The Effectiveness of Islamic Work Value on Medical Career Planning Web Application for Analysis Anticipated Work-Family Conflict

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Abstract

The dynamics of medical education continue to innovate and specialized, it requires the graduates to choose a career well. They should not only consider of ability, but also could manage roles for responsibilities at work and family in future. Career planning in Ban dura’s Social Cognitive Theory includes personal value factors, which in this study are Islamic work values (IWV). Decisions on career choices can be strengthened by looking at the factors of anticipated work-family conflict (AWFC). Therefore, expert knowledge is used as a rule for web-based assessment and forecasting factors that could reduce conflict in the future. This study aimed to assist career development in the field of medicine in determine the priority role of work-family, by identified risk factors for possible anticipated work-family conflict based on Islamic work value, so that it could be taken decisions on career options using an expert systems. This research would be useful for psychology theoretically, as well as the used of information technology related to work-family conflict in web application. The result is SICES - AWFC software that is able to diagnose work-family conflicts (WFC) in the future and help medical students for career planning by considered Islamic work values.

Keywords: Anticipated Work-Family Conflict; Islamic Work Values; Career Planning; Web Application

1. Introduction

Career planning is associated with career decision self-efficacy and high levels of goal-setting, work experience, career expectations and goals, while career exploration is associated with career decision self-efficacy. Adolescents begin to clarify their career identity, develop an awareness of vocational interests and realities, and undertake career-related tasks, such as career planning and career exploration, as they increasingly think about their future career [1]. A specialty selection entails a transformation from the undifferentiated undergraduate stage to a completely differentiated professional enterprise where all future efforts would be focused to a single specialized field of medical discipline. It is often perceived that undergraduate medical students do not select their career specialty until they are graduated. Out of 220 respondents, 29 (13.2%) students selected General Surgery, 24 (10.9%) Pediatrics, and 18 (8.2%) selected Internal Medicine as their career specialties; whereas 24 (10.9%) students were not able to select a major specialty. The least popular specialties were Gynecology and Obstetrics, Oncology, Histopathology, Orthopedics, Genetics, Psychology, each selected by one student. One hundred and seventeen (53.1%) thought their selected specialty ‘matched their capabilities’ and 82 (37.2%) perceived their selection as “innovative field in medicine” [2]. Many attributing factors for this, but one factor can be lack of focus on giving due importance to Islamic Work Values (IWV) in Muslim country like Indonesia. Researchers have found that religious inspirations on HR practices are very significant but are a neglected area in research [3].

Many ways could be done to be able suppressed conflicts because of work demands. One of them is religiosity can suppress the negative influence of WFC [4]. Religious activities especially prayer, are considered as one of tools that have positive effect in dealing with problems and personal development. Conflict could be anticipated if individuals have confidence in making work-family decisions. The results of research on anticipated work-family conflict [5] could provide awareness for medical students that demands of time in their medical career choices will have an impact on family life. Career development started after graduating from college. Used an integrated system on the computer could facilitate medical students in planning their future careers [6], [7]. Applications for decision-making systems (DSS) for human resource management practices are still being developed [8]. A series of DSS are applied for human resource planning (HR) for the U.S. Navy shipyard community. Bellone et al. presenting DSS, ISPm, for personnel career management for Italian steel mills [9]. Mohanty and Deshmukh proposed a DSS for human resource planning at an Indian oil company. Because of DSS contributes a lot to HR practices, this paper also looked at expert systems forecasting approach based web, to assess AWFC in terms of medical career planning factors and IWV. Aspects of religious values are part of spiritual intelligence that can be applied to artificial intelligence [10] to solve problems. The development of spirituality in the
workplace is proven to make work meaning more positive [11], [12].

According to finding that work-to-life conflict mediates the relationships between two workplace characteristics—job pressure and supervisor support and psychological distress for medical workers [13], the research is needed to further explicate how anticipated future family responsibilities relate to career planning for young women. Whether expectations about work–family conflict, as well as willingness to compromise career for future children, may play a role in young women’s early career development (i.e., career choice traditionally, leadership aspirations, and occupational engagement), beyond the established role of instrumentality [14]. The purpose of this study was to found out the factors of AWFC in medical students, and known the effectiveness of IWV on career planning in impact of AWFC used web application.

2. Theory

2.1. Anticipated work-family conflict

The construction that linked career development and work-family was the anticipated work-family conflict (AWFC). AWFC was defined as the belief that responsibility in future work role would impair responsibility in family role in one's future. This definition was adapted to the existing work-family conflict definition [5];[6];[15]. In framework of the social cognitive career theory (SCCT), AWFC could be characterized as "outcome expectations" [1]. The expectation of the outcome was a belief about the possible outcome of a decision. Thus, AWFC was a specific type of outcome hope centered on beliefs about the possible outcomes of roles in work and family roles in the future.

Researches were limited to construction of AWFC [16], produced six dimensions that reflected two-way conflict (work-interfered-family and family-interfered-work) of three types of conflict-based time, under pressure work or strain, and behavior [17]. In a previous study of AWFC [5], most studies have expressed AWFC as uni-dimensional of two dimensions: anticipated work interference with family (AWIF), and anticipated family interference with work (AFIW). In this study used six-dimensional factor structure suitable for AWFC assessment as followed:

1. AWIF-based Time: The belief that the time demands of the job roles will interfere with responsibilities in future family roles.
2. AFIW-based Time: The belief that the time demands of family roles will interfere with responsibilities in future work roles.
3. AWIF-based strains: The belief that the burden of tension from work roles will interfere with responsibilities in future family roles.
4. AFIW-based strains: The belief that the burden of tension from family roles will interfere with responsibilities in future work roles.
5. AWIF-based Behavior: The belief that the behavior needed in the work role will interfere with the responsibilities in the future family role.
6. AFIW-based Behavior: The belief that the behavior needed in family role will interfere with responsibilities in future work roles.

2.2. Islamic work values

Values in general have generated great interested for research, for example in organizations and cultures. However, there was little research that discussed religious values, especially Islam in Indonesia. The importance of religion as a determinant of work value attracted the attention of some scientists. The basic values were understood and acceptable, because almost country have a religious life. Islamic values are generally based on the principles outlined in the Qur'an and Hadith [18]. Values were the principle of assistance for behavior and could affected humans in terms of passing some values and norms to its followers. Thus, the values that existed could greatly influence follower behavior. Research about personal Muslim could moderated the relationship between work stress and employee well-being [4]. The validated Islamic work values (IWV) are Virtue, Competence, Cooperation, Devotional, Gratitude, Hard work and optimal effort, Perfectionism, Responsibility, Self-discipline, Self-criticism, Consultations-Cooperatives, Competitions, and Patience-persistence [18]. Therefore, IWV could be used in human resource practices such as career development and employee recruitment [3]. IWV could be used in the context of conflict management [19] and anticipated work-family conflict (AFWC) in the future [20];[21];[11].

2.3. Career planning

Social cognitive career theory (SCCT) as a framework to assess broader career constructs, and to test a direct relationship between person inputs and choice actions, using both cross-sectional and longitudinal designs have been done. The result showed students who are exposed to "real world" workplace experiences and opportunities reported more have career planning and thinking activities. Gender also did not emerge as a predictor of career planning or career exploration. Self-efficacy and career goals were associated with career planning, and self-efficacy was associated with career exploration [1]. Importantly, these results supported the SCCT model cross-sectional and longitudinally indicating the significant and stable role that self-efficacy and goals play in affecting career choice behavior. The concept of self-efficacy is at the Centre of Bandura’s social cognitive theory. Bandura explained the important link between self-efficacy and behavioral outcomes, maintaining that those who are highly efficacious are able to approach tasks as challenges to be mastered rather than as threats to be avoided. Because career decision self-efficacy is a key variable for the study of an individual's career planning and career decisions, it is a central factor influencing human career development [22].

High levels of career planning instrumentality were associated with strong leadership aspirations and occupational engagement. An inverse relationship emerged between the selection of a more traditional career and less anticipation that work would interfere with time spent with family, and a positive relationship emerged between high leadership aspirations and more anticipation that family would be a strain on work. Additionally, anticipating that work would interfere with time spent with family had a positive relationship with occupational engagement [14]. Findings above captured salient career-related behaviors of college women in their present environment as the other variables included in the study focused more on anticipation of the future.

The theoretical framework used in the literature was Cognitive Social Theory for Career Development or Social Cognitive Career Theory (SCCT). In general, SCCT content were individuals would pursue and survive in careers that they believe they have succeed and would delivered the results they wanted. Research has been considerable to supported this [1]; [5], about two variables in career development and process. Previous research linked career needed with AWFC explained college challenges about work and family could predicted career development from assertive traits, risk taking, the willingness to compromise in family careers, family-work conflict issues, traditional career path choices, leadership aspirations, and job involvement. The results showed that work to be done with the family, and a positive relationship between high leadership aspirations and more anticipation of the family would be a work load [14].
Given the facts that young adults today would be part of the dual role of working-families with having children, would have an impact on career achievement and that’s why AWFC depend on career planning factors [5]: Positive self-evaluation, great confidence in making work-family decisions, expectations could control working hours or completion of work, the importance of job responsibilities, the expectations of family responsibilities did not interfere work, job specialization required speed of work behavior, number of planned children, and certainty about family planned.

3. Methods

3.1. Data collection procedure

Data collection techniques were divided into several methods:
1. Qualitative study: a review of relevant literature on Islamic work values (IWV) and anticipated work-family conflict (AWFC), and then did in-depth interviews with two of Medical Doctor to obtained work-family conflict factors, and IWV factors in careers planning and AWFC. This data would be knowledge base into expert system was created web application of medical career planning for assess medical students by diagnosed AWFC risk factors from planned work-family consideration and IWV factors as AWFC solutions for career planning in the medical field, which named of the spiritual intelligence-based career expert system to analyze anticipated work-family conflict or SICES-AWFC.
2. Quantitative study: research questionnaires from categorized interviews were made in a questionnaire contained: 6 AWFC aspects, 13 IWV factors, 9 dimensions of career planning, number of child planned, weekly work-plan, intending to go to next college / specialization, and other careers planning factors. Forward Chaining method presented in this second study to explained the application of expert system and to obtained impact of Islamic work values in analysis of career planning for anticipated work-family conflict, through survey to medical students with number sampling of 209.

This study applied a self-administered questionnaire to collect data. The researcher approached the Dean of Medical Faculty to seek its permission to distribute the questionnaires to medical student while conducting scheduled learning activities. The questionnaires were distributed according to the scheduled activities. The scheduled activities were retrieved from administration staff in Medical Faculty. Data distribution was carried out from April 2018 to the end of Mei 2018 and then inputted into web application.

3.2. Measures

The measures were primarily adopted with an acceptable reliability. Scales developed by previous researchers [5], [17] were used to measure the six aspects of AWFC. The Cronbach's alpha for AWFC was 0.766 in this study. IWV was then assessed by the thirteen criteria validated [18]. The Cronbach's alpha was 0.865 in this study. Finally, career planning was measured using the 3-indicator Social Cognitive Career Theory [1] and six dimension of beginning career development [14]. In this study, the coefficient alpha was 0.795. Respondents were asked to rate the criteria using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for favorable item and from 1 (strongly agree) to 5 (strongly disagree) for unfavorable item. Ratings were made for all of the variables in this study. This study has used content validity with professional judgment were medical doctors have been interviewed. Through item correlated test, those score less than 0.3, so that item was deleted. This obtained for AWFC scale with 34 items into 17 valid items, IWV scale with 28 items becomes 22 valid items, and medical career planning (MCP) scale with 27 items becomes 12 valid items.

3.3. Data analysis

The responses were analyzed with SPSS package. In the next step, Pearson Correlation was used for exploring the inherent linear relationship, and then this research includes soft engineering which named expert system (ES), created by inductive method using the Knowledge Base. The knowledge base is made with intention to detect new knowledge (based on interview and questionnaire) relevant for the decision making process. This new knowledge should be based on use of “soft methods” in assessment of significance of the individual Islamic work values, career planning, and anticipated work-family conflict components in order to improve decision-making process. For the research purposes, a prototype expert system will analyze 60 components, and to “suggest” the most informative criteria in relation to the functionality of decisions [23].

4. Results and Discussion

This section presents the demographic profiles of the respondents, 62 (29.6%) were male, while 147 (70.4%) were female. In terms of grade attainment, 48 (23.0%) obtained grade one, 66 (31.6%) obtained grade 2, 49 (23.4%) obtained grade 3, and 46 (22%) obtained grade 4 year of study. All 209 respondents in this study were medical student registered in Universitas Abdurrab. So, we could assess mediating effect of career planning on relationship between IWV and AWFC based web application, which named of spiritual intelligence-based career expert system for analyze AWFC (SICES-AWFC). Table 1 summarizes the demographic characteristics of the respondents.

<table>
<thead>
<tr>
<th>Demographic profile of respondents</th>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>62</td>
<td>29.6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>147</td>
<td>70.4</td>
</tr>
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<td>Level of grade</td>
<td>Semester 2</td>
<td>48</td>
<td>23.0</td>
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<td></td>
<td>Semester 4</td>
<td>66</td>
<td>31.6</td>
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<td></td>
<td>Semester 6</td>
<td>49</td>
<td>23.4</td>
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<tr>
<td></td>
<td>Semester 8</td>
<td>46</td>
<td>22.0</td>
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The relationships between independent variable and dependent variables are discussed in this section. Two hypotheses were postulated for the relationship between IWV and career planning as measured by IWV and AWFC. Tests of the hypotheses findings indicated that both were supported. In other words, IWV appears to have a positive correlation on career planning (r=0.766, p<0.000) and IWV appears to have a negative correlation on AWFC (r=-0.250, p<0.005). Career planning was found to have a negative correlation on AWFC (r=-0.246, p<0.005). In addition, analyze of medical career planning were postulated hypotheses for the relationship between planned number of children and medical specialization toward career planning. Planned number of children was found to have a positive correlation on career planning (r=0.236, p<0.000) and ease of specialization in medical science was found to have a positive correlation on career planning (r=0.254, p<0.005). All independent variables in this study could be forecasting the factors influence AWFC by used web application.

4.1. Model testing

To test the conceptual model of the study, this study uses a two-step approach. This approach involves first analyzing a measurement model and then a decision support system (DSS) model. The measurement models are evaluated in terms of their validity and reliability, which are the two main criteria used for testing the appropriateness of the measures. After analyzing the
measurement model, the next step in SPSS is to analyze correlation and test of hypothesis. The proposed was tested to estimate the influence and significance of correlation coefficients. Figure 5 shows the expert system mode assessment, and Figure 7 shows the forecasting model based web application. Output from expert system could help user to describe AWFC, IWV, and career planning among medical students.

These studies were resulted the SICES-AWFC software that is able to diagnose work-family conflicts (WFC) in the future and help medical students for career planning based on Islamic work values to anticipated work-family conflict.

Fig 1: Psychological scales was processed statistically to get valid items, so they have could be used as a knowledge base.

After the knowledge base has been successfully saved, then the algorithm developed and processed for career forecasting, so that it could determine rank of factors for anticipated work-family conflict (AWFC) in the future.

Fig 2: This application could be opened at the link sices.univrab.ac.id

Fig 3: The SICES-AWFC application has a feature to view the respondent's input data through http://sices.univrab.ac.id/media.php?page=Dashboard-Admin

Fig 4: Category of assessment resulted by method of forward chaining is data-driven because of inference begins with the information available and a new conclusion is obtained.

We could print an excel report by clicking the link http://sices.univrab.ac.id/media.php?page=Dashboard-Admin, then click the print result query button. Here is an example of a questionnaire that has been generated from the software.

Fig 5: Feature of export questionnaire reported to excel file.

Fig 6: The results of SICES-AWFC application analysis could be seen directly at the link http://sices.univrab.ac.id/media.php?page=Analisis.

From the explanation above, it was clear that the SICES-AWFC software is able to diagnosed AWFC and help students' decisions to considered work that reflected IWV, so as to prevent future family conflicts.

The lack of confidence in managing emotional tension in future work-family role for the Strain-based AWIF aspect showed in SICES-AWFC application that the highest score as a factor for the possibility of future work-family conflicts, with items in AWFC scale were ‘My mind would be disturbed, if later when I am on home, there are patients problems’ and ‘Doing service to patients would make my emotions tense, because I would being busy communicated with staff, when I'm already at my house in the future’. In line with this, effectuation and causation strategy mediate the positive relationship between WIF and new venture legitimacy, and the negative relationship between FIW and new venture legitimacy [24]. The effect of job strain on well-being were significant for employees and that personal religiosity of employees contributed to alleviating job strain and enhancing well-being [4]. That study concludes that Islamic personal religiosity moderates the relationship between job strain and employee well-being. Several studies have been able to supported use of applications in human resource practice. The combined use of software technologies and statistical methods for assessing and
analyzing competences in human resource information systems have been done [25]. Based on a standard competence model, which is called a Professional, Innovative and Social competence tree, the proposed framework were offer flexible tools to experts in real enterprise environments, either for evaluation of employees towards an optimal job assignment and vocational training or for recruitment processes. In other work-family conflict research, to determine the weight of the factors through identified based on lack of independence by used Fuzzy AHP and Fuzzy Type-2 DEMATEL have been applied [26]. Using tools as integrated algorithm in psychology and engineering approach also have been done by past studies [27], [28].

This paper began with an explanation of the main objectives of the study. The first objective is to investigate whether IWV influences career planning. The second objective is to investigate whether IWV influences AWFC. The third objective is to investigate whether career planning influences AWFC. The fourth objective is to investigate whether planned number of children influences career planning and the fifth objective is to investigate whether ease of specialization in medical science influences career planning. So, we could assess mediating effect of career planning on relationship between IWV and AWFC based web application, which named of spiritual intelligence-based career expert system for analyze AWFC (SICES-AWFC).

First, IWV appears to have a positive correlation on career planning (r = 0.766, p < 0.000). This finding implies that IWV affects as much as 58.7% to career planning (R^2=0.587). In line with the earlier findings of past scholars [3], [29]–[31]. These authors opined that Islamic values at workplace have found encouragement, in pursuit of a highly prestigious and well-paid career. Work has given them great satisfaction because they gained a career opportunity and senior positions within it.

Second, it was discovered that IWV had a negative influence on AWFC (r = -0.250, p < 0.005). This finding implies that IWV affects as much as 6.2% to decrease WFC in future (R^2=0.062). Individuals who have well values like religion which is IWV often feel particularly excited or interested in their role in work and family. Past study was examined religiosity is a common strategy for all Muslims to cope with life problems and that turning to religiosity through faith, forgiveness, supplication, reading the Holy Quran, trust in God, remembrance, praying, patience, and gratitude to God are effective strategies to cope with life stressors [4]. The role of religiosity showed in reducing stress and achieving employee well-being among academic and administrative staff in Malaysian universities.

Third, it was discovered mediating effect that career planning had a negative influence on AWFC (r = -0.246, p < 0.005). This finding implies that career planning affects as much as 6% to decrease WFC in future (R^2=0.065). This finding implies that career planning affects as much as 6% to decrease WFC in future (R^2=0.065). While the majority of the previous literature on work-family conflict has originated from western countries, this paper is one of the few studies that investigated the interaction between IWV and AWFC in the Indonesian context. Specifically, this paper aims to contribute to the literature regarding the relationship between IWV and career planning (as measured by SSCT and AWFC) for medical students at Universitas Abdurrab, Indonesia used web application which is SICES-AWFC. The findings of this study support the notion that IWV influences career planning and forecast AWFC. We can design interventions that enhance work–family self-efficacy to help individuals make effective work and family decisions, and continually instilling student’s awareness in regarding the importance of religiosity is an important and effective factor for managing stress. Career planning influences AWFC, implies that medical student who are more likely to engage in career and family in the future are also more likely to put more effort in managing their role in careers and marital through reinforce the IWV. This also indicates that medical doctor who are committed to the job do not frequently complain about their family. In addition, the findings of this study should encourage medical institution to have a high level of career planning.

5. Conclusion

While the majority of the previous literature on work-family conflict has originated from western countries, this paper is one of the few studies that investigated the interaction between IWV and AWFC in the Indonesian context. Specifically, this paper aims to contribute to the literature regarding the relationship between IWV and career planning (as measured by SSCT and AWFC) for medical students at Universitas Abdurrab, Indonesia used web application which is SICES-AWFC. The findings of this study support the notion that IWV influences career planning and forecast AWFC. We can design interventions that enhance work–family self-efficacy to help individuals make effective work and family decisions, and continually instilling student’s awareness in regarding the importance of religiosity is an important and effective factor for managing stress. Career planning influences AWFC, implies that medical student who are more likely to engage in career and family in the future are also more likely to put more effort in managing their role in careers and marital through reinforce the IWV. This also indicates that medical doctor who are committed to the job do not frequently complain about their family. In addition, the findings of this study should encourage medical institution to have a high level of career planning.

References


