



## Analyzing the Impact of Personal Interventions on The Consequences of Work-Life Balance for Lecturers Pursuing Doctoral Degrees in Indonesia

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**ABSTRACT:** This study addresses the multifaceted challenges faced by Indonesian higher education lecturers who balance teaching, research, community service, and doctoral studies. With increasing demands for higher qualifications, lecturers must navigate these responsibilities, impacting their work-life balance and well-being. This research investigates the impact of behavior-based and cognition-based interventions on the work-life balance of these lecturers, focusing on work-related, nonwork-related, and stress-related outcomes. Using a quantitative approach, data were collected from 116 lecturers via a questionnaire. Multiple linear regression analysis revealed that behavior-based interventions significantly enhanced all outcomes, while cognition-based interventions improved work-related and nonwork-related outcomes but did not significantly impact stress-related outcomes. The findings highlight the need for flexible schedules, professional development programs, and mental health services to support lecturers, promoting a healthier work-life balance and enhancing job performance.

**KEYWORDS:** Behavior-Based Interventions, Cognition-Based Interventions, Doctoral Studies, Higher Education Lecturers, Work-Life Balance

### INTRODUCTION

The rapid advancement of science, technology, and information requires lecturers to continuously enhance their knowledge and abilities to provide high-quality education (Fitriana et al., 2021). In Indonesia, this necessity is codified in the Law of the Republic of Indonesia Number 12 of 2012 concerning Higher Education, which mandates that lecturers must hold at least a master's degree to teach in undergraduate programs and a doctoral degree to instruct graduate programs. Furthermore, lecturers are obligated to fulfill the Tridharma of Higher Education, which encompasses education and teaching, research, and community service. According to data from PDDikti, the majority of lecturers hold master's degrees (248,621), while a significant number have doctoral degrees (78,524). This disparity underscores the critical need for academic advancement within the higher education sector. Achieving a doctoral degree enhances the quality of education and research capabilities, as lecturers with higher qualifications bring advanced expertise and innovation to their institutions, contributing significantly to academic excellence and the development of new knowledge.

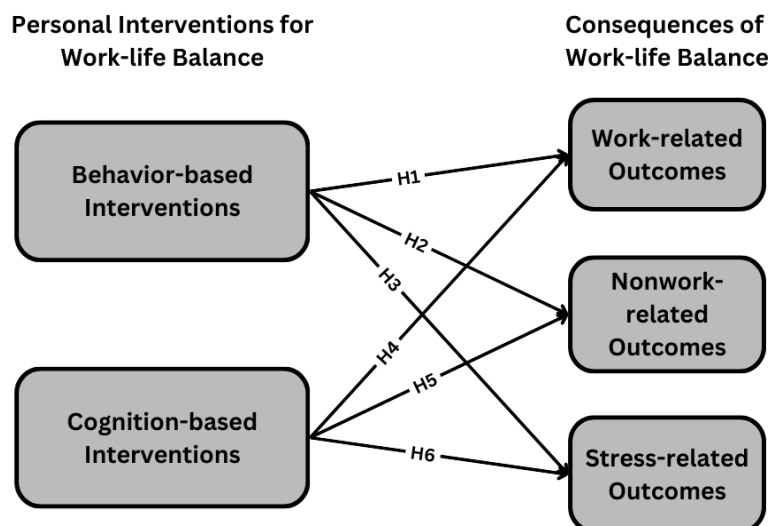
However, the dual responsibilities of fulfilling Tridharma obligations and pursuing advanced degrees present significant challenges for lecturers. If undergraduate lecturers fail to complete their master's program within the specified two-year timeframe, they may face repercussions such as transfer to a teaching staff role or other actions as per institutional policies (Circular Letter Number 01/M/SE/III/2017). The potential for future regulations requiring all lecturers to hold doctoral degrees adds to the complexity of their roles.

Lecturers must balance professional duties with personal and familial obligations, leading to potential conflicts and stress. This dual-role nature can negatively impact their well-being and performance. Maintaining a work-life balance is crucial not only for their personal health and satisfaction but also for their professional efficacy and organizational commitment (Sirgy & Lee, 2017). Work-life balance significantly influences organizational performance, job satisfaction, and individual well-being. Studies show that lecturers who maintain a healthy work-life balance are more satisfied with their jobs, perform better, and are more committed to their institutions (Preena, 2021; Susanto et al., 2022). Lecturers often face challenges in achieving work-life balance due to the demands of their multiple roles. Universities may not provide sufficient support systems to help lecturers manage their responsibilities, exacerbating stress and reducing job satisfaction. Effective strategies and coping mechanisms are essential for lecturers to balance their professional and personal lives. This study aims to investigate the impact of behavior-based and cognition-

based interventions on the work-life balance of lecturers who are pursuing doctoral degrees while fulfilling professional and personal responsibilities. Behavior-based interventions include explicit actions such as role management and conflict resolution, aimed at enhancing work-life balance through engaging in multiple roles and managing role conflict. Cognition-based interventions focus on mental processes and attitudes, such as cognitive restructuring, mindfulness practices, and value-based compensation, to improve work-life balance.

Through structured surveys and statistical analyses, this research will measure the strength and direction of the relationships between these interventions and various outcomes related to work-life balance, including work-related outcomes, nonwork-related outcomes, and stress-related outcomes. The primary goal is to provide empirical evidence on the effectiveness of these interventions, offering practical insights for lecturers to enhance their overall well-being and effectiveness in their multifaceted roles. Ultimately, the study seeks to inform institutional practices to better support lecturers in managing their diverse responsibilities, ensuring a healthy work-life balance in the higher education sector. By identifying and quantifying the effectiveness of behavior-based and cognition-based interventions, the research aims to help lecturers adopt the most effective strategies to balance their professional and personal lives while juggling multiple roles.

**CONCEPTUAL FRAMEWORK**



**Figure 1. Conceptual Framework**

The hypothesis proposed in this research is:

- H1:** Behavior-based interventions aimed at improving work-life balance have a positive impact on improved work-related outcomes, such as increased productivity and job satisfaction.
- H2:** Behavior-based interventions aimed at improving work-life balance have a positive impact on nonwork-related outcomes, such as improved family relationships and personal well-being.
- H3:** Behavior-based interventions aimed at improving work-life balance have a positive impact on improved stress-related outcomes, such as feeling more relaxed and less stressed.
- H4:** Cognition-based interventions aimed at improving work-life balance have a positive impact on improved work-related outcomes.
- H5:** Cognition-based interventions aimed at improving work-life balance have a positive impact on non work-related outcomes.
- H6:** Cognition-based interventions aimed at improving work-life balance have a positive impact on improved stress-related outcomes, such as feeling more relaxed and less stressed.



## METHODOLOGY

This chapter outlines the methodology used to investigate the impact of behavior-based and cognition-based interventions on the work-life balance of lecturers pursuing doctoral degrees in Indonesia. A quantitative approach is employed for this study because it offers a systematic and empirical investigation of observable phenomena through statistical, mathematical, or computational techniques (Creswell & Creswell, 2018). This approach allows for objective measurement and statistical analysis to test hypotheses and evaluate relationships between variables, enabling the study to reach a larger sample size and resulting in more generalized findings (Smith, 2014). The methodology includes details on the research approach, population and sample, data collection techniques, and data analysis techniques.

### Research Objects, Population, and Samples

The research focuses on lecturers in Indonesia who are actively engaged in the Tridharma of education and are currently pursuing doctoral degrees. The population for this study consists of these lecturers, forming the basis from which the sample is drawn. Given the unknown exact number of this population, the sample size is determined using the sample-to-variable ratio recommended by Hair et al. (2019), which suggests 15-20 respondents per independent variable. With two independent variables, behavior-based intervention and cognition-based intervention, the minimum sample size required is 40 individuals. The sampling technique used is non-probability sampling, specifically purposive sampling, allowing the selection of lecturers who meet the predetermined criteria. This method ensures that the selected sample provides high-quality data essential for understanding the complex dynamics of work-life balance interventions.

### Data Collection Technique

Data will be collected using structured questionnaires designed to measure the impact of behavior-based and cognition-based interventions on work-life balance. The questionnaire design is based on predetermined variables referenced from the book "Work-Life Balance: HR Training for Employee Personal Interventions" by Sirgy & Lee (2023). The structured format ensures consistency in responses, facilitating accurate measurement and analysis of the variables under study.

The questionnaire aims to measure how personal interventions conducted by lecturers who are actively engaged in the Tridharma of education while pursuing doctoral degrees impact work-related, non-work-related, and stress-related outcomes, determining whether work-life balance is achieved considering their roles and responsibilities. According to Sirgy & Lee (2023), personal interventions are categorized into two types: Behavior-based Interventions and Cognition-based Interventions. Behavior-based Interventions are further divided into five dimensions with respective indicators, while Cognition-based Interventions are divided into four dimensions with respective indicators. Similarly, the three dependent variables (work-related, non-work-related, and stress-related outcomes) are divided into specific dimensions with their respective indicators. The questionnaire also includes several socioeconomic and demographic questions.

To ensure no neutral answers, a 10-point Likert scale will be used, ranging from 1 (strongly disagree) to 10 (strongly agree). The questionnaires will be distributed through groups and communities of lecturers pursuing their doctoral degrees. The distribution of the questionnaire was carried out through several channels, including reaching out to close acquaintances and contacting lecturers via LinkedIn. After approximately one month of distribution, responses were obtained from 139 participants. However, 23 responses did not meet the criteria as the respondents were either not lecturers or not pursuing their doctoral studies in Indonesia. Therefore, the final number of respondents' data used for analysis is 116.

### Data Analysis Technique

To ensure the accuracy, consistency, and credibility of the findings, both validity and reliability tests will be conducted. Validity will be assessed using the Pearson correlation coefficient, with a significance level set at 0.05. This will determine the extent to which the measurement accurately captures what it is intended to measure. Reliability will be confirmed using Cronbach's alpha, where an alpha coefficient of 0.60 or higher indicates good internal consistency.

Several classical assumption tests will also be conducted. Normality of the data will be tested using the Kolmogorov-Smirnov test to ensure that residuals are normally distributed. Linearity tests will be performed to confirm that there is a linear relationship between the independent and dependent variables, which is essential for accurate regression analysis. Homoscedasticity will be checked using scatterplots and the Glejser test to ensure that the variance of the residuals is constant across all levels of the



independent variables. Multicollinearity will be detected using the Variance Inflation Factor (VIF) and tolerance values, with a VIF value exceeding 10 or a tolerance value below 0.10 indicating problematic multicollinearity.

The primary analytical technique employed will be multiple linear regression, which will be used to examine the impact of the independent variables on three dependent variables: work-related outcomes, nonwork-related outcomes, and stress-related outcomes. Three separate regression models will be constructed to analyze these outcomes. Hypothesis testing will be conducted using both partial (T-test) and simultaneous (F-test) methods to determine the effect of individual and collective independent variables on the dependent variables. Correlation analysis (R) and the coefficient of determination (R<sup>2</sup>) will also be used to determine the strength and direction of the relationships between variables. The correlation coefficient (R) will indicate the strength and direction of the relationship, while the determination coefficient (R<sup>2</sup>) will measure how well the independent variables explain the variance in the dependent variable.

By employing these comprehensive data analysis techniques, the study aims to provide empirical evidence on the effectiveness of behavior-based and cognition-based interventions in improving the work-life balance of lecturers pursuing doctoral degrees in Indonesia. This understanding will help lecturers adopt the most effective strategies to balance their professional and personal lives while juggling multiple roles.

**RESULT**

**Validity Test**

The validity test aims to ensure the accuracy and reliability of the data collected. To validate the research instrument, the calculated correlation coefficient (r-count) is compared with the critical value from the r-table, based on the degree of freedom (df). For this study, with a sample size of 116, the degree of freedom is 114. At a significance level (alpha) of 0.05, the critical value (r-table) is approximately 0.183. An item is considered valid if its r-count exceeds 0.183. The outcomes of the validity test are shown in Table 1.

**Table 1. Validity Test Result**

| Variable                    | Item | r-table | r-count | Result |
|-----------------------------|------|---------|---------|--------|
| Behavior-based Intervention | BI1  | 0.183   | 0.474   | VALID  |
|                             | BI2  | 0.183   | 0.510   | VALID  |
|                             | BI3  | 0.183   | 0.606   | VALID  |
|                             | BI4  | 0.183   | 0.593   | VALID  |
|                             | BI5  | 0.183   | 0.506   | VALID  |
|                             | BI6  | 0.183   | 0.515   | VALID  |
|                             | BI7  | 0.183   | 0.555   | VALID  |
|                             | BI8  | 0.183   | 0.508   | VALID  |
|                             | BI9  | 0.183   | 0.570   | VALID  |
|                             | BI10 | 0.183   | 0.672   | VALID  |
|                             | BI11 | 0.183   | 0.680   | VALID  |



|                                     |             |       |       |       |
|-------------------------------------|-------------|-------|-------|-------|
|                                     | <b>BI12</b> | 0.183 | 0.502 | VALID |
|                                     | <b>BI13</b> | 0.183 | 0.605 | VALID |
|                                     | <b>BI14</b> | 0.183 | 0.671 | VALID |
|                                     | <b>BI15</b> | 0.183 | 0.636 | VALID |
|                                     | <b>BI16</b> | 0.183 | 0.579 | VALID |
|                                     | <b>BI17</b> | 0.183 | 0.588 | VALID |
|                                     | <b>BI18</b> | 0.183 | 0.606 | VALID |
|                                     | <b>BI19</b> | 0.183 | 0.629 | VALID |
|                                     | <b>BI20</b> | 0.183 | 0.608 | VALID |
|                                     | <b>BI21</b> | 0.183 | 0.638 | VALID |
|                                     | <b>BI22</b> | 0.183 | 0.643 | VALID |
|                                     | <b>BI23</b> | 0.183 | 0.600 | VALID |
|                                     | <b>BI24</b> | 0.183 | 0.626 | VALID |
|                                     | <b>BI25</b> | 0.183 | 0.667 | VALID |
|                                     | <b>BI26</b> | 0.183 | 0.687 | VALID |
|                                     | <b>BI27</b> | 0.183 | 0.559 | VALID |
|                                     | <b>BI28</b> | 0.183 | 0.731 | VALID |
| <b>Cognition-based Intervention</b> | <b>CI1</b>  | 0.183 | 0.593 | VALID |
|                                     | <b>CI2</b>  | 0.183 | 0.571 | VALID |
|                                     | <b>CI3</b>  | 0.183 | 0.533 | VALID |
|                                     | <b>CI4</b>  | 0.183 | 0.491 | VALID |
|                                     | <b>CI5</b>  | 0.183 | 0.516 | VALID |



|  |      |       |       |       |
|--|------|-------|-------|-------|
|  | CI6  | 0.183 | 0.526 | VALID |
|  | CI7  | 0.183 | 0.401 | VALID |
|  | CI8  | 0.183 | 0.448 | VALID |
|  | CI9  | 0.183 | 0.471 | VALID |
|  | CI10 | 0.183 | 0.466 | VALID |
|  | CI11 | 0.183 | 0.371 | VALID |
|  | CI12 | 0.183 | 0.487 | VALID |
|  | CI13 | 0.183 | 0.525 | VALID |
|  | CI14 | 0.183 | 0.351 | VALID |
|  | CI15 | 0.183 | 0.389 | VALID |
|  | CI16 | 0.183 | 0.372 | VALID |
|  | CI17 | 0.183 | 0.547 | VALID |
|  | CI18 | 0.183 | 0.615 | VALID |
|  | CI19 | 0.183 | 0.599 | VALID |
|  | CI20 | 0.183 | 0.544 | VALID |
|  | CI21 | 0.183 | 0.492 | VALID |
|  | CI22 | 0.183 | 0.499 | VALID |
|  | CI23 | 0.183 | 0.459 | VALID |
|  | CI24 | 0.183 | 0.479 | VALID |
|  | CI25 | 0.183 | 0.510 | VALID |
|  | CI26 | 0.183 | 0.567 | VALID |
|  | WO1  | 0.183 | 0.880 | VALID |



|                                  |      |       |       |       |
|----------------------------------|------|-------|-------|-------|
| <b>Work-related Outcomes</b>     | WO2  | 0.183 | 0.892 | VALID |
|                                  | WO3  | 0.183 | 0.876 | VALID |
|                                  | WO4  | 0.183 | 0.844 | VALID |
|                                  | WO5  | 0.183 | 0.818 | VALID |
|                                  | WO6  | 0.183 | 0.755 | VALID |
|                                  | WO7  | 0.183 | 0.882 | VALID |
|                                  | WO8  | 0.183 | 0.773 | VALID |
|                                  | WO9  | 0.183 | 0.836 | VALID |
| <b>Non Work-related Outcomes</b> | NWO1 | 0.183 | 0.927 | VALID |
|                                  | NWO2 | 0.183 | 0.922 | VALID |
|                                  | NWO3 | 0.183 | 0.909 | VALID |
|                                  | NWO4 | 0.183 | 0.953 | VALID |
|                                  | NWO5 | 0.183 | 0.869 | VALID |
| <b>Stress-related Outcomes</b>   | SO1  | 0.183 | 0.903 | VALID |
|                                  | SO2  | 0.183 | 0.906 | VALID |
|                                  | SO3  | 0.183 | 0.863 | VALID |
|                                  | SO4  | 0.183 | 0.912 | VALID |
|                                  | SO5  | 0.183 | 0.906 | VALID |
|                                  | SO6  | 0.183 | 0.904 | VALID |
|                                  | SO7  | 0.183 | 0.897 | VALID |
|                                  | SO8  | 0.183 | 0.894 | VALID |
|                                  | SO9  | 0.183 | 0.820 | VALID |
|                                  | SO10 | 0.183 | 0.805 | VALID |
|                                  | SO11 | 0.183 | 0.628 | VALID |
|                                  | SO12 | 0.183 | 0.820 | VALID |
|                                  | SO13 | 0.183 | 0.757 | VALID |





**Reliability Test**

The reliability test assesses whether the questionnaire consistently produces stable responses when administered multiple times. A questionnaire is deemed reliable if the respondents' answers remain consistent over repeated administrations. In this study, reliability is evaluated using Cronbach's Alpha. A variable is considered reliable if the Cronbach's Alpha value exceeds 0.60. The results of the reliability test are shown in Table 2.

**Table 2. Reliability Test Result**

| Variables                    | Cronbach's Alpha | Reliability |
|------------------------------|------------------|-------------|
| Behavior-based Intervention  | 0.929            | RELIABLE    |
| Cognition-based Intervention | 0.861            | RELIABLE    |
| Work-related Outcomes        | 0.945            | RELIABLE    |
| Nonwork-related Outcomes     | 0.951            | RELIABLE    |
| Stress-related Outcomes      | 0.972            | RELIABLE    |

The test results above represent all variables in the study exhibit Cronbach's alpha coefficients well above the 0.60 threshold which confirm that the questionnaire's items are consistent and reliable for measuring the intended constructs.

**Multiple Linear Regression: Model Work-Related Outcomes**

This section presents the first multiple linear regression (MLR) model, examining the impact of independent variables—behavior-based and cognition-based interventions—on work-related outcomes. The analysis aims to determine the extent to which these interventions influence job performance, job satisfaction, and overall professional effectiveness among lecturers pursuing doctoral degrees.

The steps include conducting classical assumption tests—normality, linearity, heteroscedasticity, and multicollinearity—followed by the multiple linear regression results then hypothesis testing through partial (t-tests), simultaneous (F-tests), correlation analysis (R), and the coefficient of determination (R<sup>2</sup>). The results of this model provide insights into the significance and strength of the relationship between the interventions and work-related outcomes.

**Table 3. Classical Assumption Tests of Model I**

| Test              | Behavior-based Intervention  | Cognition-based Intervention |
|-------------------|------------------------------|------------------------------|
| Normality         | Passed (p = 0.052)           | Passed (p = 0.052)           |
| Linearity         | Passed (p = 0.000)           | Passed (p = 0.000)           |
| Homoscedasticity  | Passed (p = 0.460)           | Failed (p = 0.009)           |
| Multicollinearity | VIF = 1.6, Tolerance = 0.625 | VIF = 1.6, Tolerance = 0.625 |

The classical assumption tests were conducted to ensure the validity of the regression analysis. Normality and linearity tests were passed for both behavior-based and cognition-based interventions, indicating that the data distribution and relationship with the dependent variable were appropriate for regression analysis. However, the initial Glejser test revealed heteroscedasticity in the cognition-based intervention (p = 0.006). After transforming the data using the natural logarithm (LN), the Glejser test was





repeated, but heteroscedasticity persisted ( $p = 0.009$ ). As a result, the Weighted Least Squares (WLS) method was used to proceed with the regression analysis, ensuring the reliability of the results.

**Table 4. Multiple Linear Regression Results of Model I**

| Variables                    | Coefficient | Standard Error | t-value | p-value |
|------------------------------|-------------|----------------|---------|---------|
| Behavior-based Intervention  | 0.412       | 0.119          | 3.45    | 0.001   |
| Cognition-based Intervention | 0.595       | 0.078          | 7.644   | 0.000   |
| Constant                     | 1.276       | 0.649          | 1.967   | 0.052   |

The regression analysis results for Model I are presented in Table 4. The regression equation,  $Y_{WO} = 1.276 + 0.412BI + 0.595CI + \epsilon$ , shows that both behavior-based and cognition-based interventions significantly impact work-related outcomes. The coefficient for behavior-based interventions is 0.412 ( $p = 0.001$ ), and for cognition-based interventions, it is 0.595 ( $p = 0.000$ ). The constant (intercept) is 1.276 ( $p = 0.052$ ), indicating a baseline level of work-related outcomes when the interventions are not considered.

**Table 5. Model Summary of Model I**

| Statistic               | Value   |
|-------------------------|---------|
| R                       | 0.877   |
| R <sup>2</sup>          | 0.769   |
| Adjusted R <sup>2</sup> | 0.765   |
| Standard Error          | 1.36101 |
| F-statistic             | 184.577 |
| F-significance          | 0.000   |

The model summary in Table 5 shows an R<sup>2</sup> value of 0.769, indicating that 76.9% of the variance in work-related outcomes is explained by the independent variables. The F-test results ( $F = 184.577$ ,  $p = 0.000$ ) confirm the overall significance of the model.

The partial t-tests also support these findings. The t-value for behavior-based interventions is 3.45 ( $p = 0.001$ ), and for cognition-based interventions, it is 7.644 ( $p = 0.000$ ), both of which are significant at the 0.05 level. These results demonstrate that both behavior-based and cognition-based interventions significantly influence work-related outcomes among lecturers pursuing doctoral degrees.

**Multiple Linear Regression: Model Nonwork-Related Outcomes**

This section presents the second multiple linear regression (MLR) model, examining the impact of independent variables—behavior-based and cognition-based interventions—on nonwork-related outcomes. The analysis aims to determine how these interventions influence personal growth, social relationships, and overall personal well-being among lecturers pursuing doctoral degrees.

The steps include conducting classical assumption tests—normality, linearity, heteroscedasticity, and multicollinearity—followed by the multiple linear regression results then hypothesis testing through partial (t-tests), simultaneous (F-tests), correlation



analysis (R), and the coefficient of determination (R<sup>2</sup>). The results of this model provide insights into the significance and strength of the relationship between the interventions and nonwork-related outcomes.

**Table 6. Classical Assumption Tests of Model II**

| Test              | Behavior-based Intervention   | Cognition-based Intervention  |
|-------------------|-------------------------------|-------------------------------|
| Normality         | Passed (p = 0.058)            | Passed (p = 0.058)            |
| Linearity         | Passed (p = 0.000)            | Passed (p = 0.000)            |
| Homoscedasticity  | Passed (p = 0.251)            | Failed (p = 0.016)            |
| Multicollinearity | VIF = 1.588, Tolerance = 0.63 | VIF = 1.588, Tolerance = 0.63 |

For Model II, the classical assumption tests indicated that normality and linearity conditions were satisfied for both behavior-based and cognition-based interventions. However, heteroscedasticity was detected in the cognition-based intervention with an initial Glejser test p-value of 0.016. Despite transforming the data using the natural logarithm (LN), heteroscedasticity persisted (p = 0.016). Therefore, the Weighted Least Squares (WLS) method was employed to ensure accurate regression analysis results.

**Table 7. Multiple Linear Regression Results of Model II**

| Variables                    | Coefficient | Standard Error | t-value | p-value |
|------------------------------|-------------|----------------|---------|---------|
| Behavior-based Intervention  | 0.471       | 0.632          | 4.274   | 0.000   |
| Cognition-based Intervention | 0.388       | 0.083          | 4.648   | 0.000   |
| Constant                     | 1.613       | 0.632          | 2.553   | 0.012   |

The results for Model II are outlined in Table 7. The regression equation is  $Y_{NWO} = 1.613 + 0.471BI + 0.388CI + \epsilon$ . Both behavior-based and cognition-based interventions significantly influence nonwork-related outcomes, with coefficients of 0.471 (p = 0.000) and 0.388 (p = 0.000), respectively. The constant (intercept) is 1.613 (p = 0.012), reflecting the baseline nonwork-related outcomes without the interventions.

**Table 8. Model Summary of Model II**

| Statistic               | Value   |
|-------------------------|---------|
| R                       | 0.759   |
| R <sup>2</sup>          | 0.576   |
| Adjusted R <sup>2</sup> | 0.568   |
| Standard Error          | 1.33912 |
| F-statistic             | 75.983  |
| F-significance          | 0.000   |



Table 8 shows an  $R^2$  value of 0.576, indicating that 57.6% of the variance in nonwork-related outcomes is explained by the independent variables. The F-test results ( $F = 75.983, p = 0.000$ ) confirm the model's overall significance. The partial t-tests reinforce these findings, with a t-value of 4.274 ( $p = 0.000$ ) for behavior-based interventions and 4.648 ( $p = 0.000$ ) for cognition-based interventions, highlighting their significant impact on nonwork-related outcomes.

**Multiple Linear Regression: Model Stress-Related Outcomes**

This section presents the third multiple linear regression (MLR) model, examining the impact of independent variables—behavior-based and cognition-based interventions—on stress-related outcomes. The analysis aims to determine how these interventions influence stress management and psychological well-being among lecturers pursuing doctoral degrees.

The steps include conducting classical assumption tests—normality, linearity, heteroscedasticity, and multicollinearity—followed by the multiple linear regression results then hypothesis testing through partial (t-tests), simultaneous (F-tests), correlation analysis (R), and the coefficient of determination ( $R^2$ ). The results of this model provide insights into the significance and strength of the relationship between the interventions and stress-related outcomes.

**Table 9. Classical Assumption Tests of Model III**

| Test              | Behavior-based Intervention    | Cognition-based Intervention   |
|-------------------|--------------------------------|--------------------------------|
| Normality         | Passed ( $p = 0.200$ )         | Passed ( $p = 0.200$ )         |
| Linearity         | Passed ( $p < 0.001$ )         | Passed ( $p < 0.001$ )         |
| Homoscedasticity  | Passed ( $p = 0.130$ )         | Passed ( $p = 0.223$ )         |
| Multicollinearity | VIF = 1.572, Tolerance = 0.636 | VIF = 1.572, Tolerance = 0.636 |

The classical assumption tests for Model III indicated that both normality and linearity conditions were met for behavior-based and cognition-based interventions. The Glejser test did not indicate heteroscedasticity for either intervention (behavior-based intervention:  $p = 0.130$ ; cognition-based intervention:  $p = 0.223$ ), allowing the regression analysis to proceed without data transformation.

**Table 10. Multiple Linear Regression Results of Model III**

| Variables                    | Coefficient | Standard Error | t-value | p-value |
|------------------------------|-------------|----------------|---------|---------|
| Behavior-based Intervention  | 0.664       | 0.119          | 5.590   | 0.000   |
| Cognition-based Intervention | 0.175       | 0.103          | 1.694   | 0.093   |
| Constant                     | 1.408       | 0.789          | 1.785   | 0.077   |

The regression results for Model III, shown in Table 10, indicate that behavior-based interventions significantly impact stress-related outcomes, with a coefficient of 0.664 ( $p = 0.000$ ). This suggests that an increase in behavior-based interventions is associated with better stress management among lecturers. In contrast, the coefficient for cognition-based interventions is 0.175 ( $p = 0.093$ ), indicating no significant effect on stress-related outcomes. The regression equation is  $Y_{SO} = 1.408 + 0.664BI + 0.175CI + \epsilon$ .



Table 11. Model Summary of Model III

| Statistic               | Value   |
|-------------------------|---------|
| R                       | 0.626   |
| R <sup>2</sup>          | 0.392   |
| Adjusted R <sup>2</sup> | 0.381   |
| Standard Error          | 0.92392 |
| F-statistic             | 35.787  |
| F-significance          | 0.000   |

The model summary in Table 11 shows an R<sup>2</sup> value of 0.392, indicating that 39.2% of the variability in stress-related outcomes is explained by the independent variables. The F-test results (F = 35.787, p = 0.000) confirm the overall significance of the model. The t-tests further support these findings, with a significant t-value for behavior-based interventions (5.590, p = 0.000) and a non-significant t-value for cognition-based interventions (1.694, p = 0.093). This demonstrates that behavior-based interventions are crucial for improving stress-related outcomes.

## DISCUSSION

The findings of this study reveal significant insights into the impact of behavior-based and cognition-based interventions on the work-life balance of lecturers pursuing doctoral degrees. Behavior-based interventions, which include engaging in multiple roles and domains, increasing role enrichment, engaging in behavior-based compensation, managing role conflict, and creating role balance, were found to significantly enhance work-related, nonwork-related, and stress-related outcomes. This aligns with previous research suggesting that proactive and strategic role management can lead to improved job performance, increased life satisfaction, and reduced stress levels (Sirgy & Lee, 2023; Baral & Bhargava, 2010).

Conversely, cognition-based interventions such as segmenting roles and domains, integrating roles and domains, engaging in value-based compensation, and applying a whole-life perspective in decision-making showed varied effects. While these interventions significantly improved work-related and nonwork-related outcomes, their impact on stress-related outcomes was not statistically significant. This may indicate that while cognitive strategies are effective in enhancing role satisfaction and performance, they may not be sufficient alone to mitigate stress, emphasizing the need for combined approaches (Sirgy & Lee, 2023).

The significance of work-life balance in higher education is underscored by its direct impact on both organizational performance and individual well-being. The improved productivity and job satisfaction observed among lecturers who effectively manage their work-life balance highlight the critical role of supportive institutional policies. Higher education institutions should consider implementing flexible schedules, targeted professional development programs, and mental health services to support lecturers in balancing their multifaceted roles.

Additionally, the findings emphasize the importance of strategic resource management in achieving work-life balance. Lecturers who can allocate their time and energy effectively across their various roles experience less conflict and greater overall satisfaction. This underscores the relevance of behavior-based interventions in practical settings, where tangible actions and strategies can be employed to balance professional and personal responsibilities (Greenhaus & Beutell, 1985; Sirgy & Lee, 2023).

The results of this study contribute to the existing body of knowledge by providing empirical evidence on the effectiveness of personal interventions in enhancing work-life balance. These findings can inform the development of comprehensive support systems within higher education institutions, fostering environments where lecturers can thrive both professionally and personally.



## CONCLUSION

This study aimed to investigate the impact of behavior-based and cognition-based interventions on the work-life balance of lecturers pursuing doctoral studies, with a specific focus on work-related, nonwork-related, and stress-related outcomes. To achieve this objective, a questionnaire was distributed via Google Forms to lecturers across Indonesia who are pursuing doctoral degrees. The questionnaire was disseminated through acquaintances, WhatsApp, various lecturer associations in Indonesia, Facebook, and LinkedIn. A total of 116 responses were collected from various regions.

The data were analyzed using multiple linear regression. Of the three multiple linear regression models used, the homoscedasticity test was not met in the first and second models, necessitating the use of weighted multiple linear analysis. The results of the analysis were then interpreted to answer the research questions outlined below.

The findings revealed that behavior-based interventions have a significant positive impact on work-related, nonwork-related, and stress-related outcomes among lecturers pursuing doctoral degrees in Indonesia. Lecturers who engage in behavior-based interventions experience enhanced job performance and satisfaction, better personal growth, more fulfilling social relationships, and reduced stress levels. These interventions help lecturers manage their professional responsibilities effectively, leading to improved productivity and higher levels of job satisfaction. Additionally, effective time management and role enrichment strategies contribute to better stress management and overall well-being.

Conversely, cognition-based interventions showed varied results. While they significantly improve work-related and nonwork-related outcomes, their impact on stress-related outcomes was not statistically significant. Lecturers who engage in cognition-based interventions, such as stress management training and problem-solving strategies, experience enhanced job performance and personal growth. However, these interventions may not be sufficient alone to significantly reduce stress levels among lecturers.

In summary, behavior-based interventions significantly enhance all measured outcomes, making them essential for lecturers seeking to achieve a balanced and fulfilling life both professionally and personally. Cognition-based interventions, while beneficial for work-related and nonwork-related outcomes, may require supplementation with other strategies to effectively manage stress. These findings underscore the importance of a comprehensive approach to supporting lecturers' overall well-being and professional effectiveness.

## RECOMMENDATION

### Institutions Where Lecturers Work

Institutions should offer personalized and adaptable teaching schedules and administrative duties to lecturers pursuing doctoral degrees. Flexibility options should include reduced teaching responsibilities, remote teaching capabilities, and customizable office hours tailored to individual needs. By regularly assessing and adjusting these schedules, institutions can support lecturers in managing their workload more effectively, thereby reducing stress and enhancing both job performance and personal well-being. Additionally, institutions should create and offer professional development programs focusing on both behavior-based interventions (such as engaging in multiple roles, increasing role enrichment, and managing role conflict) and cognition-based interventions (such as segmenting roles and domains, integrating roles and domains, value-based compensation, and applying a whole-life perspective in decision-making). This targeted approach helps lecturers apply effective strategies in their daily routines, leading to improved job satisfaction and reduced stress levels. Finally, institutions should offer comprehensive mental health and wellness services on their campuses, including counseling, stress management courses, and wellness programs specifically tailored for academic personnel. Regular mental health assessments and participation in support groups can create a nurturing community atmosphere, assisting lecturers in effectively handling the challenges of juggling PhD studies and professional responsibilities. The provision of direct support is crucial in mitigating stress and bolstering emotional resilience and general well-being. This comprehensive support aligns with behavior-based interventions and holistic decision-making strategies, which have been shown to positively impact work-related and non-work-related outcomes.

### Lecturers Pursuing Doctoral Degrees

Lecturers should implement behavior-based interventions such as effective time management, engaging in multiple roles, increasing role enrichment, and managing role conflict. Prioritizing tasks, setting clear boundaries, and integrating professional and personal roles can significantly reduce stress and improve overall life satisfaction. These strategies positively impact work-related



and non-work-related outcomes, as demonstrated in the research. In addition to behavior-based interventions, lecturers should practice cognition-based interventions such as segmenting roles and domains to prevent negative spillover and integrating roles and domains to enhance positive spillover. These practices help manage stress, enhance mental clarity, and improve focus on both professional and personal tasks. While the study found that the positive relationship between cognition-based interventions and stress-related outcomes was not statistically significant, these strategies can still contribute to overall well-being and job satisfaction when combined with other interventions. Furthermore, building a strong support network within and outside the academic environment is essential. Lecturers should actively seek support from colleagues, friends, and family to share challenges and coping strategies. Engaging in social activities and maintaining regular interactions with loved ones can provide emotional support and enhance work-life balance. This aligns with findings that show behavior-based interventions significantly positively impact non-work-related outcomes, such as personal well-being and social relationships. A robust support network contributes to these positive outcomes by providing the necessary emotional and social support to manage the demands of balancing doctoral studies and professional responsibilities.

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