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Full Length Research Paper

Patient safety training programs and the effectiveness of training in the Taiwanese medical industry

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This research aims to understand the factors influencing the transfer of training, establish model of training design, trainee's characteristics, and work environment with transfer of training effect. Taking all colleagues in a teaching hospital in Taiwan as the objects, applying valid 866 copies of questionnaires recovered through online investigation, response rate is 45%. Through empirical analysis, this research finds that training design, trainee's characteristics, and work environment had positive and significant relationships with the motivation of training transfer and the motivation of training transfer positively related to transfer of training. The theoretical and practical implications were discussed.

Key words: Taiwanese medical industry, transfer of training, motivation of training transfer, patients' safety.

INTRODUCTION

Patients' safety has been attached much importance all over the world. In general, patients' safety is a part of the medical reform used to improve the medical quality, and the movement of patients' safety is called medical reform in order to achieve the target of high medical quality. In the medical team, under heavy working load, the medical care colleagues will make great mistake and endanger the patients' lives if taking care of the steps of safety measures.

In order to improve the cooperation and communication in the teams, it seems that education and training course might further improve the patients' safety culture of an organization (Haller et al., 2008; McGreevy and Otten, 2007; Oriol, 2006; Taylor et al., 2007; Naris and Ukpere, 2009). The skill of group resource management can provide works as a defense line, which can resist the threats to safety and prevent artificial errors and possible after effect (Helmreich et al., 1999). The medical industry started to discuss patients' safety culture in recent years, but there is lack of literature discussing the importance of training transfer after the patients' safety education and training. The goal of training program might be application in the knowledge and skills to job and transfer to workplace (Baldwin and Ford, 1988; Berry and Morris, 2005; Brown and McCracken, 2009; Burke and Hutchins, 2007; Cheng and Ho, 2001a; Egan et al., 2004; Lee, 2007; Lim and Morris, 2006; Machin and Fogarty, 2004; Nikandrou et al., 2009; Noe, 2002).

In recent years considerable concern has arisen over training transfer (Baldwin and Ford, 1988; Burke and Hutchins, 2007; Cheng and Ho, 2001a; Cheng and Hampson, 2008; Saks and Belcourt, 2006; Brown and McCracken, 2009). The prior studies about training transfer studies have examine the influence of trainee characteristics, training design, and work climate variables on training transfer (Baldwin and Ford, 1988; Blume et al., 2010; Ford and Weissbein, 1997; Geilen, 1996; Holton et al., 1998; Kirwan and Burchell, 2006; Lim and Morris, 2006; Veleda et al., 2007). There are many related factors influential to training; Noe (1986) pointed that the trainees' individual difference, such as motivation and attitude, play an important role in determining whether the training is effect. According to Cheng and Ho (2001a), motivation transfer and learning motivation are two important factors influencing the training effect.

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At present, most researches mainly focus on discussing the learning motivation (Cheng and Ho, 2001b), but seldom discussing the motivation transfer, thus there is few research on motivation transfer and education and training effect. In addition, the trainees' motivation is an important determinant influencing the training effect (Mathieu and Martineauk, 1993). Therefore, this study focused on medical industry and establish model of training design, trainee's characteristics, and work environment with transfer of training effect, and examine relation of motivation of training transfer and transfer of training through discussing the importance of motivation to the transfer of training based on the prior study findings.

Therefore, this study aims to examine the effects of the factors which influence the training transfer, as a reference for enterprises to improve the training effect. For this reason, the purposes of this research can be induced: (1) Through literature discussion, to find the factors influencing the personnel training transfer, and establish the relationship structure between the three variables of training design, trainees' characteristics, and work environment and the training transfer effect. (2) Taking the training result of a case hospital as an example, to verify the factors influencing the personnel training transfer, which are develop in this research, as a reference to improve the personnel training effect.

LITERATURE REVIEW

Transfer of training

Transfer of training has been concerned for training researchers and practitioners (Baldwin and Ford, 2008; Burke and Saks, 2009). The concept of training transfer is expanded from learning transfer, and mainly focuses on the working performance after learning, in order to apply the learning result in the work, with the purpose of improving the organization's competitiveness and improve the personal performance (Wexley and Latham, 1991).

Baldw and Ford (1998) developed a mode of transfer of training process, which divided transfer of training into three parts: training investment, training output and transfer of training. Training investment includes the trainees' characteristics, course design, and work environment; training output indicates the learning during training process and memory after the training; transfer of training means that the learned knowledge is internalized into the work and continues. This model was applied as the main reference structure of this research. According to the above transfer process, if the training personnel master influential factors related to transfer of training, it will be helpful to design the training activities, and thus to maintain the transfer effect.

Therefore, after integrating the views of scholars, this research defines transfer of training as that after education and training, the organization personnel apply the learned knowledge, skills, attitudes, and behavior in the work and transfer the learned knowledge to their own intellectual mode which would keep for a period of time. Therefore, knowledge, skill, and attitude are used as three construct to measure the transfer of training in this research.

Motivation of training transfer

Motivation to transfer is essential for training effectiveness raised many scholars' interest (Egan et al., 2004; Kontoghiorghes, 2004; Nijman et al., 2006; Ruona et al., 2002; Seyler et al., 1998). It also is crucial for the training transfer (Gegenfurtner et al., 2009). Motivation of training transfer refers to the trainees' willingness to apply the learned knowledge and skills in the work, and the measurement should include evaluating the learner's confidence to use the new knowledge and recognizing the applicability of the new knowledge (Noe, 2005; Gegenfurtner et al., 2009). Noe (1986) developed the model of the motivation on training effect and indicated that the outcome of learning and behavior change might be influenced by motivation of training transfer. Because the motivation of training transfer from Noe's perspective did not only emphasize induction of outside behavior change, but also deepened into the discussion the individual confidence and recognition.

In order to make the connotation of the transfer of training more complete, this research defined motivation of training transfer as the organization member's motivation degree of willingness to apply the learned knowledge and skills in the working place after receiving educations and trainings provided by the organization. Therefore, this research referred the motivation of training transfer scale developed by Noe to measure the trainee's motivation degree of motivation of training transfer after receiving educations and trainings.

Factors of influencing transfer of training

Training transfer is an critical issue for performance improvement. This paper proposed three factors of trainees' characteristics, training design, and work environment based on the literature (Baldwin and Ford, 1988; Berry and Morris, 2005; Brown and McCracken, 2009; Burke and Hutchins, 2007; Cheng and Ho, 2001a; Egan et al., 2004; Lee, 2007; Lim and Morris, 2006; Machin and Fogarty, 2004; Noe, 2002; Nikandrou et al., 2009), for several reasons. First, learning effect is related to personal characteristics (Noe and Schmitt, 1986). Transfer of training mainly focuses on the working performance after learning, and a characteristic of the trainee's is relation with transfer of training (Nikandrou et al., 2009). Colquitt et al. (2000) conducted a meta-analysis to

examine the relationship between training motivation and training outcomes. The result showed that trainees' motivation to learn is an important factor for training transfer. Similarly, Blume et al. (2010) conducted meta-analytic review with 89 empirical studies that examine the predictors of training transfer. The result showed that trainees' characteristics has positively related to training transfer. In addition, Nikandrou et al. (2009) conducted in-depth interview method with 44 trainees from different organizations who participated in a training program. The result showed that trainee characteristics are critical factor in the training transfer process. Hence, trainees' characteristic is a key factor for training transfer.

Second, Training planning enhanced the success of training course. In order to training transfer successfully to the job, the training program must be relevant to the job (Axtell et al., 1997; Kontoghiorghes, 2002; Rouiller and Goldstein, 1993; Ryman and Biersner, 1998; Nikandrou et al., 2009). For instance, the use of after-training intervention technology (such as target stability and feedback, etc.) is helpful to increase the motivation of transferring the learned skills to the work. Only when the trainee can do and will do, can there be the behavior of learning and transfer of training (Tannenbaum and Yukl, 1992). Veleda et al. (2007) examine the determinants of training transfer in a retail grocery organization, the result showed that design factors were a significant predictor of training transfer. Hutchins (2009) conducted content analysis to explore the training Professors of best practice. The result showed that instructional activities and content alignment are important for training transfer. Hence, training design is a key factor for training transfer.

Third, The influential factors of work environment include organizational climate and culture, support from management level, colleagues' support, and opportunity application, etc. work environment produced quite a great influence on the effect of transfer of training, and the support from leaders was especially important (Brinkerhoff and Montesino,1995; Lance et al., 2002; Rouiller and Goldstein, 1992; Xiaom, 1996; Burke and Baldwin, 1999; Nikandrou et al., 2009).The organizational culture (ithat is, the organization internal members all recognize that learning is an important part of the work.) has a positive influence on the transfer of training (Tracey, 1995; Rouiller, and Goldstein, 1993; Scaduto et al., 2008; Naris and Ukpere, 2009). Cromwell and Kolb (2004) pointed out that when the trainees feel more support from the organization, management personnel and colleagues and participate in the support network consisted of the colleagues, there will be a better effect of knowledge and skill transfer. According to the Parry (1997), creation of a support network among the trainees can promote the occurrence of transfer of training. Kimberly (2001) suggested that the group leader can try to increase the effect of transfer of training through informal strengthening methods. Hutchins (2009) conducted content analysis to explore the training Professors of best practice. The result showed that environmental factor is a facilitator for training transfer. In addition, Blume et al., (2010) conducted meta-analytic review with 89 empirical studies that examine the predictors of training transfer. The result showed that work environment has positively related to training transfer. Therefore, this research proposes personal characteristics, training design, and work environment as the influential factors of transfer of training based on the literature (Baldwin and Ford, 1988; Ford and Weissbein,1997; Geilen, 1996; Holton et al., 1998; Lim and Morris, 2006; Kirwan and Burchell, 2006; Veleda et al., 2007) and hypothesize following:

H_1: Trainee's characteristics will relate to motivation of training transfer.
H_2: Training design will positively relate to motivation of training transfer.
H_3: Work environment will positively relate to motivation of training transfer.
H_4: Trainee's characteristics will positively relate to training transfer.
H_5: Training design will positively relate to training transfer.
H_6: Work environment will positively relate to training transfer.
H_7: Motivation of training transfer will positively relate to training transfer.

METHODOLOGY

This research plans to make a deep discussion of factors influencing the effect of transfer of training, as a reference for enterprises to improve the training effect. The research structure is shown as Figure 1.

Research design and data collection

This research chose the colleagues of a teaching hospital in the middle Taiwan, who participated in the patients' safety education training course in 2008 as the participation, in order to verify the factor model influencing the personnel transfer of training. This research questionnaire was placed on the website of this hospital and the time to fill the questionnaire lasted from May 1st to 7th of 2009. Totally there are 866 valid questionnaires; the return rate is 45%.

The participants in this study, female occupied a larger proportion of the samples, at 83.8% (733 persons). As for the age, age under 30 occupied a larger proportion of the samples, at 43.1% (377 persons), followed by the age of 31 to 45, at 29.4% (257 persons). As for the education degree, 48.1% (421 persons) have university degree, 35.7% (312 persons) have college degree. 83.8% (733 persons) are non-manager. 50.1% (438 persons) worked at this hospital less than 5 years, 23.1% (202 persons) worked 6~10 years. 45.9% (402 persons) are healthcare professionals.

Measurement

During the questionnaire design stage, this research did not only refer domestic and foreign literature and scale, but also considered the actual situation of the sample organization and modified the questionnaire to make it a suitable measuring tool for this research.

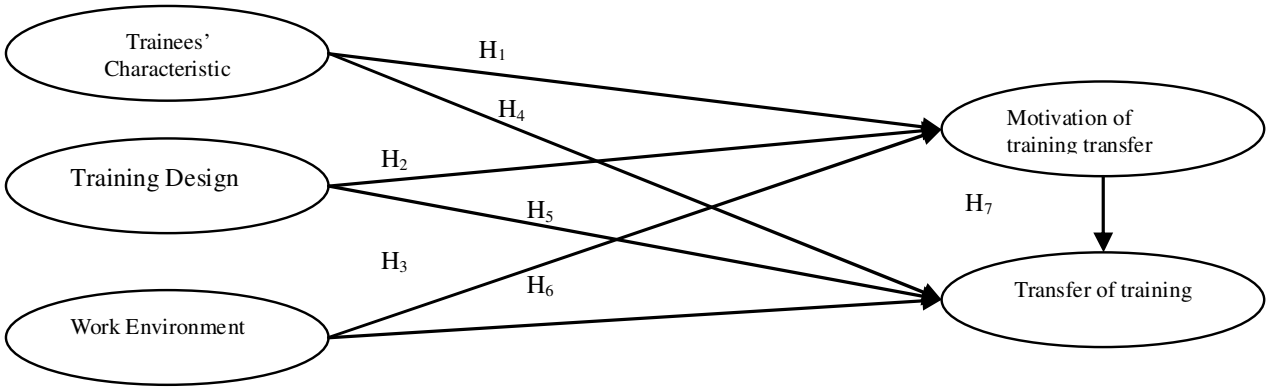

Figure 1. Conceptual model.

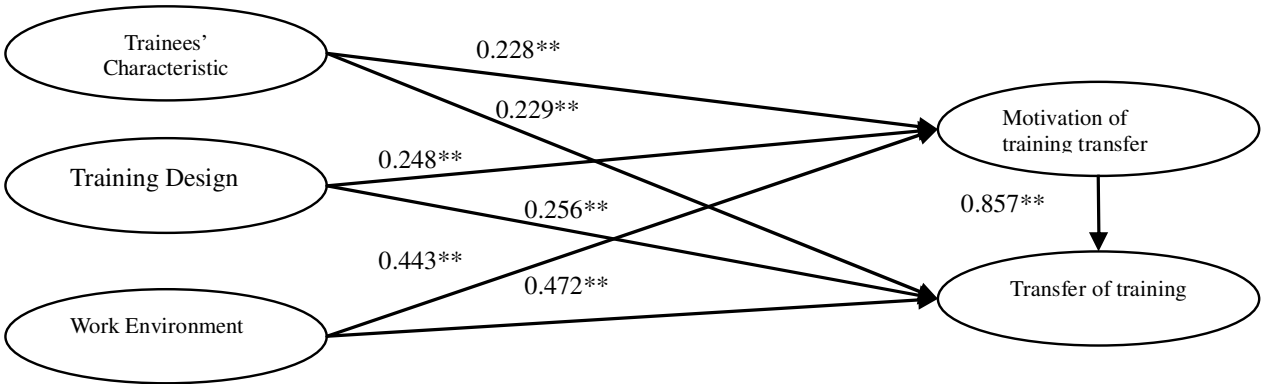

Figure 2. Path analysis result.
*p<0.05 **p<0.01.

Trainee characteristic was measured using items developed by Kimberly et al. (2001). Training Design was measured using items developed by Hagman and Rose (1993). Work environment was measured using items developed by Clarke (2002). Training Motivations of training transfer were measured using items developed by Facteau et al. (1995); Noe and Wilk (1993). Likert 5 point scales were used to assess the study variables ((1 = strongly disagree to 5 = strongly agree). The Cronbach's α coefficients are 0.70 to 0.88.

We considered age as a control variable. We distinguished four levels of education: under senior high, college, university, and above graduate. We defined four age groups: below 26, from 26 to 35, from 36 to 45, and above 45 years. Control variables were designed to pure the variables relationship, prevent respondents' identification and thus enhance the response rate.

Data analysis

This study conducted SPSS statistical software package to make analysis, with statistical methods, including Descriptive Analysis, Pearson's product moment correlation, to check the correlation of the factors, make regression analysis of the influence of trainees' characteristics, training design, work environment on motivation of training transfer and transfer of training. The research also applied path analysis method to discuss the cause-effect relationship and influences of the variables.

RESULT

Table 1 presents the correlations among study variables. The result reflected in Table 1 indicate that two dimensions of trainee characteristics positively and significantly related to dimensions of motivation of training transfer at 0.01 level. Training design positively and significantly related to dimensions of motivation of training transfer at 0.01 level. Three dimensions of work environment positively significantly related to dimensions of motivation of training transfer at 0.01 level. Finally, training transfer positively and significantly related to dimensions of motivation of training transfer at 0.01 level.

We conducted regression analysis to test the hypotheses. In model 1, trainees' characteristics, training design and work environment are consider as predictors of motivation of training transfer, and explained variation of model 1 is 0.674, which means that the three variables can explain 67.4% variations of motivation of training transfer. According to standard regression coefficient, the β coefficients of the three variables are all positive and significant, supporting H_1 to H_3, indicating that the three variables positively related to motivation of training

Table 1. Correlation among study variables.

Variable		Motivation of training transfer		
		Attitude	Knowledge	Skill
Trainee characteristics	Learning motivation	0.608**	0.588**	0.521**
	Expectation	0.578**	0.57**	0.483**
Training design	Content	0.634**	0.628**	0.603**
	Process	0.73**	0.709**	0.653**
Work environment	Colleagues' support and opportunity application	0.725**	0.731**	0,665**
	Support from the manager	0.644**	0.667**	0.573**
	Organizational climate and culture	0.724**	0.725**	0.678**
Training transfer		0.812**	0.879**	0.709**

**p<0.01.

transfer. The standard regression equation: Motivation of training transfer =0.443* work environment 0.228* trainees' characteristics 0.248* training design.

In model 2, trainees' characteristics, training design and work environment are consider as predictors of training transfer. The explained variation of model 2 is 0.737, which means that the three variables can explain 73.7% variations of training transfer. According to standard regression coefficient, the β coefficients of the three variables are positive and significant, indicating that the three variables positively related to training transfer, supporting H_4 to H_6. The standard regression equation: training transfer =0.472* work environment 0.229* trainees' characteristics 0.256* training design. The original regression equation: 2.254+0.392* work environment 0.494* trainees' characteristics 0.215* training design (Table 2).

In model 3, motivation of training transfer are consider as a predictor of training transfer, and the explained variation of model 3 is 0.766, which means that the three variables can explain 76.6% variations of training transfer. According to the β coefficients of the three variables are positive and significant; indicating that this variable positively related to training transfer, supporting H_7. The standard regression equation: training transfer = 0.875* motivation of training transfer. The original regression equation: 8.059±1.965*motivation of training transfer.

Path analysis

Trainees' characteristics have a significant direct effect on transfer of training, with the path coefficient being 0.229 (p<0.001), and the intervening variable of motivation of training transfer has a significant indirect effect on transfer of training, with the path coefficient being 0.1995 (indirect effect=0.228*0.875, p<.01). Training design has a significant direct effect on transfer of training, with the path coefficient being 0.256(p<0.001), and the intervening variable of motivation of training transfer has a significant indirect effect on transfer of training, with the path coefficient being 0.213(indirect effect =0.248*0.875, p<.01). Work environment has a sig-nificant direct effect on transfer of training, with the path coefficient being 0.472 (p<0.001), and the intervening variable of motivation of training transfer has a significant indirect effect on transfer of training, with the path coefficient being 0.388 (indirect effect =0.443*0.875, p<.01). The results of this study generally support the hypothesis 1 to 3 (Figure 2).

DISCUSSION

All health license industries have the same purpose: hoping to do the work with the best and safest method in order to finish our mission. Group resource management aims to make the group members work smoothly through such training courses, in order to have a successfully operating group (Meintel, 2009).

The goal of training program might be application the knowledge and skills to job and transfer to workplace (Berry and Morris, 2005; Lim and Morris, 2006). Hence, Transfer of training has been concerned for training researchers and practitioners (Baldwin and Ford, 2008; Burke and Saks, 2009). We propose the training design, trainees' characteristics, work environment, and motivation of training transfer have positive and significant effect on training transfer. Specifically, results support all our hypotheses.

First, we found trainee's characteristics has positive and significant effect on motivation of transfer training and transfer training. The result in this study showed that the trainees' characteristics positively related to training transfer, consisting with previous study (Blume et al., 2010; Brinkerhoff and Gill, 1992; Ford et al., 1992; Hutchins, 2009; Nikandrou et al., 2009; Veleda et al.,

Table 2. Regression analysis result for Motivation of training transfer and Training Transfer.

Variable	Motivation of training transfer			Training transfer		
	β	Standardized β	t value	β	Standardized β	t value
Intercept	0.741			2.254		
Work environment	0.163	0.443**	13.479	0.392	0.472**	15.531
Trainee characteristics	0.215	0.228**	7.762	0.494	0.229**	8.348
Training design	0.092	0.248**	6.983	0.215	0.256**	7.774
R^2		0.674**			0.737**	

*p<0.05 **p<0.01.

2007; Warr et al., 1999). Trainee characteristics, such as motivation to learn and expectation, will lead trainees to learn, synthesize, and connect what they have learn and transfer the skills and knowledge what they learned to workplace.

Second, this study found that training design factor positively related to motivation of transfer training and transfer training, consistent with previous studies (Axtell et al., 1997; Kirwan and Burchell, 2006; Kontoghiorghes, 2002; Rouiller and Goldstein, 1993; Ryman and Biersner, 1998; Nikandrou et al., 2009; Veleda et al., 2007). The content of training which combine with theoretical and practical knowledge is leads to increased training transfer. According to Brown and McCracken (2009), the instructional training design can improve the successful of training program and therefore for training transfer at work.

Third, we found that work environmental factor positively related to motivation of transfer training and transfer training. The result in this study is consistent with previous studies (Blume et al., 2010; Brinkerhoff, and Montesino, 1995; Burke and Baldwin, 1999; Hutchins, 2009; Lance et al., 2002; Nikandrou et al., 2009; Rouiller and Goldstein, 1992; Xiaom, 1996). Brown and McCracken (2009) indicated that work environment is important for training transfer; therefore supportive organizational culture is a facilitator to increase training transfer.

As for the management practice, because the work environment for education and training on patients' safety (refer to colleagues' support and opportunity application, support from management level, and organizational climate and culture) will influence the transfer of education and training, that is whether the personnel can prevent error making by applying the learned knowledge, skills and abilities in the work in a systematic management procedure, in order to prevent mistake, reduce errors, and avoid accident injuries. Therefore, this researcher gives further suggestions as for the practical management aspect:

Establish learning-type organization: Among the various types of organizational culture, the culture to encourage continuous learning produces a more positive influence on transfer of training. The medical quality management in the new century focuses on patients' safety and patient-centered care, so the leaders should create a culture of safety license, carry out the belief of "Every one is duty-bound to patients' safety", attach importance to systematical thinking, encourage the whole staff to participate in lifelong learning, and implement clinic practices based on empirical evidence.

Strengthen the support and participation of management personnel: According to Noe's (1998), the support from management level includes two aspects: emphasizing the importance of participating in the training course and emphasizing the application of learned course content into the work and putting pressure on the trainees. Both aspects produce a positive influence on transfer of training. Because the medical work is complicated and needs trans-unit cooperation and common endeavor of a group, it is not reasonable to blame the careless mistake of a single person when mistake happens; instead, it is necessary to review the systematic procedure and establish a learning culture for review and improvement. In addition, continuous on-service education is helpful for the medical workers to recognize the patients' safety and to implement the principle of patients' safety into the clinic work, in order to improve the medical environment emphasizing patients' safety.

Increase self-management and the application of target setting: From the data analysis result, it is known that most trainees want to learn new knowledge from the training, in order to be competent to deal with the future challenge from work. And personnel who have received trainings generally think that training can improve their working ability and increase their confidence. Therefore, it is necessary to often give positive affirmation as the personnel participate in training activities. In the light of that self-management is a method widely applied by enterprises in recent years, this research suggests applying target setting and self-management in training design when the organization carries out training activities, so that the trainee can reach the effect of transfer of training spontaneously after the training.

Maintain the training result: Transfer of training is of course important, but it is a more important problem as for how to maintain the transfer effect for a longer time. About the strategies used to maintain the transfer effect, this research integrated many scholar's researches and included the following three items: (1) Behavior patterns for reoccurrence prevention: Predict the trainees' future troubles according to the failure experiences of pas training plans, plan out the necessary behavior patterns for successful trainings, and help the trainees to overcome potential difficulties, so that the training effect can be transferred smoothly. Create an environment to learn safe care: Try the best to provide trainings in a simulated environment, encourage to report defective matters, and to establish a system where the trainees can learn from the errors. Establish abnormal event disposal procedure and analyze, review and improve the medical error events through hospital reporting system. (2) Companion System: Companion system means that trainees participate in the training together with companions, so that the companion's suggestions can promote the trainee's study and prevent reoccurrence of the trainee's bad habit. When the trainee applies new technologies in the organization, if recognized by the colleagues' recognition, the trainee will be more confidence in the new technologies and it will be easier to maintain the transfer effect. At the same time, it is necessary to strengthen communications with the patients, in order to understand each other. It is also necessary to encourage the medical personnel to share experience and lesson, to create a career atmosphere where different units can exchange the comments. (3) Push the measures: Pushing the measure is the extension of learning, in which the trainer touches the trainee face to face. When the trainees are about to forgetting the learned knowledge, it is very useful to provide a fortified course (such as playing a video tape) at appropriate time, so that the trainee can keep the memory of the training teaching material and maintain the transfer effect. Therefore, it is necessary to provide medical safety related education and researches and develop related education methods and media teaching materials.

CONCLUSION, LIMITATION AND FUTURE RESEARCH

This study analyzes (1) relationships between the training design, training transfer, and motivation of training transfer; (2) relationships between the trainees' characteristics , training transfer, and motivation of training transfer; (3) relationships between the work environment, training transfer, and motivation of training transfer; (4) shows that training design, trainees' characteristics, and work environment have direct influence on training transfer, and also have indirect influence on motivation of training transfer for our sample. This study demonstrates the importance of an integrated analysis of individual and organizational factors of training transfer and reinforces previous literature on the importance of individual and organizational factor to motivation of training transfer and training transfer.

There are some limitation have to be recognized. First, the evaluation of training transfer is based on the trainees' memory, there may be errors caused by the trainees' error memory and influencing the data collection and assorting. Second, the participants in this study work at a case hospital who participated in the patients' safety education course in 2008 as the object, but because the trainees participated in different courses, there may be measurements of error caused by the course difference. Third, this research used self-report scale and the measurement of variables are mainly finished through the individual perception. However, the individual perception is much different from the actual situation; the scale is unnecessarily conforming to the actual situation completely. The research mode can be more complete if combining the trainees' post training result and adding objective evaluation indicators. Therefore, it is suggested to add the performance evaluation results after training, in order to make the research mode more complete.

REFERENCES

Baldwin TT, Ford JK (1988). Transfer of Training: A review and Direction for future research. Pers. Psychol., 41: 63-105.

Berry ML, Morris ML (2005). Organizational factors impacting sexual harassment prevention programs. In M. L. Morris and F. Nafuko (Eds.), Proceedings of the 2005 Academy of Human Resource Development Annual Conference, Estes Park, CO: Academy of HRD, pp. 1271–1278.

Brinkerhoff RO, Montesino MU (1995). Partnerships for transfer of training: Lessons from a corporate study. Hum. Resour. Dev. Q., 6: 263-274.

Brown TC, McCracken M (2009). How barriers to training participation become barriers to training transfer. J. Euro. Indus. Train., 33(6): 492-512

Burke L, Hutchins HM (2007). Training transfer: an integrative literature review. Hum. Resour. Dev. Q., 6(3): 263-296.

Cheng EWL, Hampson I (2008). Transfer of training: a review and new insights. Int. J. Manage. Rev. 10(4): 327-441.

Cheng WL, Ho CK (2001b). The influence of job and career attitudes on learning motivation and transfer. Career Dev. Int., 6(1): 8-14.

Cromwell SE, Kolb JA (2004). An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace. Hum. Resour. Dev. Q., 15(4): 449-471.

Facteau JD, Dobbins GH, Russell JEA, Ladd RT, Kudisch JD (1995). The influence of general perceptions of the training environment on pre-training motivation and perceived training transfer. J. Manage., 21(1): 1-25.

Ford JK, Weissbein DA (1997). Transfer of training: An updated review and analysis. Perform. Improve. Q., 10 (2): 22-41.

Geilen EW (1996). Transfer of training in corporate setting: Testing a model. In Holton III EF (Ed.), Proceedings of the 1996 Academy of Human Resource Development Annual Conference. Austin, TX: Academy of HRD.

Haller G, Garnerin P, Morale M-A (2008). Effect of crew resource management training in a multidisciplinary obstetrical setting. Int. J. Qual. Health Care, 20(4): 254-263.

Helmreich RL, Merritt AC, Wilhelm JA (1999). The evolution of Crew Resource Management in commercial aviation. Int J Aviation Psychol., 9: 19-32.

Holton EF III, Ruona WEA, Leimbach M (1998). Development and validation of a generalized learning transfer climate questionnaire: Final research. In Torraco R (Ed.), Proceedings of the 1998 Academy of Human Resource Development Annual Conference. Baton Rouge,

LA: Academy of HRD.
Holton EF, Bates RA, Ruona WE (2000). Development of a generalized learning transfer system inventory, Hum. Resour. Dev. Q., 11: 333-369.
Hutchins HM, Burke LA (2007). Identifying trainers knowledge of training transfer research findings closing the gap between research and practice, Int. J. Train. Dev., 11(4): 236-264.
Kimberly AS, Eduardo S, Michael TB (2001). To Transfer or not to transfer? Investigating the Combined Effects of Trainee Characteristics, Team Leader Support, and Team Climate, J. Appl. Psychol., 86(2): 279-292 .
Kirwan C, Birchall D (2006). Transfer of learning from management development programmes: testing the Holton model, Int. J. Train. Dev., 10(4): 252-268.
Lance CE, Kavanagh MJ, Brink KE (2002). Retraining climate as a predictor of retraining success and as a moderator of the relationship between cross-job retraining time estimates and time to proficiency in the new job, Group. Organ. Manage., 27: 294-317.
Lee M (2007). Human resource development from a holistic perspective, Adv. in Dev. Hum. Resour. 9(1): 97-110.
Lim DH, Morris ML (2006). Influence of Trainee Characteristics, Instructional Satisfaction, and Organizational Climate on Perceived Learning and Training Transfer. Hum. Resour. Dev. Q., 17(1): 85-115.
Mathieu JE, Martineauk. WJ (1993). Individual and situational influences on the development of self-efficacy: implications for training effectiveness. Pers. Psychol., 46: 125.
McGreevy JM, Otten TD (2007). Briefing and debriefing in the operating room using fighter pilot crew resource management. J. Am. Coll Surg., 205: 169-176.
Meintel, J. Crew Resource Management. Mobility Forum, 2009/5/24, Retrieve from: http://findarticles.com/p/articles/mi_qa3744/is_200407/ai_n9451813/.
Naris NS, Ukpere IW (2009). The effectiveness of an HR code: Staff development and training at the Polytechnic of Namibia. Afr. J. Bus. Manage., 3(12): 879-889.
Noe RA, Schmitt N (1986). The Influence of Trainee Attitudes on Training Effectiveness: Test of a Model. Pers. Psychol., 39: 497-523.
Noe RA (1986). Trainee attributes and attitudes: Neglected influences of training effectiveness. Acad. Manage. Rev., 11: 736-749.
Noe RA (2005). Employee Training and Development. (3rd ed.) New York, NY: Irwin /McGraw.
Noe RA, Wilk SL (1993). Investigation of the factors that influence employees' participation in development activities. J. Appl. Psychol., 8: 291-302.
Noe RA (1998). Employee Training and Development, 2nd Ed., McGraw-Hill Higher Education.
Oriol MD (2006). Crew resource management: applications in healthcare organizations. J. Nurs. Adm., 36: 402-406.
Parry SB (1997). Evaluating the Impact of Training: A Collection of tools and Techniques. Alexandria, VA: American Society for Training and Development.
Rouiller JZ, Goldstein IL (1993). The relationship between organizational transfer climate and positive transfer of training, Hum. Resour. Dev. Q., 4: 377-390.
Ryman DH, Biersners RJ (1975). Attitudes predictive of driving training success. Pers. Psychol., 28(2): 181-188.
Saks AM, Belcourt M (2006). An investigation of training activities and transfer of training in organizations. Hum. Resour. Manage., 45(4): 629-48.
Scaduto A, Lindsay D, Chiaburu DS (2008). Leader influence on training effectiveness: motivation and outcome expectation processes. Int. J. Train. Dev., 12 (3): 158-170.
Tannenbaum SI, Yukl GA (1992). Training and development in work organization, Ann. Rev. Psychol., 43: 399-341
Taylor CR, Hepworth JT, Buerhaus PI, Dittus R, Speroff T (2007). Effect of crew resource management on diabetes care and patient outcomes in an inner-city primary care clinic. Qual. Saf Health Care, 16: 244-247.
Tracey JB (1995). Applying trained skills on the job: the importance of the work environment. J. Appl. Psychol., 80: 239-252.
Wexley KN, Latham GP (1991). Developing and training human resources in organizations.IL: Scott Foresman.
Xiaom J (1996). The Relationship Between Organizational Factors and the Transfer or Trianing in the Electronics Industry in Shenzhen, China, Hum. Resour. Dev. Q., 7: 59.