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Procedia - Social and Behavioral Sciences 97 (2013) 766 – 770

Procedia
Social and Behavioral SciencesThe 9th International Conference on Cognitive Science

Evaluation of end-user satisfaction among employees participating in a web-based needs assessment inventory

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Abstract

This paper reports on the end-user satisfaction evaluation of ENAI. It highlights the positive impact and effect of online web-based management system for counseling inventory. Participants have reported satisfaction with ENAI and the service impact within community of users is complementary. Improvement of ENAI can be made to enhance the end-user satisfaction by referring to the user's requirements.

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Selection and/or peer-review under responsibility of the Universiti Malaysia Sarawak.

Keywords: Online Counseling; web-based application; usable; user satisfaction

1. Introduction

The growth of new technologies has made it possible for the online delivery of psychological support [1]. The expansive of technology in people's lives has been noticed by health professionals including counselor, psychologist, psychiatrist, etc. Furthermore, it is predicted that the increasing growth and prevalence as well as the users demand will put technology as an essential aspect of healthcare into the future [2]. Many types Internet-delivered support is increasingly being used including online counseling management system in organization [3]

Employer has a responsibility to develop appropriate interventions to respond to the health needs of their employees. Through the organization of counseling services, it is must take into account the life style problems with assumptions if these problems can be solved to improve performance [4]. Furthermore, The World Health Organization (WHO) emphasizes that most major life style problem leading to the inability to work is depression [5]. Depression includes mixing a variety of feelings and behaviors can lead to loss of self-confidence [6]. When a person is suffering from depression, he/she may lose interest in work and stay away from the family. Study shows problems experienced by employees in organizations can influence their performance and job satisfaction, and organizational influences on the production rate. It is a need to capture the depression's symptoms before effective changes or treatment can be made. Accordingly, the use of ICT in healthcare personnel is seen as a higher demanding for innovative methods and new approaches in counseling services.

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Therefore, the focus of this paper is the delivery of online web-based management system for counseling inventory to employees at organization. In this model, the individual’s experience of participating in an online counseling intervention can be researched.

2. System Background

A system called Employee Needs Assessment Inventory (ENAI) has been developed using open source web-based technology that can be accessed through a variety of platforms and it has a usable interface where it will not require a long training to learn how to use the system. The system provide useful information to the employees, counselors and employer where it is able to provide a counseling service which is comprehensive and effective to these three tiers. ENAI is a management system which consists of three tiers counseling programs that allow workers, counselors and employers to access services related to personal life challenges and improves performance and production at work. Initially, ENAI was established in 2002 and was used manually using the typed and printed questionnaires, distributed to the respondents. In 2007, the system was upgraded to local hosting but could only be accessed in the computer. Subsequently, in 2011 the system was transformed to a web-based application.

ENAI provides a solution counseling awareness that prevention is better than cure to government agencies and organizations in Malaysia. This application has the ability to analyze the needs of the employee according to the employee profile that includes life style problems. Employee life style problems can be divided into two categories: personal problems and work problems [7]. Personal problems are health, finances, family and work issues including spirituality and work, career, interpersonal relationships and work environment.

ENAI has its own unique characteristics which give uniqueness to the system. Figure 1 illustrates the differences between ENAI and other online counselling system. ENAI provides facilities for user especially employees to share their life problems where they are able to key in all data problems that they experienced. The data will be sent to the counsellor and administrator. These data will be treated as private and confidential by the counsellor and this system can only be achieved by the counsellor and the coordinator only which means that other employees or employers do not have access to relevant information with colleagues. Problem of missing information or data loss can be avoided as ENAI is integrated with a large database to store all information.

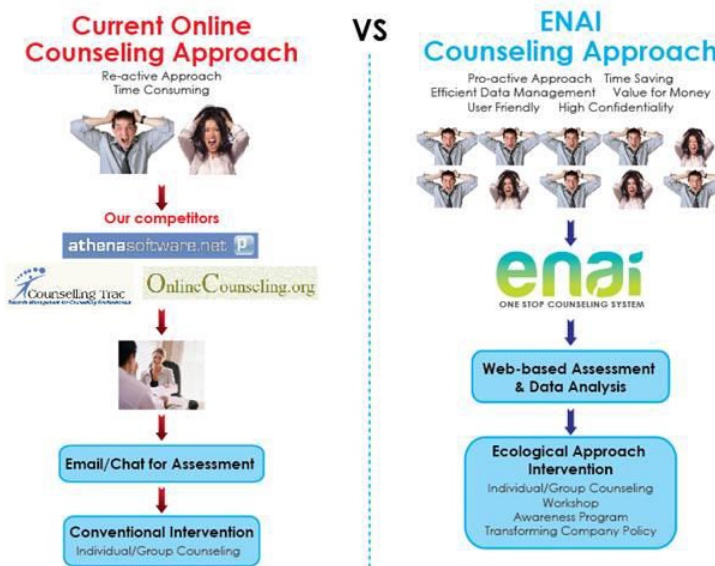


Figure 1. ENAI vs other online Counseling System

ENAI not only systematic but also saves time as counsellors do not have to write all information of employees' life problems because all the information has been captured and stored in the system. The information sharing process between counsellors and employers and also with other coordinator can be done quickly. Any information provided by the employee will be filtered by the system whether the employee is eligible for intervention services or not. The system also will indicate to the counsellor and administrator the employee decision whether he/she wants to seek further intervention and treatment. The system also can automatically analyze all data by changing the form of the percentage of employees who are suffering in life problem and need further intervention and treatment. There are many methods of intervention that can be done such as an individual counselling workshop, group counselling workshops, awareness programs and policies to transform the company.

The following figures are the two screenshots from ENAI system which Figure 2 (a) is a interface for user login and Figure 2(b) is a interface for main menu of ENAI.



Figure 2. (a) Login screen



Figure 2. (b) Main menu screen

Figure 3 shows an example of generated report in a bar graph captured from data that has been keyed in by employees using ENAI. From this report, counselor and employer can identify the majority personal life problems occurred among employees and provide further treatment or prevention.

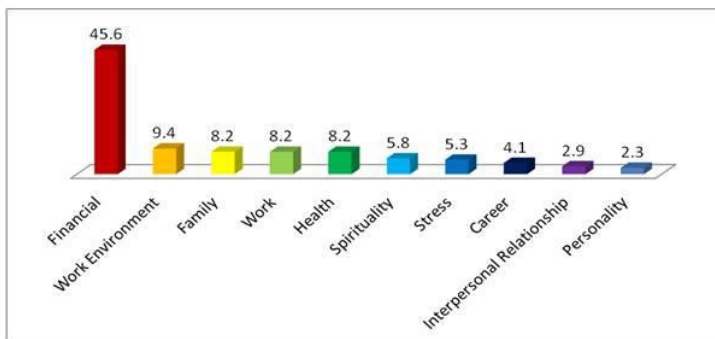


Figure 3. Example of employee's data

3. Methodology

The aim of this study was to evaluate end-user satisfaction with a well built prototype of ENAI. Evaluation was done in order to obtain information about user acceptance and satisfaction of the system functional, ability in management effectively and efficiency. The evaluation was conducted in February, 2012 – April, 2012 and all employees from Royal Malaysian Army Organization were invited to participate in this.

ENAI consisted of three major components: 1) a work and personal related problem assessment questionnaire, 2) user satisfaction questionnaire, and 3) intervention counseling services feedbacks consisting of a personal health risk profile and lifestyle behavioral through a web. Participants were asked to assess their own health and lifestyle and then the data will be processed by computer to generate the intervention feedback. The feedback was provided to the user immediately after completion of the health and lifestyles assessment questionnaire. The part of evaluation questionnaire related to satisfaction with the system which is the focus of this study consisted of 36 items and it was categorized into six major categories. Participants were asked to appraise: 1) system usability, 2) ease of use, 3) easy to learn, 4) user satisfaction, 5) system capabilities, and 6) overall system performance. Participants were asked to assess their satisfaction on a 5-point Likert scale (Very Disagree, Disagree, Neutral, Agree, Very Agree). For each category, a free-text field was available for additional comments. There was also a free-text field at the end of the questionnaire for user to remark their positive and negative aspects of ENAI. More details on the satisfaction questionnaire can be found in [8],[9],[10].

4. Satisfaction with ENAI

Descriptive statistics were performed on all data to examine user satisfaction with ENAI. A total of 220 employees have participated in the study and there was a lot of feedback on the system design from participants.

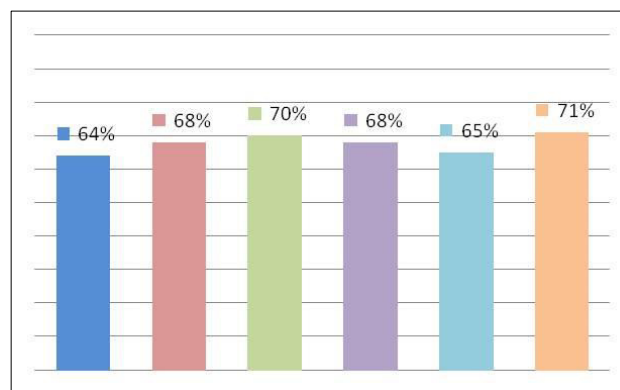


Figure 4. Overall User satisfaction results

Figure 4 shows the percentage of participants that judged positively about ENAI and the percentage is more than 60% for each category. For the first category, the usability of the system is high as 64% participants positively agreed on the effectiveness and efficiency including time saving. On the other hand, both category ease of use and category easy to learn shows that the system was not hard to use as it was effective in fulfilling the user's requirements. Because of the purpose of use is clear, the system design to such an extent that it would be easy to understand. 68% of participants indicated that they were positively satisfied with ENAI and would definitely recommend ENAI to others. In general, participants were positively satisfied about ENAI application as part of their support system and useful in order to improve performance. It is also can be a channel to detect and identify their life problems so that they can be helped. Additional analyses showed that fewer participants who made one or more remarks in the free- text field for each category were satisfied overall with ENAI.

The free-text field at the end of the questionnaire was also been analyzed and showed that 97% participants put remarks for positive and negative aspects field which includes neutral comments. From the positive aspects, participants remarked their satisfaction on the system usability and capabilities. However, although participants

generally satisfied with ENAI, minor input from free-text field contained predominantly critical remarks. From the participants' remark, confidence and system trusty seems to emerge as a key construct in the satisfaction with ENAI. In addition to obtain user trust, it is necessary to think separately about the design and the ease of case. Participants were doubted about the confidentiality of the information given by them. Furthermore, there was a lack of confidence among participants in the system security. With fewer participants who made remarks for positive and negative aspects, it is still indicated that ENAI can be improved by referring to participant's suggestions and recommendations.

This study showed that in general end-user satisfaction with web-based ENAI was high but there still are opportunities to increase satisfaction. The results from the satisfaction evaluation had proven that ENAI could be able to help employer and counselor to encounter and to manage personal life issues among employees. It is also can be used to access information which is can save time and energy, the information sharing can be done very quickly, the confidentiality of information can be ensured and data loss can be avoided.

5. Conclusion

In general, participants were satisfied with ENAI. This project has identified the themes of personal life counseling management in the state public and private sectors in Malaysia. In this project, ENAI has been developed to strengthen the existing system and has gone through the formative and summative evaluations. The results of ENAI evaluation has proven that the system could be able to provide convenience to the three tiers (employer, employees and counselor) in the counseling management of personal life in public and private organization in Malaysia. The results of the system evaluation for original functions outside the system design are high under the system that has a clear intended purpose. It is also important to make someone feel less inhibited by increasing security and improving the system usability. In future, it is planning to improve the user interface and to increase confidentiality and security.

Acknowledgements

This project is supported by University Malaysia Sarawak (UNIMAS).

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