The Organization of Irrational Beliefs in Academic Burnout

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Abstract

From the Rational-Emotive Behavior Therapy (REBT) perspective, irrational beliefs are posited as the primary catalysts for a myriad of problems, including academic burnout. This study aims to examine the theoretical model of irrational beliefs organization in academic burnout. The hypothesized model delineates the following pathways: (1) from demandingness (DEM) to academic burnout (BURN) via catastrophizing (CAT); (2) from demandingness (DEM) to academic burnout (BURN) via low frustration tolerance (LFT); and (3) from demandingness (DEM) to academic burnout (BURN) via self-depreciation (DEP). To achieve the aim, the study employed a causal relationship design. 424 subjects obtained by stratified random sampling participated in the study. The Indonesian version of the Attitude Belief Scale II and the School Burnout Inventory were used to collect data. Data analysis was carried out using path analysis with SPSS 16. The results show that the hypothesized model has received adequate empirical support after eliminating a path from LFT to BURN. In conclusion, two alternative paths of irrational beliefs contribute to academic burnout: (1) the path from DEM to BURN via CAT; and (2) the path from DEM to BURN via DEP. These results underscore demandingness as a primary irrational belief that affects academic burnout via two other secondary irrational beliefs: catastrophizing and self-depreciation. Conversely, low frustration tolerance does not emerge as a significant contributor to academic burnout within this framework.


1. Introduction

Rational-Emotive Behavior Therapy (REBT) constitutes a counseling and psychotherapy approach asserting that the genesis of all psychological disturbances lies within cognitive fallacies. As delineated by Ellis (1994), this theoretical framework posits that the roots of diverse psychological issues can be traced back to an individual's irrational belief system and their perceptions of various events or phenomena. Employing the A-B-C model (Activating Event-Belief-Consequence), Ellis (1994) elucidates that cognitive, affective, or behavioral disturbances are the consequences (C) of an individual's irrational beliefs (B) concerning specific events or occurrences (A).

REBT distinguishes between two categories of beliefs: rational and irrational. Rational beliefs are characterized as flexible, non-extreme evaluations of daily events, in contrast to irrational beliefs, which are identified as extreme, rigid, and absolutistic perceptions of everyday occurrences (Ellis et al., 2010). Individuals who approach life events with rational beliefs tend to develop positive, adaptive, and functional cognitions, emotions, and behaviors. In contrast, those who interpret events through the lens of irrational beliefs often exhibit negative, maladaptive, and dysfunctional cognitions, emotions, and behaviors.
Contemporary advancements in REBT classify irrational beliefs into four distinct categories that interact with each other to cause various dysfunctional emotions and behaviors. These four include demandingness (DEM), low-frustration tolerance (LFT), self-depreciation (DEP), and catastrophizing belief (CAT) (Ellis et al., 2010). Demandingness refers to the absolute expectations of how the self, others, or the world must be. Demandingness is represented by the words must, should, ought to, and have to. Low frustration tolerance represents a compelling inclination towards the immediate alleviation of discomfort or stressful circumstances, often without substantial contemplation. Low frustration tolerance frequently presents itself through verbal articulations, including phrases such as It's overwhelming, I can't stand it, and It's too much. Self-depreciation refers to negative self-evaluation that occurs when an individual fails to meet personal or others' expectations. Self-depreciation typically manifests through expressions of extreme self-criticism, exemplified by statements like I am the most worthless person and I am the dumbest person in the world. Awfulizing belief denotes the extreme and exaggerated belief that manifests when an individual's expectations of themselves, others, or their environment remain unfulfilled. Awfulizing belief is evident in statements such as: everything is ruined if I don't achieve my goals, and the world will end if life does not go according to my desires (Gellatly & Beck, 2016; Waltman & Palermo, 2019). This framework posits DEM as the primary irrational belief that triggers the other three. In other words, DEM can indirectly cause various dysfunctional emotions and behaviors through CAT, DEP, and LFT (Ellis et al., 2010; Turner et al., 2019). Based on this model, DEM is categorized as a primary irrational belief, while CAT, DEP, and LFT are considered secondary ones.

One of the psychological disturbances stemming from these irrational beliefs is academic burnout. Academic burnout is a syndrome of emotional exhaustion, cynicism, and lack of personal accomplishment experienced by students (Salmela-Aro, 2017) arises from irrational beliefs about their intense academic tasks (Huk et al., 2019). Emotional exhaustion refers to chronic emotional tension caused by demanding academic tasks. Cynicism denotes a detached attitude and diminished interest in academic tasks, viewing them as devoid of significance. Lack of personal accomplishment involves decreased perceptions of competence and a decline in achievement within academic contexts (Puranitee et al., 2019). Several studies have shown that academic burnout is related to learning outcomes (Fitriyadi et al., 2023; Gibran & Wiyono, 2022; Madigan & Curran, 2021) and academic performance (Ghadampour et al., 2016; Windasari et al., 2022). In other words, an escalation in academic burnout, if not adequately mitigated, portends a decline in both learning outcomes and academic performance.

From the viewpoint of REBT, the genesis of burnout does not lie in the academic workload itself, but rather in the irrational beliefs held about that workload. Employing the A-B-C model (Activating Event-Belief-Consequence), REBT asserts that burnout is a consequence (C) of an individual's irrational beliefs (B) regarding their heavy or intense study load (A) (Ellis, 1994). Conversely, irrespective of the severity and intensity of the academic workload, should individuals adopt a framework of rational beliefs, burnout is unlikely to ensue.

A substantial body of scholarly research has demonstrated that irrational beliefs about academic tasks serve as a precursor to burnout among students. Such studies include those conducted by Iremeka et al. (2021), Ezenwaji et al. (2019), Popov et al. (2018), Anggreini et al. (2019), and Ogbuanya et al. (2019). Through the application of REBT techniques to transform these irrational beliefs into rational ones, there has been a notable decrease in the symptoms associated with burnout.

Nevertheless, there has been no research specifically aimed at demonstrating the organization and interrelationship of these four irrational beliefs in precipitating academic burnout. To date, only a few studies have been conducted to understand the organization of irrational beliefs in causing various dysfunctional emotions and behaviors. One such study was conducted by Hyland et al. (2014), which investigated the organization of the four types of irrational beliefs in subjects suffering from Posttraumatic Stress Disorder (PTSD). The results indicated that DEM exerted a stronger influence on PTSD through AWF, LFT, and DEP. Another study by Rahman (2018) examined the structure of irrational beliefs in university students who procrastinated on completing their theses. The findings showed that DEM had a more substantial effect on procrastination through LFT. These investigative efforts lend empirical support to the theoretical framework posited by Ellis et al. (2010), which
situates DEM at the hierarchy's apex as a primary irrational belief, with AWF, DEP, and LFT serving as secondary ones.

However, it is manifest that further investigation is required to strengthen the hypothesized model of irrational belief organization, particularly in the context of academic burnout. Based on this background, the present study endeavors to examine the theoretical model of the organization of irrational beliefs in causing academic burnout. This model includes the following pathways: (1) from DEM to academic burnout (BURN) via CAT; (2) from DEM to BURN via LFT; and (3) from DEM to BURN via DEP, as depicted in Figure 1.

Figure 1. Hypothesized Model of Irrational Belief Organization in Academic Burnout

2. Method

This study employs a causal relationship design. A total of 424 undergraduate students from the Faculty of Education at Universitas Negeri Malang (UM) participated in the study, obtained through stratified random sampling. This sample size represents 10% of the research population (4,237 students). Data were collected using the Attitudes and Beliefs Scale II Abbreviated Version (ABS-II AV) (Hyland et al., 2014) and the Indonesian version of the School Burnout Inventory (SBI) (Rahman, 2020; Rahman et al., 2020). The ABS-II AV consists of 24 items, derived from eight dimensions, delineating four constructs of irrationality (demandingness, catastrophizing, low frustration tolerance, and depreciation) and four of rationality (preferences, non-catastrophizing, high frustration tolerance, and acceptance). The SBI consists of nine items derived from three dimensions: emotional exhaustion, cynicism, and inadequacy. The ABS-II AV and SBI items were translated into Bahasa Indonesia and subsequently tested for validity and reliability using exploratory factor analysis and Cronbach’s Alpha. The analysis results indicate that all items of the ABS-II AV and SBI are valid and reliable, with KMO-MSA values for each instrument exceeding 0.5 and p-values less than 0.05, MSA values for all items surpassing 0.5, and Cronbach’s Alpha coefficients for all items exceeding 0.7. The collected data were subsequently analyzed using path analysis. Examination of the influence of independent variables on the dependent variables was conducted by observing the significance values of regression. If the significance value of regression is less than 0.05, it can be concluded that the independent variable has an influence on the dependent variable. In general, this path analysis is conducted through the following procedures: (1) validation of the proposed paths and (2) calculation of path coefficients comprising direct effects, indirect effects, and total effects. The entire analysis process was facilitated with the utilization of SPSS 16 software.

3. Results

From the perspective of REBT, DEM is posited as the primary irrational belief precipitating Academic Burnout via three secondary irrational beliefs: Catastrophizing (CAT), Low Frustration Tolerance (LFT), and Depreciation (DEP) (Ellis et al., 2010; Turner et al., 2019). The investigation of the interrelationships among these beliefs, employing path analysis, yielded path coefficients, standard errors, coefficients of determination (R square), and statistical significances as detailed in Table 1. Concurrently, this analysis facilitated the derivation of values corresponding to direct, indirect, and total effects amongst the identified pathways, collectively encapsulated in Table 2.
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Table 1. Results of Path Analysis

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Path Coefficient</th>
<th>Error</th>
<th>R Square</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM to CAT</td>
<td>0.150</td>
<td>0.989</td>
<td>0.022</td>
<td>0.002</td>
</tr>
<tr>
<td>DEM to LFT</td>
<td>0.186</td>
<td>0.982</td>
<td>0.035</td>
<td>0.000</td>
</tr>
<tr>
<td>DEM to DEP</td>
<td>0.115</td>
<td>0.993</td>
<td>0.013</td>
<td>0.018</td>
</tr>
<tr>
<td>CAT to BURN</td>
<td>0.170</td>
<td>0.970</td>
<td>0.060</td>
<td>0.001</td>
</tr>
<tr>
<td>LFT to BURN</td>
<td>0.094</td>
<td>0.970</td>
<td>0.060</td>
<td>0.055*</td>
</tr>
<tr>
<td>DEP to BURN</td>
<td>0.125</td>
<td>0.970</td>
<td>0.060</td>
<td>0.009</td>
</tr>
</tbody>
</table>

As illustrated in Table 1, all posited pathways within this investigation achieved significance levels below 0.05, with the sole exception being the pathway from LFT to BURN, which exhibited a significance value of 0.055. This implies that all hypothesized paths in the model can be accepted and have adequate empirical support, except for the path from LFT to BURN. Consequently, the model proposed in Figure 1 needs to be modified by removing the path from LFT to BURN. In light of these findings, the proposed model needs to be revised to the model as depicted in Figure 2.

Table 2. Effects of Independent Variables on Dependent Variables

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM to CAT</td>
<td>0.150</td>
<td>-</td>
<td>0.150</td>
</tr>
<tr>
<td>DEM to LFT</td>
<td>0.186</td>
<td>-</td>
<td>0.186</td>
</tr>
<tr>
<td>DEM to DEP</td>
<td>0.115</td>
<td>-</td>
<td>0.115</td>
</tr>
<tr>
<td>DEP to BURN</td>
<td>0.125</td>
<td>-</td>
<td>0.125</td>
</tr>
<tr>
<td>CAT to BURN</td>
<td>0.170</td>
<td>-</td>
<td>0.170</td>
</tr>
<tr>
<td>DEM to BURN via CAT</td>
<td>-</td>
<td>0.026</td>
<td>0.026</td>
</tr>
<tr>
<td>DEM to BURN via DEP</td>
<td>-</td>
<td>0.014</td>
<td>0.014</td>
</tr>
</tbody>
</table>

In addition to yielding significant paths, the employment of path analysis also produces path coefficients comprising direct, indirect, and total effects. This information is instrumental in distinguishing the strongest paths among those corroborated by empirical evidence. As delineated in Table 2 and Figure 2, two divergent routes through which irrational belief influences academic burnout are identified: the path from DEM to BURN via CAT and the path from DEM to BURN via DEP. Among these, the former path is the strongest with a total effect of 0.026.

Figure 2. Revised Model of Irrational Belief Organization in Academic Burnout

4. Discussion

This study revealed that DEM significantly affects three other irrational beliefs. These findings support the hypothesis proposed by Ellis (1987, 1994), which consistently posits that DEM is a primary irrational belief, while the other three beliefs are the secondary ones that arise from the primary irrational belief. Furthermore, these results confirm the findings of Hyland et al. (2014), who discovered that DEM exerts an indirect effect on PTSD symptoms through CAT, DEP, and LFT. The alignment of our results with Ellis’s theory and Hyland et al.’s study underscores the robustness of the primary-secondary belief distinction within the context of irrational beliefs. This further
validates the theoretical model, suggesting that primary irrational beliefs serve as a foundation for the development of secondary beliefs, which, in turn, influence psychological disturbances such as academic burnout.

The findings of this study also support the research outcomes presented by DiLorenzo et al. (2007). Their research sought to identify the most efficacious model among three irrational belief frameworks in moderating psychological distress: REBT Model I, REBT Model II, and the Cognitive Therapy Model. REBT Model I delineates DEM as the core belief and the other three beliefs as secondary, as depicted in Figure 1. REBT Model II characterizes all four irrational beliefs as equally primary beliefs, as depicted in Figure 3. In contrast, the Cognitive Therapy Model categorizes DEM as a secondary belief and elevates the other three beliefs to the primary ones, as illustrated in Figure 4. The results of their study indicated that REBT Model I, which is congruent with the irrational belief model employed in the current study, demonstrates superior efficacy in predicting psychological distress. This comparative efficacy highlights the unique role of DEM as a central belief driving secondary irrational beliefs, thereby offering a clearer pathway for therapeutic interventions aimed at reducing psychological distress by targeting the primary belief first.

Based on the comparison of these three models, it can be concluded that the irrational belief model hypothesized in this study surpasses other models in conceptual clarity and empirical support. Thus, Ellis's assertion (1987, 1994) that DEM is the core of irrational beliefs receives robust support from our findings. This finding further reinforces the theoretical frameworks and previous research results (DiLorenzo et al., 2007; Hyland et al., 2014; Rahman, 2018; Turner et al., 2019) regarding the organization and interrelationships of these four irrational beliefs. These cumulative findings contribute to a more nuanced understanding of how primary irrational beliefs like DEM influence secondary beliefs, thereby providing a strong theoretical basis for developing targeted cognitive-behavioral interventions. Furthermore, the superiority of REBT Model I in explaining psychological distress underscores its practical relevance and potential for enhancing therapeutic outcomes in educational counseling settings.

This study not only explores the relationships among the four irrational beliefs but also delineates the regression pathways ranked from highest to lowest coefficients. The strongest pathway is from DEM to BURN via CAT, followed by the pathway from DEM to BURN via DEP. However, the pathway from DEM to BURN via LFT is found to be insignificant. The order of these
pathways appears to relate to the variable positioned as the consequence (C) in this model, namely BURN. According to Ellis (2003), each irrational belief contributes distinctively to a particular problem. Depending on the issue at hand, LFT might emerge as more dominant in one issue, whereas in another, CAT or DEP might take precedence. This is illustrated by Harrington’s (2005) findings, which show that discomfort intolerance belief strongly correlates with task aversiveness but weakly correlates with fear of failure. The differential pathways underscore the importance of contextual factors in determining which secondary irrational belief contributes most to a specific psychological outcome.

In this study, CAT emerged as the strongest secondary irrational belief contributing to BURN. This suggests that students are predisposed to experiencing academic burnout when they engage in irrational thought processes, notably by magnifying situations beyond their true severity. Conversely, the pathway from LFT to BURN was found to be insignificant. Low frustration tolerance does not have a notable effect on academic burnout. These findings carry implications for interventions aimed at mitigating academic burnout, suggesting that counselors should prioritize their efforts and interventions toward addressing CAT when assisting students experiencing burnout. By focusing on altering catastrophic thinking patterns, counselors can more effectively reduce the intensity of academic burnout and help students develop healthier coping mechanisms to manage academic burnout.

The study’s findings also provide a broader understanding of how irrational beliefs interplay with different psychological outcomes beyond just academic burnout. For instance, the significant pathways from DEM to BURN via CAT and DEP indicate that these secondary beliefs could potentially mediate other forms of psychological distress, such as anxiety or depression. Future research should explore these mediational roles in more diverse contexts and populations to ascertain whether similar patterns hold. Additionally, the non-significant pathway from DEM to BURN via LFT suggests that the impact of low frustration tolerance might be context-dependent, warranting further investigation into the specific conditions under which LFT becomes a prominent factor.

Moreover, these findings have practical implications for educational institutions and mental health practitioners. By understanding that catastrophic thinking (CAT) is a significant predictor of academic burnout, institutions can develop targeted intervention programs that focus on cognitive restructuring techniques. Such programs could help students reframe their irrational thoughts and adopt more realistic and adaptive thinking patterns. Additionally, since depression-related beliefs (DEP) also significantly predict burnout, integrating mental health support services that address depressive symptoms and irrational beliefs could provide a comprehensive approach to preventing and managing burnout among students.

5. Conclusion

The theoretical framework of the organization of irrational beliefs within the context of academic burnout proposed in this study has been validated and garnered adequate empirical support subsequent to modification. The modification involved the elimination of the pathway from LFT to BURN. Based on this framework, it can be concluded that demandingness is a primary irrational belief that influences academic burnout via two other secondary irrational beliefs: catastrophizing and self-depreciation. Conversely, low frustration tolerance does not serve as an irrational belief that affects academic burnout. Among the two established pathways, the pathway through catastrophizing emerges as the strongest.

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