treatment response. *Sleep*, 34(5), 601-608.
- Morrison, V., & Bennett, P. (2009). *An Introduction to Health Psychology (2nd ed.)*. Spain: Pearson Education Limited.
- O'Toole, T. P., Buckel, L., Redihan, S., DeOrsey, S., & Sullivan, D. (2012). Staying healthy during hard times: the impact of economic distress on accessing care and chronic disease management. *Medicine & Health*, 95, 11, 363-366. Accessed in 19 June 2018. <http://www.rimed.org/medhealthri/2012-11/2012-11-363.pdf>
- Papalia, D. E., Olds, S. W., & Feldman, R. D. (2009). *Human development (11th edition)*. USA: McGraw-Hill.
- Sarafino, E. P., & Smith, T. W. (2011). *Health psychology: biopsychosocial interactions (7th edition)*. USA: John Wiley & Sons, Inc.
- Sares, A. (2008). *Coping strategies of older adults living with chronic pain*. Fullerton: California State University.
- Smyth, C. A. (2008). Evaluating sleep quality in older adults: the Pittsburgh sleep quality index can be used to detect sleep disturbances or deficits. *American Journal of Nursing*, 108, 5, 42-50.
- Smyth, J., Zawadzki, M., & Gern, W. (2013). Stress and disease: a structural and functional analysis. *Social and Personality Psychology Compass*, 7, 4, 217-227. <https://doi.org/10.1111/spc3.12020>
- Statistics Indonesia (2012). *Perkembangan beberapa indikator utama sosial-ekonomi Indonesia*. Jakarta: Statistics Indonesia.
- Steffens, D. C., Fisher, G. G., Langa, K. M., Potter, G. G., & Plassman, B. L. (2009). Prevalence of depression among older Americans: the aging, demographics and memory study. *International Psychogeriatrics*, 21, 5, 879-888. Doi: 10.1017/S104161020999044.
- Suriastini, N. W., Sikoki, B. S., Rahardjo, T. B. W., Mulyanto, E. D., Fauzan, J., Naryanta, Rahayu, T., Gunawan, A., Setyawati, N. I., Ambarwati, T. P., Kurniawati, D. W., & Lestari, S. (2013). *Satu Langkah Menuju Impian Lanjut Usia: Kota Ramah Lanjut Usia 2030*, Kota Depok. Yogyakarta: SurveyMETER.
- The Ministry of Women's Empowerment and Child Protection. (2009). Accessed in 9 November 2010. <http://www.menegpp.go.id/aplikasidata>
- The Philips Center for Health and Well-Being. (2010). Philips Index for Health and Well-being: A global perspective. Accessed in 20 November 2013. <http://www.philips-thecenter.org/Global/think-tank/GlobalIndexReportFinal.pdf>
- Upadhyaya, A. K., Lyness, J. M., Cox, C., Seidlitz, L., & Caine, E. D. (2000). Anxiety and functional status in older primary care patients. *International journal of Psychiatry Medicine*, 30(3) 221-228.
- Whitbourne, S. K., & Whitbourne, S. B. (2011). *Adult development and aging: Biopsychosocial perspective (4th ed.)*. USA: John Wiley & Sons, Inc.
- Willis, T. A., Yearall, S. M., Gregory, A. M. (2011). Self-reported sleep quality and cognitive style in older adults. *Cognitive Therapy and Research*, 35, 1, 1-10. Doi: 10.1007/s10608-009-9270-x.
- Wiernik, E., Nabi, H., Pannier, B., Czernichow, S., Hanon, O., Simon, T., Simon, J. M., Thomas, F., Ducolombier, C., Danchin, N., Limosin, F., Consoli, S. M., Lemogne, C. (2014). Perceived stress, sex and occupational status interact to increase the risk of future high blood pressure: the IPC cohort study. *Journal of Hypertension*. Doi: 10.1097/hjh/0000000000000288.