# Adaptation Of AVEM (Arbeitsbezogenes Vehaltens-Und Erlebensmuster) Test To Measure Work-Related Behavior And Experience Patterns

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**Abstract**: People who work will face a variety of stressful situations and pressures. Stress experienced by workers can be caused by various factors, generally caused by external factors and internal factors of the individual itself. Existing studies tend to focus on the influence of external factors on stress conditions experienced by workers, such as environment and work situation. Meanwhile, studies focusing on internal factors as a cause of worker stress, are still not widely practiced, particularly with regard to experience patterns and work-related behavior. Measurements used to measure experience patterns and work-related behavior are also newly adapted in some countries, using the AVEM test. Considering benefits from measuring individual experience patterns and work related behavior through the AVEM test, researchers are interested in adapting AVEM tests into Bahasa Indonesia. Respondents in this study were 357 respondents, with various educational and work background. The data were collected at various locations in Yogyakarta Province. Main instrument used in this study is a work-related behavior and experience patterns test known as Arbeitsbezogenes Vehaltens-Und Erlebensmuster (AVEM Test). In addition, this study also used other measurements to be correlated as part of instruments validation, namely Sense of Coherence Scale (SOC), Parental Stress Scale (PSS), and Family Hardiness Index (FHI). Based on results and discussion, it can be concluded that AVEM test in Bahasa Indonesia and among Indonesian produce items on AVEM test is divided into 2 main dimensions, namely Engagement dimension and Resilience dimension. Meanwhile, Emotion dimension that exists as its own dimension on English version of AVEM test goes into Engagement dimension. And referring to the results of reliability estimates, it can be concluded that Indonesia version of AVEM test is reliable for use on Indonesian. In addition, referring to the results of previous analysis, it can be concluded that Indonesia version of AVEM test can be used as a tool to measure experience patterns and work-related behavior among people of Indonesia.

**Index Terms**: AVEM test, experience patterns, Family Hardiness Index, Parental Stress Scale, validation, work-related behavior.

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## 1 INTRODUCTION

HAVING a worker who is very dedicated to the job and exerting all the ability to complete a job is the dream of whole organization. Only with the characteristics of such workers, organization can achieve its goals. Workers are the main resources for every organization, because workers are the driving force in an effort to realize goals of organization. Therefore, it is important for organizations to pay particular attention to worker's health and well-being, which in turn can make workers more energetic and dedicated to work, thereby achieving organizational goals. Worker health not only revolves around physical health, but also needs to pay attention to aspects of mental health and psychological well-being of workers. One of the most frequently raised issues in health and welfare topics is work-related stress. As humans in general, workers are vulnerable to stress. Moreover, as a person who works, individuals will be exposed to various conditions and demands, both from their work environment and from their family environment. When a person feels that he is unable to meet the demands given to him and is unable to face the challenges in his life, it is possible that people will be able to experience of stress [1].

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Lazarus [2] explains that general stress is defined as a thrilling psychological state that occurs when external demands overload or exceed one's adaptive capacity. Work stress will be experienced if there is a difference between demands of the workplace and individual's ability to meet these demands [3]. Based on a survey conducted by Regus on 16,000 professional workers worldwide, it was found that the main cause of stress was 73% coming from work [4]. Still according to Regus's survey, 64% of workers in Indonesia experienced increased stress compared to previous year [4]. A survey conducted internationally by various international survey institutions shows that 40% of workers experience a very high stress condition at work (Northwestern National Life Survey), 26% of workers are very stressful with workload (The Families and Work Institute Survey), and 29% of workers feel resigned to the extremely stressful conditions experienced in workplace (Yale University Survey) [5]. In particular, result of Sulistomo's research [6] showed that 73.25% of sharecrop manufacturing workers experience medium to high stress. Result of a survey written in a study to 30 female teachers showed that majority of women working vulnerable to work stress [7]. Result of Putri [8] also showed that as many as 45.24% of nurses who have a night shift experience stress. Result of initial survey by Nugroho, Andrian, and Marselius [9] on 25 nurses showed that 24% of nurses had mild stress, 20% nurses had moderate stress, and 20% nurses had severe stress and even started burnout. Meanwhile, Safaria's study [10] showed result, that there were 30.27% of the 80,000 teachers experiencing severe labor stress. Result of previous studies have shown, that stress conditions are very vulnerable experienced by workers, in various types of professions, locations, and even gender. Based on this, it can be seen that stress becomes one of the important aspects that should be considered by an organization in improving performance of its workers. Conditions felt by workers should be the main concern of organization if you want workers to have optimal productivity in their work. Nasution and Adi [6]

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explained that the effect of work stress on productivity and quality of workers has been widely studied, one of which can occur various mental and physical health disorders that can decrease the quality and productivity of workers. Of course, if such a thing is allowed to drag on, it can harm the organization and workers themselves. In general, Cooper and Davidson [10] classify causes of work stress in four areas, namely work environment, home, social, and individual. Similarly, Robbins [10] who stated that factors causing work stress are grouped into three sources, namely factors that come from environment, organization, and individuals. Result of initial survey from Rudi and Partini [7] showed that stress experienced by workers is caused by several factors such as 93.3% caused by overworked time, 86.6% caused by the higher workload, 80% due to the leadership decisions that change, and 60% are caused by changes that occur in work environment. Study of Putranto [11] to 487 respondents showed that 33.61% of respondents considered that the main factor causing stress was due to work load. Meanwhile, dominant factors causing employee stress in Andriani's research [12] are pressing work time to complete job, the existence of a narrow career ladder in company, no job promotion to a higher position, and can not participate in corporate decision-making. Result of Febriana [13] showed that work fatigue factors contribute 33.6% to the stress of workers. Factors that have been described previously show that poor working conditions such as prolonged and stressful work hours, high workload, changes in work environment and work fatigue, contribute to worker stress. However, these factors are still largely attributable to the working environment itself, and have not yet explained the factors of individual. Studies on the measurement of workers' tendency to experience stress in their work or not due to internal factors or worker personalities have not been done. Lack of research on the subject makes researchers interested in examining potential and risk factors of workers in the context of their mental health, individual perceptions, and resources. This study will aim to measure the patterns of experience, behavior, perceptions, and characteristics related to individual work. Several studies have reportedly measured individual experience patterns and work-related behaviors. Such research among others conducted by Voltmer, Schwappach, Frank, Wirsching, and Spahn [14], Kiretmici and Gencer [15], Volmer, Kieschke, and Spahn [16], Kiretmici and Gencer [17], Muszalska, Krajnik, and Rogiewicz [18], Goetz, Loew, Hornung, Cojocaru, Lahmann, and Tritt [19], Basinska, Andruszkiewicz, and Grabowska [20], Gencer, Boyacioglu, Kiretmici, and Dogan [21], Kiretmici, Gencer, Demiray, and Unutmaz [22], Ortner [23], as well as Bauer, Stamm, Virnich, Wissing, Muller, Wirsching, and Schaarschmidt [24]. The studies used a measuring instrument to reveal work-related behavior and experience patterns, using AVEM test (Arbeitsbezogenes Verhaltens-Und Erlebensmuster) or in English version often referred to as MECCA (The Measure of Coping Capacity Questionnaire). AVEM-scale studies have been conducted in Turkish countries in order to validate MEDYAM scale as an instrument that measures teacher-related behavior and experience patterns. Result showed this instrument is equivalent [21]. It can be a reference, that AVEM is not only developed in the country of origin that is Germany. Development of tests initiated in these countries can be an indicator of this instrument free of culture. Schaarschmidt and Fischer [25] as composer of AVEM test explained that AVEM is not meant to measure stress symptoms in the form of complaints and physical and emotional illness. However, AVEM is focused on measuring individual ways in dealing with stressful situations and shaping the challenges situations that individuals face. Adopting this approach, AVEM is resource-oriented [25]. AVEM is a diagnostic tool that can be used to measure work-related behaviors and experiences that related with work and job requirements, and from the point of view of health considerations. Purpose of the development of these test kits is to identify the particular personality types of people who are on this requirement. These different types can be represented as different experience patterns and work-related behavior. The patterns shown are key indicators of the level of emotional health associated with people work-related behavior [25]. As explained earlier, that stress condition experienced by workers is not only influenced by external factors, but also influenced by individual itself. It is important to understand by organization, that stress conditions experienced by workers are not solely due to the environment and work situation. Similarly, described by Schaarschimdt and Fischer [25], there is no doubt that personality, and particular personality of individual behavior and experience, plays an important role in maintaining health. It also denied that relationship between personality and health was influenced solely because of work situation [25]. The use of AVEM as a measuring instrument is meant to look at internal factors of workers. Schaarschimdt and Fischer [25] explains that one of the goals of the AVEM gauge is to identify the type and attitudes, experience competencies, and individual feelings. Thus, the AVEM test emphasizes the active role of the individual rather than emphasizing the demands of individual work situation. This test also takes into account the fact that people not easily victimized by the stresses encountered, but through the type or pattern of individual experience and behavior and through the application of his personal resources. Schaarschimdt and Fischer added that external conditions provide a framework that determines how and to what extent personal resources can be revealed and developed. Result obtained from the use of AVEM provide good information about personal characteristics brought in to generate individual involvement with job requirements and the consequences of demands placed on the individual. Both can not be separated [25]. Although measurements related to experience patterns and work behaviors are important objects to be studied, as far as researchers are concerned, there are no studies in Indonesia that focus on them. Most are still dominated in other countries. Even AVEM test itself has not been validated in English version, still in the original, German. Based on this, we are interested to adapt AVEM test in Bahasa Indonesia version, so that AVEM test can be widely used in Indonesia to measure people experience patterns and work-related behavior.

## 2 LITERATURE REVIEW

AVEM test was initiated by U. Schaarschmidt and A. W. Fischer. AVEM test is not only used to assess the symptoms of stress in physical form and emotional illness and its complaints. AVEM test also deals with the way people deal with stressful situations and their role in creating situations in the challenges they face. In the adoption process in this approach, AVEM takes from a resource-oriented theory [25]. This self-assessment is obtained in 11 dimensions that have a theoretical foundation and have been established by factor analysis [25]:

1. Subjective importance of work (The pace of work in one's personal life)
2. Work-related ambition (Striving for promotion and

success at work)

3.  Willingness to work until exhausted (Willingness to devote one's personal energies to fulfilment of one's appointed tasks)
4.  Striving for perfection (Requiring quality and reliability of one's own performance at work)
5.  Distancing ability (Ability to recuperate emotionally from work)
6.  Tendency to resignation in the face of failure (Inclination to put up with failure and give up easily)
7.  Proactive problem-solving (Active and optimistic attitude to challenges and problems)
8.  Inner calm and balance (Experience of emotional stability and inner equilibrium)
9.  Experience of success at work (Satisfaction with achievements at work)
10. Satisfaction with life (Satisfaction with one's life situation as a whole, including aspects that lie outside work)
11. Experience of social support (Confidence in the support of significant other, feeling of security in a social context)

This inter-dimensional relationship is expressed in four forms of work-related behavior and experience, namely G (Health), S (taking it easy), A (taking too much risk on himself), and B (risk of withdrawal and depression). Measurements are made in the form of personal and situational intervention. This test is performed approximately 12 minutes for standard form and 8 minutes for short form. After instruction stage, each item will be presented on screen. Each respondent will answer on a five-point scale encoded with words or symbols that describe the levels of strongly agree to strongly disagree. It's possible to fix each item once more and ignore individual items. Then all items that have not been answered will be presented again at the end of this test. This test is standard with 66 items with 6 for each dimension and a short form of AVEM-44 with 44 items with 4 in each dimension. Results of this test consist of a table with a default score and a standard score for 11 scales and an individual test profile. In addition, there is a description about how individual profiles resemble the four reference profile patterns that have been described and determined by calculating the possibility of classification [25]. There are two types of norms underlying this AVEM test. First, there is a norm associated with value of the scale. For both versions of standard form and short form, norms are provided for samples with job differences, specific work groups, students or trainees and patients. This distinction is made from a sample norm between Germany and Austria based on 31,979 individual data. Second, the similarity of each respondent expressed in classification of each possible for four reference patterns are G (high engagement with work but not excessive, resilient to stress, positive attitude on life), S pattern (tendency to think easily, low score on work, ambition at work, and low score on desire to work until fatigue for the purpose of perfection), the risk of pattern A (excessive to engage with work) combined with the thing that limits the feeling and the level of low stress resilience, the risk of pattern B value is low on work commitment (having a keen interest in the need for "thirst" experience, resignation, and being overly challenged). The patterns can be calculated and can be regarded as the norm and can summarize what kind of person's behavior and experience in any consideration or health which is threatening

[25]. Usefulness of AVEM include [25]:
1.  to collect information on either conducive or dangerous conditions at the level of intra-level work levels as well as levels between jobs,
2.  can be effective for early diagnosis of health risks,
3.  can provide the foundation for preparation and planning of interventions (concerning the content of behavior or situation),
4.  can be to identify relevant changes to health that occurred during the intervention and monitor the duration of the impact of the intervention.

Scope of this instrument are self-development, clinical, health psychology, and industry-organization. Relating to reliability, all scales on AVEM have an internal consistency at high levels (Cronbach's Alpha which lies between 0.79 and 0.87 for standard form, and between 0.75 and 0.83 for short form). AVEM is reliable and sensitive to changes which means that repeated use of tests can identify changes to work-related or intervention issues both on a scale and pattern [25]. AVEM is also a test that has full validity as evidenced by findings on many levels. First, AVEM has clear factors and group structure that reflect the intent of test and has been replicated by various samples. Second, the correlation coherent with characteristics measured by other scales has been confirmed for the individual scale. Third, the relationship between four behaviors and forms of health experience has been believed to use a variety of internal and external criteria [25].

## 3  RESEARCH METHODS

### 3.1  Participants
Respondents in this study were 357 respondents, with various educational and work background. The data were collected at various locations in Yogyakarta Province.

### 3.2  Measurements
The instruments to be used in this study to measure the psychological aspects of working and married individuals are:
1.  Work-related behavior and experience patterns test (AVEM Test). This test was developed by Schaarschmidt and Fischer [25], consisting of 66 items and 11 dimensions including: subjective importance of work, work-related ambition, willingness to work until exhausted, striving for perfection, distancing ability, tendency to resignation (in the face of failure), proactive problem-solving, inner calm and balance, experience of success at work, satisfaction with life, experience of social support. These eleven dimensions describe four patterns of behavior and work experience: G (health), S (taking it easy), A (risk of driving oneself too hard), and B (risk of resignation and depression). Responses consist of 5 ratings from "strongly agree" to "strongly disagree".
2.  Sense of Coherence (SOC). SOC 29-items scale was first developed by Antonovsky [26] to explain why some people become sick and others remain healthy when under stress. Furthermore, SOC scale developed for a short version to 13 items [27] [28], consisting of 1 dimension, namely the general orientation in life, which summarizes three components of comprehensibility, manageability and meaningfulness. Responses on a short SOC scale

consist of 7 different assessments for each item.

3. Parental Stress Scale (PSS). PSS Scale was developed by Berry and Jones [29] to find out positive themes (emotional benefits, self-enrichment, personal development) and negative themes (demands on resources, opportunity costs and restrictions) on both mother and father. This scale consists of 18 items with responses 1 to 5, from "strongly disagree" to "strongly agree". A high score on this scale indicates a high degree of nurturing stress.

4. Family Hardiness Index (FHI). This scale was developed by McCubbin, McCubbin, and Thompson [30], consisting of 20 items to measure resilience to stress and family adaptation. FHI scale consists of 3 sub-scales: commitment, challenge, and control. Response on this scale consists of 4 ratings from "wrong" to "right". A high score indicates high family resilience.

## 3.3 Research Procedure
Research conducted in several stages, including:

1. Back-translation. All translations of original languages (English and German) into Indonesian will be translated back into English or German by expert translators. Then, the scale that has been translated into original language will be checked by native speaker to determine suitability of the resultant scale to the original scale. This expert translator also controls Psychology terms. Professional judgment was done by an expert from Psychology faculty of DPFA University of Applied Sciences of Saxony Leipzig Germany, named Prof. Marcus Stück and one of UII Psychology lecturers who are studying S3 at University of Leipzig Germany, namely Dian Sari Utami, S.Psi., M.A.

2. Research permit. Data collection to participants conducted in work agencies by applying for a research permit.

3. Preparation of research instruments. All research instruments that will be given to participants are first given an assessment by the expert to see content validation. Then, a preliminary test conducted for 2-3 individuals who have similar characteristics to participants to know which questions and statements in research instrument can be understood and how long it takes for participants to answer all questions.

4. Data collection. Data collection was done to participants who work and have married through institutions that have given research permission as well as relatives in neighborhood.

5. Management of research data. All instruments that have been completed by participants and returned, will be recorded and arranged by using excel and SPSS program.

6. Data analysis. Before data analysis is done, all data of participants will be checked completeness and answer pattern. Research data that has an extreme answer pattern (all answers filled with the same response, both positive and negative) will not be analyzed.

7. Research report. All completed data analyzed will be written in report form as the final stages in the research.

## 3.4 Data Analysis Method
Analysis of research data conducted using SPSS program with stages:

1. Exploratory factor analysis to examine the dimensions of questionnaire that construct into a measuring variable.

2. Reliability analysis to check reliability level of item in questionnaire (internal consistency), in measuring indicators of behavior patterns and work experience.

3. Criterion-related validity to check the validity of AVEM test in participants group (for example, by sex whether there is a difference).

4. Inter-dimensional correlations on AVEM tests and other related variables, namely sense of coherence, parental stress, and family hardiness.

## 4 RESULTS AND DISCUSSION
The first stage analysis is done by exploratory factor analysis. Based on the exploratory factor analysis that has been done, following results are obtained:

### Table 1 Result of KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | 0.858 |
|---|---|---|
| | Approx. Chi-Square | 1147.031 |
| Bartlett's Test of Sphericity | df | 55 |
| | Sig. | 0.000 |

KMO results show a significance level of $p = 0.000$ ($p < 0.05$). This significance indicates that the variables studied can be further analyzed. Anti-image correlation (mark a) shows a correlation value greater than 0.30, where this value is the absolute value used for factor analysis. Total variance explained table in the Rotation sums of squared loadings column shows the percentage of factor variance 1 and 2. That is, the scales entering in factor 1 are able to explain the variation of dimension construct in factor 1 by 26.731%, while the incoming scales are in factor 2 able to explain the variation of construct dimension in factor 2 equal to 15,631%.

### Table 2 Rotated Factor Matrix

| | Factor | |
|---|---|---|
| | 1 | 2 |
| proactive_problem_solv | .684 | -.335 |
| work_related_ambition | .655 | |
| success_work | .614 | |
| social_support | .610 | |
| striving_perfection | .580 | .399 |
| sub_importance_work | .540 | |
| satisfaction_life | .465 | |
| inner_calm | .441 | |
| tendency_resignation | | .713 |
| will_work_exhausted | | .602 |
| distance_ability | .436 | .513 |

Notes: Extraction Method: Principal Axis Factoring,
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Result of rotation factor analysis shows the extracted factor to 2 of 3 required. The variables that enter factor 1 are proactive problem solving, work related ambition, experience of success at work, experience of social support, striving for perfection, subjective importance of work, satisfaction with life, and inner calm. While factor 2 itself consists of variable tendency to resignation, willingness to work until exhausted, and distancing ability. Naming for factor 1 is dimension of Engagement, and

for factor 2 is Resilience dimension. Emotion dimensions that exist on the original AVEM test go into Engagement dimension. Changes of Emotion dimension that enter in Engagement dimension may be influenced by cultural characteristic factor of Indonesian society which is collectivism. This collectivist culture emphasizes individual engagement of the larger group. In the culture of collectivism, people are interdependent in their group (family, tribe, nation, etc.) [31]. According to Mills and Clark [31], among the characteristics of societies with collectivism culture is to give priority to group goals, to shape their behavior primarily based on group norms, and to behave in a communal way. Added also by Triandis [31], that people in collectivism culture is paying close attention to relationships with others. In line with Cohen and Avrahami [32], that when there is a conflict between individual needs and group needs, person within them are expected to put group's needs ahead of their personal needs. LeFebvre and Franke [33] also explained that in collectivism culture, members of group keep each other and work together, each member has a clear status and role in group, as well as between group members have strong emotional connections to each other and connect specifically In addition, other possibilities can also be caused by the majority of research respondents are women (60.8%), so emotion dimension become one part with Engagement dimension in work. This is in line with previous studies which show that emotions, in various forms, become one of variables or factors that support engagement of working people. As Reissova, Simsova, and Hasova [34] found that female workers tend to be more loyal to the agency they work for, due to variables such as satisfaction with management, workplace climate, and turnover trends. These variables adequately illustrate how emotions are part of engagement among women workers. Similarly, research of Opie and Henn [35] showed that the existence of work-family conflicts and conscientiousness, which there is no emotional element in it, is also associated with engagement in working mothers. Research of Lodha and Pathak [36] also showed that psychological contact can have an important impact on women workers. Next, exploratory factor analysis performed to test the dimensionality of AVEM test in Indonesia. Original AVEM test consists of 3 dimensions, namely Engagement, Resilience, and Emotion. Meanwhile, based on results of a survey conducted on participants of this research (Indonesia) and data analysis that has been done, results showed that measurement dimensions of AVEM test Indonesia version becomes 2, namely Engagement dimension and Resilience dimension. Emotion dimension enter into construct Engagement dimension, while 2 scales from Resilience dimension, that is proactive problem solving and inner calm, enter into Engagement dimension. Then 2 scales of Engagement dimension, that is willingness to work until exhausted and distancing ability, goes into Resilience dimension.

**Table 3** *Summary of Reliability Estimation Result*

| Measurement tools | Cronbach Alpha's Coefficient |
|---|---|
| AVEM | |
| *Engagement* | 0.812 |
| *Resillience* | 0.672 |
| Sense of Coherence (SOC) | 0.784 |
| Parental Stress Scale (PSS) | 0.846 |
| Family Hardiness Index (FHI) | 0.857 |

| | |
|---|---|
| (Total) | |
| *Family Challenge* | 0.753 |
| *Family Control* | 0.664 |
| *Family Commitment* | 0.755 |

Furthermore, after exploratory factor analysis, measurement tool used in validation process is calculated its reliability estimation by using internal consistency calculation. Below are the results of reliability estimation with Cronbach Alpha. Based on the table, it can be concluded that all measurement tools used in this study has good reliability coefficient. Field [37] said that the standard applied to determine whether a measurement tool reliable or not based on Cronbach Alpha value is to use the number 0.6, which means if the value of Cronbach Alpha more or equal to 0.6 then it can be said that the measurement tool is reliable. Next step, researchers checked the Criterion-related validity estimation to check the validity of AVEM test in participants group, for example by sex whether there is a difference or not. Results of analysis can be seen in the following table.

**Table 4** *Summary of Pearson Chi Square test results between nominal variables and AVEM dimensions (significant correlation, p <0.05)*

| Variables | Value | df | p |
|---|---|---|---|
| Work hours per week*inner calm | 1521.838 | 1170 | 0.000 |
| Work hours per week *proactive problem solving | 1240.967 | 855 | 0.000 |
| Work hours per week *striving for perfection | 1285.584 | 1125 | 0.001 |
| Work hours per week *work-related ambition | 1211.636 | 1035 | 0.000 |
| Kind of works*work-related ambition | 102.450 | 42 | 0.000 |
| Education*experience of social support | 250.669 | 145 | 0.000 |
| Education*experience of success at work | 155.314 | 125 | 0.034 |
| Education*work-related ambition | 168.012 | 105 | 0.000 |
| Sex*experience of social support | 157.345 | 87 | 0.000 |
| Sex*work-related ambition | 109.318 | 66 | 0.001 |
| Marital status*proactive problem solving | 70.935 | 48 | 0.017 |
| Age of marriage*experience of success at work | 120.734 | 84 | 0.005 |
| Number of children*subjective importance of work | 125.703 | 100 | 0.042 |
| Number of children *willingness to work until exhausted | 124.315 | 95 | 0.023 |
| Number of children *striving for perfection | 133.506 | 105 | 0.032 |

**Table 5** *Summary of means between nominal variables and correlated AVEM dimensions (significant difference, p <0.05)*

| Variables | F | p |
|---|---|---|
| Distance ability* Number of children | 2.316 | 0.045 |
| Work-related ambition*sex | 5.893 | 0.001 |
| Willingness to work until exhausted* sex | 6.871 | 0.000 |
| Experience of success at work* sex | 2.954 | 0.033 |
| Experience of social support* sex | 3.953 | 0.009 |
| Subjective importance of work*education | 3.942 | 0.002 |
| Work-related ambition* education | 4.263 | 0.001 |
| Willingness to work until exhausted* education | 3.807 | 0.002 |
| Striving for perfection* education | 6.043 | 0.000 |
| Distancing ability* education | 3.148 | 0.009 |
| Tendency to resignation* education | 2.353 | 0.040 |
| Proactive problem solving*work hours per week | 1.497 | 0.027 |

Referring to tables above, it can be seen that there were significant correlation between some nominal variables in this study (demographic factors) with some dimensions of AVEM. In addition, it can be seen that there were mean differences

between some nominal variables with some dimensions of AVEM. This indicates that AVEM have an estimate of validity criteria (criterion validity). The next stage of this analysis is validation of AVEM by performing correlation analysis between dimensions on AVEM and other related variables, namely sense of coherence, parental stress, and family hardiness. Results of analysis can be seen in the tables below.

*Table 6 Regression Analysis Result (1)*

| Predictors | t | p | R | $R^2$ |
|---|---|---|---|---|
| *Resilience* AVEM | 5.748 | 0.000 | 0.302 | 0.091 |
| E*ngagement* AVEM | -4.088 | 0.000 | | |

*dependent variable = parental stress*

*Table 7 Regression Analysis Result (2)*

| Predictors | t | p | R | $R^2$ |
|---|---|---|---|---|
| *Resilience* AVEM | -8.183 | 0.000 | 0.400 | 0.160 |
| E*ngagement* AVEM | 4.411 | 0.000 | | |

* *dependent variable = sense of coherence*

*Table 8 Regression Analysis Result (3)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| *Resilience* AVEM | -3.229 | 0.001 | 0.182 | 0.033 |
| E*ngagement* AVEM | 2.662 | 0.008 | | |

* *dependent variable = family hardiness index*

*Table 9 Regression Analysis Result with Predictor of AVEM Subscales (significant, p<0.05) (1)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Proactive problem solving | 2.823 | 0.005 | 0.266 (constant) | 0.071 |

* *dependent variable = family hardiness index*

*Table 10 Regression Analysis Result with Predictor of AVEM Subscales (significant, p<0.05) (2)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Proactive problem solving | 2.548 | 0.011 | 0.251 (constant) | 0.063 |

* *dependent variable = family commitment*

*Table 11 Regression Analysis Result with predictor of AVEM Subscales (significant, p<0.05) (3)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Tendency to resignation | -1.961 | 0.051 | 0.287 (constant) | 0.082 |
| Satisfaction with life | -2.398 | 0.017 | | |

* *dependent variable = family control*

*Table 12 Regression analysis result with predictor of AVEM Subscales (significant, p<0.05) (4)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Proactive problem solving | 2.829 | 0.005 | 0.213 (constant) | 0.046 |

* *dependent variable = family challenge*

*Table 13 Regression Analysis Result with Predictor of AVEM Subscales (significant, p<0.05) (5)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Tendency of resignation | -6.372 | 0.000 | 0.487 (constant) | 0.237 |
| Experience of Successful at work | 4.009 | 0.000 | | |

* *dependent variable = sense of coherence*

*Table 14 Regression Analysis Result with Predictor of AVEM Subscales (significant, p<0.05) (6)*

| Predictor | t | p | R | $R^2$ |
|---|---|---|---|---|
| Willingness to work until exhausted | 2.419 | 0.016 | 0.382 (constant) | 0.146 |
| Proactive problem solving | -3.761 | 0.000 | | |
| Satisfaction with life | 2.082 | 0.038 | | |

* *dependent variable = parental stress*

Based on results of analysis presented in the previous table, it can be concluded that all models fit with AVEM dimensions as predictors of Sense of Coherence, Family Hardiness, and Parental Stress. Subscales of AVEM test is significant as predictors of Parental Stress, Sense of Coherence, Family Hardiness, Family Commitment, Family Challenge, and Family Control are subscales Willingness to work until exhausted, tendency to resignation, proactive problem solving, successful at work, and satisfaction with life. Referring to these results and results of the previous analysis, it can be concluded that Indonesian version of AVEM test can be used as a tool to measure experience patterns and work-related behavior among Indonesian people. In the end, this study can not be said to be perfect. Researcher still see many weaknesses in this study. Until this report is prepared, the process of translation of data analysis results is still done. In addition, another limitation of this study is the need to develop a comparative measure of AVEM that is more compact, so that respondents do not feel burdened, given the questionnaire distributed in this study has a lot of measurement tools and make the questionnaire format becomes thicker. Surely this can affect the validity of AVEM as well. Not only that, researcher needs to make sure that the data filled by participants is really accompanied, minimally done in classical setting, so that demographic data can be maximized and not many items are not filled by participants. At the same time to ensure that indeed participants who actually fill out the questionnaire, including if participants wants to ask questions related to the questionnaire filling.

## 5 CONCLUSION

Based on results of existing research and discussion, it can be concluded that AVEM test in Bahasa Indonesia and among Indonesian respondents produce items on AVEM test was divided into 2 main dimensions, namely Engagement dimension and Resilience dimension. Meanwhile, Emotion dimension that exists as its own dimension on AVEM English version goes into Engagement dimension. And referring to the results of reliability estimates, it can be concluded that Indonesian version of AVEM test is reliable for use on Indonesian respondents. In addition, referring to the results of previous analysis, it can be concluded that Indonesian version of AVEM test can be used as a tool to measure experience patterns and work-related behavior among Indonesia people.

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