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Psychometric Properties Evaluation of Mental Health: Depression, Anxiety and Stress Scale (DASS) and Subjective Cognitive Decline Questionnaire (SCD-Q) at Millenial and Gen Z Employee in Indonesia

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Abstract

Research data states that 37% of employees in Indonesia experience mental disorders, especially in the millennial and Z generations. Various terms and measurements of mental health often appear in psychological research but are rarely adjusted to respondents in the context of work settings and often limited to understanding the affective side of individuals, and not much is interpreted from the cognitive side. This is the primary basis for the translation and adaptation process, which uses measurements using the Depression, Anxiety, and Stress Scale (DASS-42) and Subjective Cognitive Decline Questionnaire (SCD-Q). The translation and adaptation process is carried out using Beaton's concept, which consists of the translation process, synthesis, back translation, expert committee review, pilot test, and the last stage is the submission developer committee. The respondents used in this process numbered 100 people according to the characteristics that have been determined. The DASS-42 item discrimination test results for the Stress are 0.685 - 0.879, the Anxiety is 0.701 - 0.989, and the Depression is 0.591 -0.841. Reliability with Cronbach Alpha for the Stress is 0.957, the Anxiety is 0.961, and the Depression is 0.935, which indicates high reliability. The results of the item discrimination test for the SCD-Q are 0.401-0.770 with a Cronbach Alpha of 0.926, which indicates high reliability. The measurement results show that the test tools for measuring mental health, DASS-42, and SCD-Q, can be used to measure and explore levels and analyze mental health in the work environment context, especially for the millennial and Z generations.

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INTRODUCTION

The millennial generation was born between 1980 and 1990 and is entering a productive age. Generation Z, or Gen Z, is the generation born after 1996 (Pew Research Center in Business Insider, 2018). Gen Z generally lives in college or has entered the workforce in 2020. Dwidienawati and Gandasari (2018) stated that in 2020, Gen Z is estimated to reach 2.56 billion or 20% of people globally who enter the workforce. The millennial generation is currently in the workforce.

The millennial generation and Gen Z grew and developed amidst technology, the internet, and social media. Therefore, this generation is nicknamed the Internet generation. The development of technology makes these generations more capable of doing all activities at one time (multitasking) compared to previous

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generations (Apaut & Suparman, 2021). This has an impact on the characteristics of the millennial and Gen Z generations when they are in the workforce compared to other generations.

Basic Health Research (2018) obtained data on suicides per year: 1,800 people or every day there are five people committing suicide, and 47.7% of suicide victims are aged 10-39 years, which is the millennial or productive age and Gen Z. Furthermore, based on a Business Insider survey (2021) Gen Z is stereotyped as technology addicts and anti-social. In addition, Gen Z shows a struggle against anxiety and depression (Gallup Survey, 2023). The Annie E Casey Foundation (2024) stated that almost two-thirds or 65% of the millennial and Gen Z generations have experienced at least one mental health problem in the past two years. The weaknesses displayed by this generation make it easy to get bored; everything is instant, and they act on their own, making them susceptible to mental health problems.

The World Health Organization (2020) states that mental health is a state of well-being, namely that individuals can recognize their potential, face the pressures of everyday life, be productive, and contribute or be helpful to the community. Measuring mental health is an early examination to determine a person's potential for mental disorders. Mental health measurements in Indonesia are MMPI (Minnesota Multiphasic Personality Inventory) and PHQ-9 (Patient Health Questionnaire-9) (Ministry of Health, 2024).

MMPI is a screening instrument used in clinical settings to detect mental disorders, and it has 567 items. The use of MMPI is paid and is not used in general. PHQ-9 is a screening instrument consisting of 9 items to determine mental disorders specifically for the detection of depression. PHQ-9 has been tested for validity and reliability on n = 1000 patients in the clinic by Fatimah (2014) with a Cronbach Alpha value of 0.74. Both measuring instruments are mental health screening instruments in clinical settings. In addition, the two instruments need to explain how the translation and adaptation process is used according to the culture of Indonesia. Most mental health instruments used in research only measure aspects of affect or behavior.

On the other hand, several opinions interpret measuring mental health as also identified in cognitive or thinking abilities. Hasanah (2017) stated that the form of healthy mental behavior is the ability to think well and control emotions. Several studies have begun to link and state cognitive aspects as one of the mental health indicators, such as in a study titled Depression and Cognitive Decline as Indicators of Mental Health in the Elderly, which examined 511 older adults (Loza et al., 2024). This study combines affective and cognitive indicators in measuring mental health in the work environment.

The DASS (Depression, Anxiety, and Stress Scale) is a 42-item questionnaire that includes three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. Each of the three scales contains 14 items, divided into subscales of 2-5 items with similar content. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale (items) is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, easily upset/agitated, irritable/over-

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reactive, and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week (Lovibond & Lovibond, 1995).

The principal value of the DASS-42 in a clinical setting is to clarify the locus of emotional disturbance as part of the broader task of clinical assessment. The essential function of the DASS is to assess the severity of the core symptoms of Depression, Anxiety, and Stress. Accordingly, the DASS allows a way to measure the severity of a patient's symptoms and a means by which a patient's response to treatment can be measured.

This is a screening instrument, and practitioners should make a clinical judgment as to whether an individual needs further assessment for anxiety and depression. High scores on the DASS would undoubtedly alert the clinician to a high level of distress in the patient, and this would need to be explored further during the interview process. Similarly, low scores on the DASS should not be a substitute for a comprehensive clinical interview.

The DASS is based on a dimensional rather than a categorical conception of measure of distress where depression and anxiety vary along a continuum of severity. The DASS has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the DSM and ICD. However, recommended cutoffs for conventional severity labels are given in the DASS Manual (http://www2.psy.unsw.edu.au/groups/dass/order.htm).

In DASS-42, 42 items are asked of, as in Table 1 (NovoPsych. 2018). In the DASS-42 standard, the division of items/symptoms that affect certain disorders can be seen in Table 2. Self-assessment is done by filling in the values 0: does not occur, 1: rarely occurs, 2: sometimes, or 3: often occurs on each item. In Table 2, for example, item number 39 (easily anxious), according to DASS-42, will be recommended as a symptom of stress disorder; however, being easily anxious is also part of depression and anxiety disorders. Likewise, for example, number 36 (fear), according to DASS-42, will be recommended as a symptom of anxiety disorder; however, being easily frightened is also part of depression and stress disorders. So far, there has been no research/literature on the priority ranking of disorders for each item. Priority is only determined to the extent of influencing or not influencing, not showing the ranking of the influence of each disorder. The final score for the DASS-42 is calculated based on the total value for each disorder so that the maximum total score for each disorder is 3 x 14 = 42. The severity of each disorder in the DASS can be divided into four classifications, namely mild, moderate, severe, and very severe.

Subjective cognitive decline (SCD) was demonstrated as the subjective cognitive decline in those with normal cognition, involving cognitive domains of processing speed, executive functions, memory, and visuospatial abilities, especially in the memory domain (Jensen, 2014; Jensen, 2020). Moreover, SCD does not need to be reconfirmed by cognitive tests when its diagnosis is not required (Wong, 2020). Before being redefined in 2014, SCD was studied as subjective cognitive impairment, subjective memory decline, subjective memory impairment, and memory complaint in many studies (Abdulrab, 2008). A large cohort study found that memory complaints occurred around 16 years before the dementia diagnosis (Verlinden,

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2016). Compared with those without SCD, older adults with SCD were 2.3 times as likely to develop dementia and mild cognitive decline (MCI) (Mitchel et al., 2008).

Similarly, a multicenter study found that those with SCD presented a higher incidence rate of dementia than those without SCD (Slot et al., 2019). A phenomenological study describing the cognitive changes of health, MCI, and Alzheimer's disease (AD) in older adults stated that cognitive decline among the three groups showed an increasing relationship (Buckley et al., 2015). Therefore, SCD was considered as an early marker for impending cognitive decline in older adults. According to a previous survey, the prevalence of SCD was 14.4–18.8% among the northern Chinese population (Hao et al, 2017). However, there are few studies related to SCD in southern China. Consequently, it is of great public health significance to study SCD symptoms among southern older adults.

The Subjective Cognitive Decline Initiative stressed the importance of focusing on the subjective perception of cognitive decline instead of the more general terms subjective cognitive complaint or impairment because subjective cognitive decline refers to the experience of temporal change in cognitive capacity, whereas complaint or impairment may also refer to chronic or stable cognitive states (Jessen F, Amariglio RE, van Boxtel M, et al., 2014).

Several studies have translated and adapted the SCD-Q in several countries, namely in China, with Cronbach's α coefficient ranging from 0.870 to 0.88 and Spearman-Brown's split-half coefficient was 0.892 (Hao et al., 2019). There is also a translation and adaptation process in Germany, distributed to 313 respondents from a memory clinic, using exploratory factor analysis. The results of the statistical analysis showed Bartlett's test chi-square (136) = 981.891, $p < .001$, and the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.916) indicated the viability of the variables for factor analysis (Tegehoff, 2024). The study results showed that the SCD was translated and adopted in Spain, and the research respondents were the general public. Tatay et al. (2023) stated that the SCD questionnaire has been translated more in clinical and health contexts. The constancy of the instrument in measuring the same object is known as reliability (McNeish, 2017). Measuring the measurement error or loading factor is a prerequisite to assessing the instrument's internal consistency. The aggregate measure's internal consistency and acceptable reliability are assessed using Cronbach's Alpha (Peters, 2014). The respondents also validated the measurement instrument tryout procedure by the predetermined criteria through focus group talks and surveys with 100 individuals.

It is crucial to create culturally relevant instruments because human behavior is influenced by its surrounding context, which is also the focus of measurement (Kim et al., 2006). The relationship between psychometric and cultural instruments can be understood through the ideas of "context" and "content" (Triandis, 2000; Kim et al., 2006; Dockterman & Blackwell, 2014). According to Matsumoto (2007), context is intrinsic to humans as social beings, while content refers to human behavior.

From 42 publications, Epstein et al. (2015) found 30 methodology strategies for translating and customizing cross-cultural questionnaires. Three phases involve translating and modifying questionnaires for use in various languages and cultural contexts. According to Rahman et al. (2003), there are three steps involved in translation processes: translation, cross-cultural verification and adaptation, and instrument

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verification in the study population. The six steps of the cross-cultural adaptation process are as follows: the translation process, synthesis, reverse translation, expert committee review, pilot test, and submission development committee, which is the final stage, according to Beaton, Bombardier, Guillemin, and Ferraz (2000).

Regarding the literature search, a mental health screening instrument that can be used generally on the millennial generation and Gen Z in the workplace setting and is based on the cultural context in Indonesia has not been found. In addition, the translation and adaptation process as part of testing psychometric properties. The increasing vulnerability of the characteristics of the millennial generation and gen Z to mental health problems. Therefore, research to test the psychometric properties of instruments to detect mental health in the millennial generation and gen Z according to the Indonesian cultural context is necessary.

METHOD

The subjects in this study were 100 Millennial and Generation Z employees. Respondents in this study were selected using purposive sampling techniques. Purposive sampling is a sample selection technique used to obtain the most valuable data from certain known cases. The characteristics of the research respondents are the millennial generation aged 1981-2000, generation z aged 2000-2024, contract or temporary employees, and employees with a minimum work period of 3 months.

The measuring instruments used in this study were the Depression, Anxiety, and Stress Scale-42 (DASS-42) and the Subjective Cognitive Decline Questionnaire (SCD-Q). The Depression, Anxiety, and Stress Scale (DASS-42) consists of 21 items. In the DASS-42, there are four response options, namely: 0 (Not suitable for me at all, or never), 1 (Suitable for me to some extent, or sometimes), 2 (Suitable for me to some extent, or quite often) and 3 (Very suitable for me, or very often). The subjective Cognitive Decline Questionnaire (SCD-Q) consists of 21 items with three answer choices, namely 1 (never), 2 (sometimes), and 3 (always). The concept of Cronbach's alpha coefficient is used to test the reliability of the DASS-42 and SCD-Q. The validity test of the items in the Indonesian version of the DASS-42 and SCD-Q uses the item total correlation technique with the SPSS program (Rachmayani et al., 2017).

RESULTS AND DISCUSSION

The stages of the translation and adaptation process have been carried out using the concept stages of Beaton, Bombardier, Guillemin, and Ferraz (in Yuniasanti and Abas, 2019), which consist of 6 stages. The first stage is the translation process, the second stage is the synthesis process, the third stage is back translation, the fourth stage is professional judgment from experts, the fifth stage is pre-testing with focus group discussions and tryouts to sample respondents, and the sixth stage is to reconfirm with experts after the scale has been revised and statistically tested.

Stage one is translation from the original instrument into the target language. At this translation stage, the initial step involves having two translators independently translate the original measurement instrument into the target language (Beaton et al., 2000; Sousa & Rojjanasrirat, 2011). As noted by Rahman

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et al. (2003), translators should possess several key characteristics: they must understand both the technical and everyday language of the source and target languages, have extensive knowledge of the relevant culture, and be well-versed in the technical skills and scientific concepts pertaining to the field covered in the questionnaire.

The second stage is the synthesis of the translations. At this stage, the researcher selects the sentence that most closely aligns with the original meaning, while also considering the theoretical framework being applied.

The third stage is back translation. After synthesizing the instrument, it is translated back into English by providing the synthesized version to native speakers (Beaton et al., 2000). In this research, the back translation is conducted by experts with a background in English language studies, particularly those specializing in medical terminology.

Heale and Twycross (2015) distinguish between three forms of validity: criterion, construct, and content. In order to verify the accuracy of research instruments, stage four involves content validity assessment (Beaton et al., 2000). The instrument's fit for the construct, the population under study, and the sociocultural context of the investigation are all evaluated using content validity. It may also have to do with the requirement for new tools or adjustments that can be made after an evaluation by a minimum of three specialists who hold doctorates in the area under investigation (Mohamad et al., 2015; Sugiyono, 2017). Expert opinions on instruments that assess ideas are sought as part of the process of content validity (Heale & Twycross, 2015). A committee of experts of four professionals from four different views will examine the work in this fourth stage. The first viewpoint is semantic equivalency, which refers to the perception of words as having the same meaning and exploring an item's multiple meanings. Furthermore, it is also to observe grammatical errors in the translation. Expert opinions on instruments that assess ideas are sought as part of the process of content validity (Heale & Twycross, 2015). A committee of experts of four professionals from four different views will examine the work in this fourth stage. The first viewpoint is semantic equivalency, which refers to the perception of words as having the same meaning and exploring an item's multiple meanings. Furthermore, it is also to observe grammatical errors in the translation. Conceptual equivalence is the second viewpoint, which verifies if each item is measurable and has a meaning consistent with the variable's definition. The third perspective, experiential equivalency, compares items with facts from the target culture. Idiomatic equivalence, the fourth viewpoint, creates equivalent statements in the target version (Beaton et al., 2000). Sousa and Rojjanasrirat (2010) urged further assessment of the instrument to clarify instructions, items, and response format using a sample of 6-10 experts.

This pretesting phase aims to evaluate the adaptation scale design's construct validity and reliability. Theoretical evidence, homogeneity, and convergence are the three categories of evidence that characterize a research instrument as having construct validity. Sugiyono (2017) states that the instrument's construct validity can be tested using a sample of 30 respondents. According to Sousa and Rojjanasrirat (2010), translation trials in cultural adaptation necessitate a sample size of 10–40 individuals. A survey paper was used to distribute questionnaires to respondents who shared the same characteristics to conduct the

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instrument trial. The constancy of the instrument in measuring the same object is known as reliability (McNeish, 2017). Measuring the measurement error or loading factor is a prerequisite to assessing the instrument's internal consistency. The aggregate measure's internal consistency and acceptable reliability are assessed using Cronbach's Alpha (Peters, 2014). The respondents additionally approved the measuring instrument tryout process utilizing focus group talks and surveys with 100 subjects according to the set criteria.

The sample to measure internal consistency was generated by randomly selecting the subjects with 100 people. The summary of the respondent demography are as follows:

Table 1. Respondents' demography

Characteristics	Category	Frequency	Percentage
Age	Z Generation (0-23 years old)	51	51%
	Millennial Generation (24-43 years old)	49	49%
Total		100	100%
Working period	< 3 years	73	73%
	> 3 years	27	27%
Total		100	100%
Latest Education	Highschool/ Vocational School	64	64%
	Diploma	5	5%
	Undergraduate	29	29%
	Post Graduate	2	2%
Total		100	100%
Job title	Structural	77	77%
	Non Structural	23	23%
Total		100	100%
Sex	Female	62	62%
	Male	38	38%
Total		100	100%
Division/ working unit	HRD	3	3%
	Treasury	3	3%
	Marketing	17	17%
	Production	4	4%
	General Affair	63	63%
	Information and Technology	10	10%
Total		100	100%

The Depression, Anxiety, and Stress concept is identified as 3 dimensions that are informed by 42 measurement items. The three dimensions are negative emotional states of depression, anxiety and stress. To validate the scale, the analysis was conducted and the result of validity analysis referred to corrected item-total correlations. The corrected item-total correlation's score range is from 0.520 until 0.856. Maki, Rajab, Watson and Critchley (2017) used internal consistency to check validity items of their instrument at translation and culture adaptation. For checking the data quality, it can use internal consistency of scale to predict differential heritability (McCrae, Kurtz, Yamagata, & Terracciano, 2011). To test convergent

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validity, it can use correlation between each item and its own scale (corrected for overlap), the proportion of item own scale correlations ≥0.4 (Perneger, Leplège, & Etter, 2002). The proportion of comparison in which the item own-scale correlation is significantly greater than the item-other scale correlation (Perneger et al., 2002).

The Subjective Cognitive Decline Questionnaire (SCD-Q) assesses an individual's perception of their cognitive abilities, particularly about memory and other mental functions. The dimension of SCD-Q is concerns about memory, perception of cognitive changes, and impact on daily life. It focuses on subjective cognitive decline (SCD), which refers to the self-reported experience of worsening cognitive function without objective evidence of impairment (i.e., when cognitive tests still show average performance). The SCD-Q gives information on how individuals perceive changes in their cognitive abilities over time. Corrected item-total correlations were the outcome of the validity analysis, which was done to validate the scale. The range of scores for the corrected item-total correlation is 0.401 to 0.770.

Reliability is a measuring instrument's degree of stability and consistency (Creswell in Mohamed et al., 2015). This aligns with Azwar (2017), who stated that reliability is defined as how a measuring instrument or procedure can produce the same score when used in the same situation. According to Anastasi and Urbina (1997), reliability is explained as the consistency of scores obtained by individuals when retested on the same subject with the same measuring instrument at different times, or with different measuring instruments that have equivalent items, or in other measurement conditions of the variable (Anastasi & Urbina, 1997).

The reliability value is based on Cronbach alpha with an appropriate range of values. Higher values indicate a strong relationship between items in the test, while weaker relationships are indicated by lower values between test items (Mohamad et al., 2015). This study uses a significance level of 0.05 ($\alpha = 0.05$) with a benchmark. The item is considered valid and reliable if the inter-correlation coefficient is equal to or above 0.3 (≥ 0.05). Both research scales were analyzed quantitatively using SPSS. The analysis showed that the DASS-42 items had a Cronbach Alpha value 0.980. Meanwhile, the items in the SCD-Q had a Cronbach Alpha value of 0.926. According to Anastasi and Urbina (1997), both research scales have good reliability because the limits of good reliability range from 0.8 - 0.9.

The measuring instrument also underwent a confirmation process from the respondents, using focus group discussions and questionnaires with 100 subjects according to the established criteria. The try-out results were analyzed using SPSS analysis to determine the reliability and difference of the instrument. The following are the results of each instrument's reliability and difference test after going through the translation and adaptation process.

Tabel 2. Table reliability of instrument

No	Instrument	Reliability	T-test
1	Stress	0.957	0.685-0.879
2	Depression	0.961	0.701-0.898
3	Anxiety	0.935	0.591-0.842
4	The Subjective Cognitive Decline	0.926	0.401-0.770

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The final stage in this cross-cultural adaptation scale is the submission and assessment of all written reports by the expert committee. At this stage, researchers must document all processes carried out and make assessments and conclusions from each item that will be used to measure the variables. The following are the results of the synthesis of instruments from 10 professional judgments.

Tabel 3. Submission and assessment

Instrument	Original Item	Final Item
DASS		
Depression	3. I couldn't seem to experience any positive feeling at all 5. I just couldn't seem to get going 10. I felt that I had nothing to look forward to 13. I felt sad and depressed 16. I felt that I had lost interest in just about everything 17. I felt I wasn't worth much as a person 21. I felt that life wasn't worthwhile 24. I couldn't seem to get any enjoyment out of the things I did 26. I felt down-hearted and blue 31. I was unable to become enthusiastic about anything 34. I felt I was pretty worthless 37. I could see nothing in the future to be hopeful about 38. I felt that life was meaningless 42. I found it difficult to work up the initiative to do things	3. Sepertinya saya tidak bisa merasakan perasaan positif sama sekali 5. Saya merasa seperti tidak bisa pergi kemanapun 10. Saya merasa bahwa saya tidak punya harapan 13. Saya merasa sedih dan tertekan 16. Saya merasa bahwa saya telah kehilangan minat dalam banyak hal di kehidupan saya 17. Saya merasa bahwa saya tidak berharga sebagai manusia 21. Saya merasa hidup saya tidak berharga 24. Sepertinya saya tidak bisa menikmati apapun yang saya lakukan 26. Saya merasa sedih dan menderita 31. Saya merasa tidak bisa bersemangat dalam hal apapun 34. Saya merasa diri saya tidak berharga 37. Saya tidak melihat apapun yang di masa depan yang bisa saya harapkan 38. Saya merasa bahwa hidup saya tidak berarti 42. Saya merasa sulit untuk memulai melakukan sesuatu hal
Anxiety	2. I was aware of dryness of my mouth 4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion) 7. I had a feeling of shakiness (eg, legs going to give way) 9. I found myself in situations that made me so anxious I was most relieved when they ended 15. I had a feeling of faintness 19. I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion 20. I felt scared without any good reason 23. I had difficulty in swallowing 25. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat) 28. I felt I was close to panic	2. Saya merasa mulut atau bibir saya sering terasa kering 4. Saya mengalami kesulitan bernafas (misal : bernafas dengan sangat cepat atau sesak napas tanpa adanya aktifitas fisik) 7. Saya cenderung merasa goyah di beberapa anggota tubuh saya (misal : kaki saya terasa gemetar sehingga sulit untuk melangkah) 9. Saya menemukan diri saya berada dalam situasi yang membuat saya sangat cemas sehingga saya sangat lega ketika situasi tersebut berakhir 15. Saya merasa lemas seperti mau pingsan 19. Saya merasa berkeringat tanpa saya sadari (misal : tangan saya berkeringat padahal tidak sedang beraktifitas fisik atau tidak sedang demam) 20. Saya merasa ketakutan tanpa alasan yang masuk akal 23. Saya merasa kesulitan untuk menelan makanan atau minuman

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	30. I feared that I would be "thrown" by some trivial but unfamiliar task 36. I felt terrified 40. I was worried about situations in which I might panic and make a fool of myself 41. 1 I experienced trembling (eg, in the hands)	25. Saya merasa jantung saya berdetak tidak teratur padahal tidak ada aktifitas fisik yang berat (misal detak jantung meningkat atau berdegup kencang tanpa alasan) 28. Saya nyaris selalu panik ketika menghadapi segala sesuatu 30. Saya merasa seperti akan terhambat oleh hal-hal kecil atau sesuatu yang remeh-temeh 36. Saya merasa ngeri atau ketakutan tanpa sebab yang jelas 40. Saya merasa cemas dengan situasi dimana saya mungkin terlihat panik dan berbuat yang mempermalukan diri saya sendiri 41. Saya mengalami sensasi bergetar tanpa sebab yang pasti (misal : terasa gemetar di tangan atau kaki)
Stress	1. I found myself getting upset by quite trivial things 6. I tended to over-react to situations 8. I found it difficult to relax 11. I found myself getting upset rather easily 12. I felt that I was using a lot of nervous energy 14. I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting) 18. I felt that I was rather touchy 22. I found it hard to wind down 27. I found that I was very irritable 29. I found it hard to calm down after something upset me 32. I found it difficult to tolerate interruptions to what I was doing 33. I was in a state of nervous tension 35. I was intolerant of anything that kept me from getting on with what I was doing 39. I found myself getting agitated	1. Saya mudah merasa kesal atau jengkel hanya karena hal-hal kecil atau sepele 6. Saya cenderung bereaksi berlebihan terhadap situasi yang terjadi 8. Saya merasa sulit untuk bisa rileks atau bersantai 11. Saya merasa diri saya cenderung mudah marah 12. Saya merasa gugup dan tegang 14. Saya mendapati diri saya menjadi tidak sabaran ketika terjadi penundaan atau harus menunggu (misal : ketika menunggu pintu lift terbuka, menunggu lampu lalu lintas, atau menunggu seseorang) 18. Saya merasa bahwa saya cenderung sensitif atau terlalu peka dengan ucapan atau tindakan orang lain 22. Saya merasa sulit untuk beristirahat 27. Saya merasa bahwa saya cenderung mudah marah 29. Saya sulit untuk merasa tenang setelah terjadi sesuatu yang membuat saya kesal 32. Saya merasa sulit untuk bisa menoleransi gangguan atau penyelaan dari orang lain ketika saya sedang melakukan atau mengerjakan sesuatu hal 33. Saya merasa tegang atau gelisah 35. Saya tidak bisa menoleransi apapun yang membuat saya tidak bisamelanjutkan sesuatu yang sedang saya lakukan atau kerjakan 39. Saya merasa gelisah
The subjective cognitive decline	1. Do you think you have problems with your memory? 2. Do you have difficulty remembering a conversation from a few days ago?	1. Apakah menurut Anda, Anda memiliki masalah dengan ingatan Anda? 2. Apakah Anda kesulitan mengingat percakapan beberapa hari yang lalu? 3. Apakah Anda mempunyai keluhan

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p-ISSN: 1693–2552

3. Do you have complaints about your memory in the last 2 years?	mengenai daya ingat Anda dalam 2 tahun terakhir?
4. How often is the following a problem for you: Personal dates (e.g., birthdays)	4. Apakah mengingat tanggal ulang tahun anda dan keluarga menjadi masalah bagi Anda?
5. How often is the following a problem for you: Phone numbers you use frequently	5. Apakah mengingat nomor telepon menjadi hal yang menjadi masalah bagi anda?
6. On a whole, do you think that you have problems remembering things that you want to do or say?	6. Secara keseluruhan, apakah Anda merasa kesulitan mengingat hal-hal yang ingin Anda katakan?
7. How often is the following a problem for you: Going to the store and forgetting what you wanted to buy	7. Seberapa sering hal berikut ini menjadi masalah bagi Anda: Misalnya pergi ke toko dan lupa apa yang ingin Anda beli?
8. Do you think that your memory is worse than 5 years ago?	8. Apakah menurut Anda ingatan Anda lebih buruk dibandingkan 5 tahun yang lalu?
9. Do you feel you are forgetting where things were placed?	9. Apakah Anda merasa lupa di mana benda-benda diletakkan?
10. How often is the following a problem for you: Knowing whether you've already told someone something	10. Seberapa sering hal berikut ini menjadi masalah bagi Anda: Mengetahui apakah Anda sudah memberitahukan sesuatu kepada seseorang?
11. Overall, do you feel you can remember things as well as you used to?	11. Secara keseluruhan, apakah Anda merasa dapat mengingat berbagai hal sebaik dulu?
12. Has your memory changed significantly?	12. Apakah ingatan Anda berubah secara drastis?
13. Do you feel that you have more memory problems than most?	13. Apakah Anda merasa memiliki lebih banyak masalah ingatan dibandingkan kebanyakan orang?
14. Do memory problems make it harder to complete tasks that used to be easy?	14. Apakah Anda lebih kesulitan mengingat hal-hal yang terjadi baru-baru ini?
15. Do you have more trouble remembering things that have happened recently?	15. Apakah masalah ingatan mempersulit penyelesaian tugas yang dulunya mudah?
16. Do you notice yourself repeating the same question or story?	16. Apakah Anda mengulangi cerita yang sama?
17. Do you lose objects more often than you did previously?	17. Apakah Anda lebih sering kehilangan benda dibandingkan sebelumnya?
18. Do you feel you are unable to recall the names of good friends?	18. Apakah Anda merasa tidak bisa mengingat nama teman baik?
19. On a whole, do you think that your memory is good or poor?	19. Secara keseluruhan, menurut Anda apakah ingatan Anda baik atau buruk?
20. How often is the following a problem for you: Things people tell you	20. Seberapa sering hal berikut ini menjadi masalah bagi Anda: Hal-hal yang diceritakan orang kepada Anda?
21. How often is the following a problem for you: Words	21. Seberapa sering hal berikut ini menjadi masalah bagi Anda: Kata-kata yang Anda dengar?

The process of translation and adaptation of questionnaires is crucial in cross-cultural research and the use of psychometric measurement tools in different countries or language groups (Yuniasanti and Abas, 2019). This process ensures that the questionnaire used in another language maintains its original meaning, reliability, and validity. The process of cross-cultural adaptation consists of six stages that really need to

e-ISSN: 2548–1800
p-ISSN: 1693–2552

adapt the scale of DASS-24 and SCD-Q from English language to Indonesian language. The process of cross-cultural adaptation for DASS and SCD-Q was done in 6 stages. Adaptation process of DASS-42 and SCD-Q has shown that there are some sentences changing to make Indonesian respondents know and understand the meaning of each item.

From the process of analyzing data DASS-24 and SCD-Q using SPSS. The value of reliability for the dimension of depression is 0.961, for dimension of anxiety is 0.935, and dimension of stress is 0.957. The value of reliability for the subjective cognitive decline is 0.926. According to Sugiyono (2010), 0.96, 0.935, 0.957 and 0.926 include high reliability. High reliability means that the scale of DASS-42 and SCD-Q after process adaptation has high consistency to measuring the DASS-24 and SCD-Q in the different subjects.

The internal consistency of the dimension of depression is 0.701-0.898 while the dimension of anxiety is 0.591-0.842, and the dimension of stress is 0.685-0.879. The internal consistency of the dimension of subjective cognitive decline is 0.401-0.770. This result was found by calculating the correlation between the scores of each item and the total score of the questionnaire. The assumption is that a valid questionnaire will have inter correlation between the items to form a single entity (Azwar, 2017) . The validity of internal consistency is done by correlating item scores with total scores using the Pearson Product formula. According to Azwar (2017), the correlation coefficient > 0.30 is considered to have a satisfying differentiation mode; however, if the number of items is sufficient, then the minimum limit can be reduced to 0.25, with a significance level of 0.05. This study uses a significance level of 0.05 ($\alpha = 0.05$) with a benchmark if the correlation coefficient is equal to above 0.5 (≥ 0.05), then the item is considered valid. This inter correlation is imposed on each subscale separately

The highest validity score item for item depression is items 17 at DASS-24 that has a validity score of 0.898. The final sentence of the item is “I feel that I am worthless as a human being.” The score validity after process adaptation shows that respondent knows and understands the item. The lowest validity score after process adaptation is item 5 that has validity score 0.701. The final sentence of the item is “I feel like I can't go anywhere.” The highest validity score item for item anxiety is item 20 that has a validity score of 0.842. The final sentence of the item is “I feel scared for no apparent reason.” The score validity after process adaptation shows that respondent knows and understands the item. The lowest validity score for anxiety after process adaptation is item 41 that has validity score 0.770. The final sentence of the item is “I experience a vibrating sensation for no apparent reason (e.g., shaking in the hands or feet).” The highest validity score item for item stress at DASS-24 is item 11 that has a validity score of 0.879. The final sentence of the item is “I feel like I tend to get angry easily”. The score validity after process adaptation shows that respondent knows and understands the item. The lowest validity score after process adaptation is item 22 that has validity score 0.699. The final item is “I find it difficult to rest?”

For SCD-Q the highest validity score item is item 13 that has a validity score of 0.770. The original sentence of the item is “Do you feel that you have more memory problems than most?” After the translation and adaptation process the item has changed “Do you feel like you have more memory problems than most

e-ISSN: 2548–1800
p-ISSN: 1693–2552

people?". The score validity after process adaptation shows that respondent knows and understands the item. The lowest validity score after process adaptation is item 11 that has validity score 0.118 and deleted for questionnaire. The original item is: Overall, do you feel you can remember things as well as you used to?" and the final item that was deleted is "Overall, do you feel like you can remember things as well as you used to?".

According to Sugiyono 2010), 0.98 and 0.770 are highly reliable. High reliability means that scales DASS-24 and SCD-Q after process adaptation have high consistency in measuring depression, anxiety, stress, and subjective cognitive decline in the different subjects of the workplace. The correlation between each item's score and the questionnaire's overall score was calculated to arrive at this conclusion. It is assumed that the elements on a legitimate questionnaire will correlate to form a single entity (Azwar, 2017). Using the Pearson Product method to correlate item scores with total scores verifies the validity of internal consistency. Azwar (2017) states that a satisfactory differentiation mode has a correlation coefficient > 0.30; however, if there are enough items, the minimum requirement might be lowered to 0.25 at a significance level of 0.05. This study uses a benchmark and a significance threshold of 0.05 ($\alpha = 0.05$). The item is considered valid if the correlation coefficient is more than 0.5 (≥ 0.05.

CONCLUSION

The result of the translation and cultural adaptation scale of DASS-24 and SCD-Q from English to Indonesian can be used to measure mental health in Indonesia, especially for millennial and Z employees. Based on the results of the quantitative analysis of the test data, each questionnaire's discriminant validity and reliability are good and high. The conclusion is that DASS-24 and SCD-Q are reliable for research in a workplace context. The weakness of this research is that the number of subjects in the pilot study needs to be added from another city in Indonesia, as well as more varied types of employees.

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