CHAPTER 2

Literature Review

In this study, the literature review includes the following topics:

1. Emotional intelligence
   1.1 Definition of emotional intelligence
   1.2 Conceptual models related to emotional intelligence
   1.3 Measurement of emotional intelligence
   1.4 Studies related to emotional intelligence
   1.5 Factors related to emotional intelligence
2. Work-related stress
   2.1 Definition of work-related stress
   2.2 Conceptual models related to work-related stress
   2.3 Measurement of work-related stress
   2.4 Studies related to work-related stress
   2.5 Factors related to work-related stress
3. Relationship between emotional intelligence and work-related stress
4. Situation related to emotional intelligence and work-related stress of nurses in Dali
5. Conceptual Framework

Emotional Intelligence

Emotional intelligence has been an interesting topic among researchers for many years (Lopes, Grewal, Kadis, Gall, & Salovey, 2006). Emotional intelligence is also an increasingly recognized concept in the social psychology literature (Cherniss, 2002), and in nursing journals (Cadman & Brewer, 2001; Evans & Allen, 2002; Freshman & Rubino, 2002). It is considered a virtue and is important for understanding other people (Vitello-Cicciu, 2002). In health care, emotional intelligence is considered an important concept for medical practitioners to understand the patient's point of view, and nursing leaders participation contributing to successful management is very important.

In nursing literature, Evans and Allen (2002) acknowledged that nurses can manage their emotions and understand patients and that this is an asset for providing care. Emotional intelligence can be improved through the whole life (Segal, 2002). Goleman (1998) suggested professional training programs should be used to develop emotional intelligence in the workplace.

Definition of Emotional Intelligence

Emotional intelligence was proposed first time by Thorndyke (1920), who noted that it was valuable in human interactions. His conclusion was that social intelligence and academic ability are separated, and both are key to success in real life. Within the group of social intelligences, Gardner (1993) distinguished between two types of personal intelligences: interpersonal and intrapersonal intelligence. The wisdom of relationships has to do with understanding other people's abilities and the ability to work with them. Intra or inter personal intelligence included the ability to form an accurate picture of yourself and to achieve success in life. The latter included the ability to be self-aware, to recognize one's own feelings and to take account of them in social behavior.

Salovey and Mayer (1990) defined emotional intelligence as the ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action. In 1997, Mayer and Salovey refined the definition of emotional intelligence as a set of interrelated skills concerning the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate

feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997).

Elsewhere, Bar-On (1997) defined emotional intelligence as an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures.

Goleman (1998) postulated a broad interpretation of emotional intelligence that defined it as the ability to distinguish feelings, to motivate ourselves, and to manage emotions in ourselves and in our relationships.

In the present study, the definition of emotional intelligence was drawn from the work of Salovey and Mayer (1990). This definition was chosen because it was used as the foundation of other emotional intelligence approaches and is a widely accepted definition.

Conceptual Models Related to Emotional Intelligence

Currently, there are three main approaches of emotional intelligence accepted widely by the scientific field around the world. The researchers in the field of emotional intelligence did the classification based on the Ability Model of Emotional Intelligence (Salovey & Mayer, 1990; Mayer & Salovey, 1997), Baron-On Model of Emotional-social Intelligence (Bar-On's, 1997), and Emotional Competencies Model (Goleman, 1998).

The Ability Model of Emotional Intelligence (Salovey & Mayer, 1990). In an article published by Salovey and Mayer in 1990, the concept of emotional intelligence was formally defined. This article reviewed psychology and psychiatry, and other literature in the field of artificial intelligence, and concluded that humans have the ability which they called an 'emotional intelligence'. Their idea was that some people are more rational than others, and some have more reasoning skills than others. Salovey and Mayer (1990) described four core parts of emotional intelligence, namely, appraisal, expression, regulation and utilization. Salovey and Mayer (1990) conceptualized emotional intelligence as including four distinct dimensions:

Self-emotional appraisal (SEA). This relates to the people's ability to understand their deep emotions and be able to express these emotions naturally. People who have great ability in this area will sense and acknowledge their emotions than other people.

Others' emotional appraisal (OEA). This relates to people's ability to perceive and understand the emotions of those people around them. People who are high in this ability will be much more sensitive to the feelings and emotions of others as well as being able to understand them.

Regulation of emotion in the self (ROE). This relates to the ability of people to regulate their emotions, which will enable a more rapid recovery from psychological distress. People who have a high ability in regulation of emotion would be able to return quickly to normal psychological states and lose their temper less.

Use of emotion to facilitate performance (UOE). This relates to the ability of individuals to use of their emotions by guiding them to establish activities and personal performance. People who express a high use of emotion would be able to encourage themselves to do better and keep emotion in a positive and productive way fairly continuously.

The Ability Model of Emotional Intelligence (Mayer & Salovey, 1997). Mayer and Salovey refined Ability Model of Emotional Intelligence (Salovey & Mayer, 1990). This model is a conceptual framework that is hierarchical from the basic psychological process of perceiving and expressing of emotions to the higher more psychologically integrated process of the reflective regulation of emotions. This refined model included four dimensions:

Perception, appraisal, and expression of emotion. This relates to the accuracy with which an individual can identify emotions and emotional content in their own thoughts and in other people.

Emotional facilitation of thinking. This relates to individual can prioritize thinking by directing attention, and generating emotions to assist judgment.

Understanding and analyzing emotions. This relates to the ability to label and recognize relations among emotions, and interpret meanings that emotions convey, as well as understand complex feelings.

Reflective regulation of emotions to promote emotional and intellectual growth. This relates to the ability to stay open to feelings, engage or detach from an emotion, and reflectively monitor emotions.

Bar-On Model of Emotional-social Intelligence (Bar-On, 1997). Bar-On pointed out that emotional intelligence is associated with emotional and social skills, these skills determine the understanding and the ability to express themselves, the ability to understand other people and their everyday relations (Bar-On, 1997).

Bar-On (1997) conceptualized emotional intelligence as including five broad areas of skill as follows:

Interpersonal skills refer to the ability to understand other people's emotions, feelings, and thoughts.

Adaptability refers to the ability to adjust their feelings in different situations, including reality testing, flexibility, and problem-solving.

Stress management refers to the ability to handle stress and control emotions.

Motivational and general mood refers to the ability to feel and express positive emotions and optimism.

Emotional Competencies Model (Goleman, 1998). Goleman (1998) pointed out several competencies which can predict effectiveness and personal outcome, and divided them into five dimensions: self-awareness, self-regulation, self-motivation, empathy, and social skills. Goleman, Boyatzis, and McKee (2002) classified competencies into two categories: personal competencies and social competencies. Personal competency includes self-awareness and self-management. Social competencies contain social-awareness and relationship management. Then, Goleman and colleagues simplified this model into a two by two matrix with four dimensions as follows:

Self-awareness means recognition of people's own feelings, awareness of their abilities and limitations, and self-confidence or efficacy.

Social-awareness means people's awareness of others' emotions, including empathy, service orientation, and organizational awareness.

Self-management means the ability of people to control their negative emotions, including self-control, trustworthiness, conscientiousness adaptability, achievement drive, and initiative.

Relationship management means high-level social skills, including the ability of general communication, to influence others, to manage conflict and to inspire others.

Since each model has a different point of view on components of emotional intelligence, only one model was selected. Although Emotional Competencies Model was perceived as the most popular theory, the Ability Model of Emotional Intelligence developed by Salovey and Mayer (1990) is the most foundational and widely used model of emotional intelligence. Moreover, in this study, the Wong and Law Emotional Intelligence Scale was used which based on Ability Model of Emotional Intelligence. Therefore, the Ability Model Emotional of Intelligence (Salovey & Mayer, 1990) was used in this study.

Measurement of Emotional Intelligence

According to the literature view, there are five main widely used instruments for measuring emotional intelligence: the Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al., 2003); Emotional Quotient Inventory (Bar-On, 2006); Emotional Competence Inventory 2.0 (Goleman & Boyatzis, 2002); Schutte Emotional Intelligence Scale (Schutte et al., 1998); and the Wong and Law Emotional Intelligence Scale (Wong & Law, 2002).

Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al., 2003). Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT V2.0) was developed by Mayer, Salovey, Caruso, and Sitarenios (2003) based on the Ability Model of Emotional Intelligence (Mayer & Salovey, 1997) which measured how well people perform tasks

rather than asking them for their own assessment of their emotional sensitivity. The MSCEIT V2.0 assesses the four-branch model of emotional intelligence (perceiving, using, understanding, and regulating emotions) with 141 items that are divided among 8 tasks (two for each branch). The reliabilities of the four branch scores (perceiving, using, understanding, and managing emotions) for both methods of scoring were between 0.76 and 0.91 (Mayer et al., 2003). Mayer et al. (2003) reported one factor to four factors, the gradual improvement of the solution. The important thing is that all models work well. The most appropriate is a four factor solution, which is the strength of the health index (NFI = 0.98, 0.97; TLI = 0.96, 0.97; RMSEA = 0.05, 0.04) using consensus and expert scoring methods, respectively. The test-retest reliability of the full-test MSCEIT V2.0 over a three-week interval was r (59) = 0.86 in a college student sample (Brackett & Mayer, 2003).

Emotional Quotient Inventory (Bar-On, 2006). The Emotional Quotient Inventory (EQ-I) was developed by Bar-On (2006), which was based on Bar-On Model of Emotional-social Intelligence (Bar-On, 1997). It was also the first emotional intelligence tool to be peer reviewed in the Buros mental measurement yearbook (Plake & Impara, 1999). The EQ-I is a self-report tool which consists of 133 items which include five composite scales: intrapersonal, interpersonal, adaptability, general mood, and stress management. EQ-I using a five-point Likert scale (1= very seldom or not true of me and 5 = very often true of me). The higher the score the higher the emotional intelligence. The norming studies on an American sample indicated an internal consistency coefficient of the EQ-I was 0.97, and similar findings were reported throughout the world (Bar-On, 2006; van Rooy & Viswesvaran, 2007).

Emotional Competence Inventory 2.0 (Goleman & Boyatzis, 2002). The Emotional Competence Inventory (ECI) was developed by Goleman and Boyatzis (2002) and based on the Emotional Competencies Model (Goleman, 1998). The purpose of ECI is to assess the emotional capacity of individuals and organizations, as well as positive social behavior. The current version is ECI Ver.2.0 that measures ECI, and is designed to measure emotional competencies specifically in the work context. It comprises 72 items and 18 competencies grouped into the following four clusters: self-awareness, self-management, social awareness and social skills. The ECI 2.0 uses a six-point Likert Scale

and the alpha coefficients range from 0.68 to 0.87 with an overall average internal consistency coefficient of 0.788 (Wolff, 2005).

The Schutte Emotional Intelligence Scale (Schutte et al., 1998). The Schutte Emotional Intelligence Scale (SEIS) was developed by Schutte, Malouff, Hall, and Haggerty (1998) based on the Ability Model of Emotional Intelligence (Salovey & Mayer, 1990). This scale evaluates emotional intelligence which have 33 items and four dimensions including the appraisal and expression emotions in self and others, regulation of emotions in self and others, and utilization of emotions. Participants report by using a five-point Likert scale (1 = strong disagree to 5 = strong agree). The cross-check of internal consistency showed a Cronbach's alpha of 0.87, the test-retest reliability was 0.78. The score was related to eight of nine indicators of emotional intelligence (Schutte et al., 1998). The total score can range from 33 to 165.

Wong and Law Emotional Intelligence Scale (Wong & Law, 2002). Wong and Law (2002) developed the Wong and Law Emotional Intelligence Scale (WLEIS) in Chinese, based on the Ability Model of Emotional Intelligence (Salovey & Mayer, 1990). The WLEIS has 16 items and consists of four dimensions: self-emotion appraisal (SEA); others' emotion appraisal (OEA); regulation of emotion (ROE); and use of emotion (UOE). The response format was a 7-point Likert-type Scale (1=totally disagree to 7=totally agree). Wong and Law (2002) estimated the validity using confirmatory factor analysis and the result revealed that standardized root mean square residual (RMR) was 0.08. According to Bachand and Beard (1995), RMR ranges from 0 to 1, the smaller the RMR is, and the better validity is. The WLEIS's comparative fit index (CFI) was 0.93, Tucker-Lewis Index (TLI) was 0.91. Aroian and Norris (1998) cited from (Munro, 2001), stated that CFI and TLI ranges between 0 and 1. The values greater than 0.90 indicate good validity of the instrument. The reliability estimate (coefficient alpha) for the four dimensions of self-emotion appraisal, others' emotion appraisal, regulation of emotion and use of emotion were 0.89, 0.85, 0.76, and 0.88, respectively (Wong & Law, 2002). The Wong and Law Emotional Intelligence Scale was used by Li in 2011. The overall reliability coefficient was 0.86, and for each dimensions self-emotional appraisal, others' emotional appraisal, regulation of emotion, use of emotion were 0.70, 0.83, 0.84 and 0.70, respectively (Li, 2011).

Compared with other instruments developed in western countries, the items of the Wong and Law Emotional Intelligence Scale fit more with the eastern culture and norms. First, it is clear that cultural norms may affect the choice of the right answer in performance testing. For instance, most Asians will accept the power differences between their superiors and their subordinates. Secondly, Asians are trained to suppress and regulate their emotions, while Westerners are trained to express their emotions. Therefore, when the boss puts forward unreasonable demands, a kind of reactive quiet response in Chinese culture may be seen as a kind of high emotional reaction, but in western culture may not be so. Therefore, the Wong and Law Emotional Intelligence Scale is more appropriate for Chinese subjects than other western developed emotional intelligence instruments. Moreover, the Wong and Law Emotional Intelligence Scale was widely used in many occupations in Hong Kong (Wong & Law, 2002) and mainland China. In addition, the Wong and Law Emotional Intelligence Scale is brief compared with other existing emotional intelligence scales such as Mayer-Salovey-Caruso Emotional Intelligence Test, Emotional Quotient Inventory, and Emotional Competence Inventory 2.0. Owing to the reasons above, the Wong and Law Emotional Intelligence Scale was used in this research.

Studies Related to Emotional Intelligence

Emotional intelligence is a concept increasingly recognized in the social psychology literature and the nursing journals (McQueen, 2004). Many organizations have sent their employees to various emotional intelligence training workshops to improve their emotional intelligence ability.

Successful emotional assessment and staff who are able to express their feelings will be better accepted and understood by their colleagues, and therefore, they will have the ability to develop themselves, manage their own career path and personal leadership (Carmeli, 2003). Moreover, people can use their emotions for their own future via a variety of means: flexible planning and improve the decision-making ability, cultivating creative thinking, improving perseverance on challenging tasks, in dealing with positive and negative emotions more flexibly and effectively (Akrivos, Ladkin, & Reklitis, 2007). Emotional intelligence has been widely researched in non-nursing and nursing professions in foreign countries and in China.

Wong and Law (2002) conducted a study using Wong and Law Emotional Intelligence Scale to identify the emotional intelligence of leaders. The sample was composed of 149 middle-level administrators in Hong Kong government. The result showed that the overall emotional intelligence of supervisors was at a moderate level ($\bar{x}$ = 4.63, SD = 0.83). The results of the four dimensions were also at a moderate level, which the score of OEA was the highest ($\bar{x}$ = 4.59, SD = 0.96), then UOE ($\bar{x}$ = 4.50, SD = 0.96), ROE ($\bar{x}$ = 4.71, SD = 0.91), and SEA ($\bar{x}$ = 4.70, SD = 0.97).

Görgens-Ekermans and Brand (2012) conducted a study to investigate inter-relationships between emotional intelligence, work stress and burnout among nurses in the Western Cape Province, South Africa. The emotional intelligence was examined by using the Swinburne University Emotional Intelligence Test (Palmer & Stough, 2001) among 122 nurses in private hospitals. The scale consisted of 59 items in a 5-point Likert scale (1 = none at all to 5 = very much). The results showed that the total score of emotional intelligence was 213.35, (SD = 18.04). It means that they had a high level of emotional intelligence.

Karimi et al. (2014) conducted a study to explore the relationship between emotional intelligence, well-being and job stress among a group community nurses in Australia. The emotional intelligence was examined with the Schutte Emotional Intelligence Scale (Schutte et al., 1998) among 312 community nurses. The result showed that nurses' emotional intelligence was at a high level ($\bar{x}$ = 3.73, SD = 0.36).

In China, Tao and Song (2012) conducted a study to investigate the status of emotional intelligence and job performance of clinical nurses in Hubei, China. The emotional intelligence was tested among 378 nurses with the Wong and Law Emotional Intelligence Scale. The result showed that the overall emotional intelligence of nurses was at a high level ($\bar{x}$ = 5.15, SD = 0.45). For each dimension, the dimensions of SEA and UOE were at high level, SEA ($\bar{x}$ = 5.82, SD = 0.65), UOE ($\bar{x}$ = 5.41, SD = 0.78). The dimensions of ROE and OEA were at moderate level, ROE ($\bar{x}$ = 4.99, SD = 0.85), OEA ($\bar{x}$ = 4.37, SD = 0.86).

Hu et al. (2013) conducted a study to explore the relationship between emotional intelligence and emotional labour strategy of nurses. The emotional intelligence was

tested by the Wong and Law Emotional Intelligence Scale among 488 nurses in Shanghai, China. The results showed that the overall emotional intelligence of nurses was at a moderate level. The results of the four dimensions were also at moderate level ($\bar{x}$ = 4.50, SD = 1.00), which the score of OEA was the highest ($\bar{x}$ = 4.40, SD=0.90), then UOE ($\bar{x}$ = 4.20, SD = 1.00), SEA ($\bar{x}$ = 4.00, SD = 0.90), and ROE ($\bar{x}$ = 3.90, SD = 1.00).

Ma et al. (2016) conducted a study to explore the nurses' emotional intelligence, the relationship between positive emotions and job involvement in Xi'an, China. Emotional intelligence was tested among 420 nurses by the Wong and Law Emotional Intelligence Scale. The results showed that the total score of emotional intelligence was 60.27, (SD = 8.23). It means that there was a moderate level of emotional intelligence among nurses. The author didn't mention about the level of each dimension.

In summary, according to the literature review, the emotional intelligence as measured by different instruments among nurses in South Africa and in Australia were at a high level. This means it meant that western nurses possessed a high level of emotional intelligence. In China, several studies, using the Wong and Law Emotional Intelligence Scale, the result of overall emotional intelligence of nurses was at a high level in Hubei. For each dimension, the dimensions of SEA and UOE were at high level ($\bar{x}$ = 5.82, SD = 0.65; $\bar{x}$ = 5.41, SD = 0.78, respectively). The dimensions of ROE and OEA were at moderate level ($\bar{x}$ = 4.99, SD = 0.85; $\bar{x}$ = 4.37, SD = 0.86, respectively) (Tao & Song, 2012). The result of overall emotional intelligence of nurses was at a moderated level in Shanghai. The results of four dimensions were also at moderate level, which the score of OEA was the highest ($\bar{x}$ = 4.40, SD = 0.90), then UOE ($\bar{x}$ = 4.20, SD = 1.00), SEA ($\bar{x}$ = 4.00, SD = 0.90), and ROE ($\bar{x}$ = 3.90, SD = 1.00) (Hu et al., 2013). The studies showed inconsistent results in China. However, no published study was found in Yunnan to explore the level of emotional intelligence among nurses. Dali is located in the Midwest of Yunnan Province which has lower economy and education. In addition, Dali is an area of many minorities, each with a different language and religion, which makes it prone to conflict in the complex hospital environment. Therefore, it is necessary to explore the emotional intelligence of nurses in Dali, in Yunnan Province now.

Factors Related to Emotional Intelligence

According to the literature review, some factors are related to emotional intelligence such as age, gender, educational level and stress. Most importantly, emotional intelligence can be improved by training.

The age was a factor that being report the relationship with emotional intelligence. Nikolaou and Tsaousis (2002) found that older individuals score higher on emotional intelligence than younger ones. Hu, Liu and Hou (2010) stated that people older than 40 years have highest emotional intelligence.

Additionally, gender may affect people's emotional intelligence. Previous researchers commonly believed that women had a higher ability of emotional intelligence than men (Downey, Papageorgiou, & Stough, 2005). In addition, Mayer et al. (2000) showed that women generally have higher emotional intelligence than men (Extremera, Ferna'ndez-Berrocal, & Salovey, 2006).

Educational level was one factor that affect people's emotional intelligence. People with high level of education may have more chance to contact courses which can improve their self-awareness, such as sociology, psychology, interpersonal and communication, and aesthetics. Yuan (2007) pointed out that those courses can enhance confidence and improve the emotional intelligence.

The emotional intelligence may be associated to stress. Görgens-Ekermans and Brand (2012) stated that higher emotional intelligence is significantly related with lower stress in a sample of South African nurses.

While emotional intelligence evolves over time, this does not necessarily mean that it should not be mentioned during the education process. It is an asset that can be learned and taught for life (Segal, 2002). Goleman (1998) suggested that emotional intelligence can be improved through professional training programs in the workplace. Training in affective cognitive and behavioral skills can improve emotional intelligence (Leban & Zulauf, 2004).

Work-related Stress

Stress was introduced as a term in psychology by Selye (1956). Cox and Mackay (1981) have classified stress definitions with regard to the conceptualization of stress as a stimulus-answer, or interaction stimulus–response. Stress as transactional stimulus–response refers to the evaluation that the individual makes of the fit/unfit that exists between environmental demands and their capacity to confront them (Edwards, 1988; Harris, 1989). Based on the definition the model is usually considered superior, because it provides more complete ideas about pressure dynamics and can be in the case of a single record having different experiences (Arnold, Cooper, & Robertson, 1998).

Definition of Work-related Stress

There are many stimuli that will generate stress, and work is one of them. Stress at work, specifically, is increasingly generating concern for employees, employers, and governments (Cox, Griffiths, & Rial-Gonzales, 2000; Muchinsky, 2006). Work-related stress is increasingly considered one of the worst occupational health hazards, reducing employee satisfaction and productivity (HSE, 2009). In an organizational context, work-related stress is also known as occupational stress, workstress, and job stress (Muchinsky, 2006). All are concerned with stress at work, but different models and dimensions originated from Europe and the USA. Work-related stress has been given different definitions and meaning as follows:

Cox et al. (2000) defined work related stress as a psychological state which is part of and reflects a wider process of interaction between the person and their work environment.

European Commission [EC] (2002) defined work-related stress as the emotional, cognitive, behavioral and physiological reaction to aversive and noxious aspects of work, work environments and work organization.

Palmer et al. (2004) defined work-related stress is a harmful emotional and somatic response to stimuli which are in his or her job when the perceived pressure exceeds an individual's perceived ability to cope.

The HSE (2007) defined work-related stress is the adverse reaction people have to excessive pressure or other types of demands placed on them from work.

In summary, these are different definitions of work-related stress. However, work-related stress mostly was explained as response to stimuli. Work-related stress is a harmful emotional and somatic response to stimuli which are in his/her job when the perceived pressure exceeds his/her perceived ability to cope. Palmer et al. (2004) defined work-related stress in a precise way so it was used in this study.

Conceptual Model Related to Work-related Stress

Many models related to work-related stress have been developed. Some of them have been accepted for the evaluation of work-related stress, and are described as follows.

The Demand-Control Model (Karasek, 1979). The Demand-Control Model, developed by Robert Karasek (1979), identified a highly stressed work as that which has high responsibility without corresponding authority. High stress is associated with symptoms of depression, job dissatisfaction, and absenteeism. The Demand-Control Model states that the pressure on the physical and mental health of workers is the biggest risk facing high mental load or pressure, combined with a low latitude control or decision to meet these requirements. The model has two dimensions and was divided into four types of psychological in work, which divided by interaction between psychological job demand and decision latitude, four-types are high strain job, active job, low strain job, and passive job.

This model focuses on the interaction between the objective needs of the work and the decisions employees make when meeting these requirements. The model also shows that the “best” job is a positive job, with high demand being balanced by high decision latitude. However, most of the research on the requirements control model focuses on how to redesign high-stress jobs by increasing the control of workers. Further refinement of this model also recognizes the importance of support from superiors and colleagues (Karasek, Triantis, & Chaudhry, 1982). Job stress occurs when job demands are high and job decision latutude is low, which impacts the individual’s confidence and self-esteem.

The Person-Environment Fit Theory (Edwards, Caplan, & van Harrison, 1998). The Person-Environment Fit approach, based on the pioneering work of Robert Kahn, emphasized the stressful nature of confusing or conflicting role demands (Kahn, Wolfe, Quinn, & Snoek, 1964). Fit is defined as a person's skill and ability matched with job requirements, as defined by role expectations. The core premise of the Person-Environment Fit Theory is that stress arises not from the person or environment separately, but rather by their fit or congruence between them.

The core elements of the theory depict three basic distinctions central to the Person-Environment Fit Theory. The first and most basic distinction is between the person and environment. This distinction is a prerequisite for the conceptualization of Person-Environment Fit Theory and provides the basis for examining reciprocal causation between the person and environment. The second distinction is between objective and subjective representations of the person and environment. A third distinction differentiates between two types of Person-Environment Fit. The first involves the fit between the demands of the environment and the abilities of the person. The second type of Person-Environment Fit involves the match between the needs of the person and the supplies in the environment that pertain to the person's needs.

Person-Environment Fit concepts, especially role ambiguity and role conflict, have been investigated in numerous studies. This model emphasizes the importance of relationships in work. These relationships are with bosses, colleagues, subordinates, and a growing number of clients.

Model of Work-related Stress (Palmer et al., 2004). In response to concerns around work-related stress, in order to support the theory and practice advocated by the UK government's health and safety division, the Health and Safety Executive, Palmer et al. (2001) developed a simple model of work-related stress that could be used to explain the relationship between potential work-related stress hazards, individual and organizational symptoms of stress, negative outcomes, and financial costs. This model was subsequently updated and revised by Palmer et al. in 2004 following the revised HSE Management Standards. As outlined in the companion paper on HSE's Management Standards approach (Cousins et al., 2004), researcher has identified a taxonomy of work-related hazards. Specifically, there is an accumulation of evidence that six particular

hazards: demands, control, support (including managerial support and colleague support), relationships at work, role, and organizational change have the potential negative impact on employee well-being (and productivity), regardless of type or size of organization. The HSE chose to focus on these six hazards to provide six Management Standards, and associated 'states to be achieved' that suggest generic principles and interventions that will achieve a positive effect for the workforce, and a reduction in the national incidence of work-related stress.

The HSE Management Standards incorporated a list of hazards that were believed to cause work-related stress which represented a set of psychosocial working conditions that reflect levels of health, wellbeing, and organizational performance (Cousins et al., 2004; HSE, 2003). These working conditions were divided into six hazards:

Demands refer to stressful situations that arise when employees are not able to deal with the demands of their job. Job demands include exposure to issues such as workload, work patterns, and work environment. Large amounts of complex work, scheduling problems, and unrealistic deadlines may result in stress for employees.

Control refers to stressful situations that arise when employees lose control over their pace of work. For example, employees cannot decide when to take a break and have no choice in deciding what work they do. Control balanced against demands, lack of autonomy, and too much supervision may result in stress for employees.

Support was divided into two sub-dimensions: including managerial support and peer support. It refers to stressful situations from lacking encouragement, sponsorship, and resources provided by the line manager and colleagues. Lack of feedback and encouragement from line manager, and lack of respect and help from work colleagues may result in stress for employees.

Relationships refer to stressful situations from the harassment and bullying by colleagues and customers. Suffering bullying and harassment, making conflicts with line managers, colleagues, and customers may result in stress for employees.

Role refers to stressful situations that arise when employees cannot clearly understand their role or they have conflicting roles. Having role ambiguity and role

conflict lead employees to perform extra duties, and have more burdens and responsibilities, which results in stress for employees.

Change refers to stressful situations that arise when employees lack opportunities to participate in workplace change. Little knowledge of organizational changes, low involvement in the organizational activities, and poor organizational culture may result in stress for employees.

Through these potential hazards, there are adverse effects of work-related stress of employees such as increased sickness absence and staff turnover, reduced staff morale and loyalty, and reduced staff performance. All of outcomes are very harmful for the personal physical and mental health and organizational effectiveness.

The literature review demonstrated that the majority of the work-related stress models, such as the Demand-Control Model (Karasek, 1979) and the Person-Environment Fit Theory (Edwards et al., 1998) were developed in the 1980s and 1990s. Since these landmark models, a lot of new data has accumulated in the literature, concerning work related factors associated with individuals and organizations. Model of Thomas's Model (Palmer et al., 2004) together with empirical attempted to combine the two approaches into an 'integrated' approach. This model emphasizes the importance of the perception of psychological working environment as it reflects levels of health, wellbeing, and organizational performance. As illustrated in the model, employees are subject to the six primary stressors identified by the HSE. These stressors can lead to negative individual and organizational symptoms and outcomes. The HSE Management Standards provide a useful and organizational framework for measuring, monitoring, and managing work-related stress (Nieuwenhuijsen et al., 2010). So the Model of Work-related Stress (Palmer et al., 2004) was used in this study.

Measurement of Work-related Stress

Based on the literature review, the following instruments were commonly used to assess stress which occurred at work. In this study, the researcher will use self-reporting to measure work-related stress.

The Occupational Stress Inventory Revised (Osipow, 1998, as cited in Jackson, 2004). The revised edition of the Occupational Stress Inventory (OSI-R) was developed by Osipow (1998) which was based on the Person-Environment Fit Theory (Caplan, 1987). The OSI-R has 140 items which are separated into three domains with separate instruments: 1) the Occupational Roles Questionnaire (ORR) is made up of six scales with ten items for each scale and measures the occupational stress domain of the interactive model. The roles identified as potentially stressful include role overload, role insufficiency, role ambiguity, role boundary, responsibility and physical environment; 2) the Personal Strain Questionnaire (PRQ) includes four scales with ten items for each scale to assess the perceived strain that may result from stress. The manifestations of strain are assessed by evaluating problems in work quality or output, perceived psychological or emotional problems, and illness or poor self-care; 3) the Personal Resources Questionnaire (PRQ) includes four scales with ten items per scale and assesses available coping resources. The coping responses include recreation, self-care, social support, and rational/cognitive coping. The alpha coefficients for OSI-R total questionnaire scores were 0.88 for ORQ, 0.93 for PSQ, and 0.89 for PRQ. Coefficients for individual scales ranged from 0.70 to 0.89.

Nursing Job Stressors Inventory (Li, 1996). The Nursing Job Stressors Inventory (NJSI) was developed by Li (1996) which was based on the Nursing Stress Scale developed by Gray-Toft and Anderson (Gray-Toft & Anderson, 1981), the sources of stress inventory developed by Wheeler and Riding (1994), and review of literature. The inventory has 35 items which consists of five subscales: 1) nursing care and patient interaction; 2) workload and time pressure; 3) interpersonal relationship and management issues; 4) professional and career issues; and 5) resources and environmental issues. Subjects rate each item on a 4-point scale of frequency of occurrence (1 = never, 2 = occasionally, 3 = frequently, 4 = very frequently). Rating is summed to produce a total score. Mean and standard deviation were used to indicate the frequency of job stressors. A mean between 3.03 and 4 is considered mostly frequently encountered job stressors, between 3.02 and 2.03 is considered frequently encountered job stressors, and between 2.02 and 1 is considered less frequently encountered job stressors.

The content validity of the inventory fit the criteria and the Cronbach's alpha coefficient was 0.98. The five subscales for nursing care and patient interaction, workload and time pressure, interpersonal relationships and management problems, career and professional problems, and environmental and resources problems were 0.95, 0.83, 0.92, 0.94 and 0.90 respectively. The Nursing Job Stressors Inventory is a valid and reliable scale to assess the frequency of nursing job stressors. This scale was translated into Chinese by Li (1996) and has been used in the nursing profession in China.

HSE Management Standards Work-related Stress Indicator Tool (HSE, 2004). The HSE Management Standards Work-related Stress Indicator Tool was developed through a large study in a UK-based population using standard development techniques (HSE, 2004). In the late 1990s, the HSE, the lead authority in the UK responsible for health and safety at work, conducted an extensive consultation exercise to elicit views about how work-related stress should be tackled (Cousins et al., 2004). The Indicator tool is a self-report questionnaire which contains 35 projects, with seven independent scales, which are mapped to the HSE Management Standards described in the six categories. This tool helps employers by reviewing the status of the employee's mental work to identify risks and working conditions (determined by management standards), resulting in pressure at work.

This tool has 35 items which consist of seven dimensions of *demands (8 items)*; *control (6 items); managerial support (5 items)*, *peer support (4 items)*; *relationships (4 items)*; *role (5 items)*; and *change (3 items)*. The response format was a 5-point scale (1 = Never to 5 = Always; or 1 = Strongly Disagree to 5 = Strong Agree). The items number 3, 5, 6, 9, 12, 14, 16, 18, 20, 21, 22 and 34 were the negative questions. Thus, the 5-point scale were meant that 1 = Always to 5 = Never or 1 = Strongly agree to 5 = Strongly disagree. The average score of a project is calculated by the sum of each of the scores and by the total sum of the scale.

This tool is a standard and extensively validated survey instrument. The Cronbach's alpha reported by Edwards, Webster, van Laar, and Easton (2008) for seven subscales (demands, managerial support, work colleague/peer support, relationships, control, role, and change) were 0.87, 0.88, 0.82, 0.78, 0.82, 0.83 and 0.80, respectively. The overall scale reliability was 0.92. Moreover, confirmatory factors analysis (CFA) showed an

acceptable fit to the data for the instrument (CFI = 0.91, GFI = 0.92, NFI = 0.91, and RMSEA = 0.05) (Edwards et al., 2008). A second-order CFA was also performed to test that this tool contains a higher order uni-dimensional measure of work-related stress (Edwards et al., 2008). The results reveal the acceptability of the data, which suggests that there may be a single index of work-related stress (Edwards et al., 2008). The HSE Management Standards Work-related Stress Indicator Tool has been validated further in an Italian study (Toderi et al., 2013). Therefore, there is sufficient empirical evidence for reliability and validity of the HSE Management Standards Work-related Stress Indicator Tool as an appropriate measurement of work-related stress.

The above review of work-related stress instruments found that the HSE Management Standards Work-related Stress Indicator Tool was developed using standard development techniques in a large study in a British local authority population (HSE, 2004). This indicator tool is a standard, reliable, and extensively validated survey instrument (Edwards et al., 2008). The results of work-related stress for employees could be evidence to managers to take action to tackle work-related stress. This scale has been used in European organizations and has been translated into 18 different languages including Chinese for non-English-speaking workers. In the present research, the original HSE Management Standards Work-related Stress Indicator Tool will be used to assess nurses' work-related stress since it is an in-depth and up-to-date measurement for general professionals.

Studies Related to Work-related Stress

Nursing is often seen as one of the most stressful occupations. Work-related stress has overtaken musculoskeletal disorders as the main cause of absence and ill health among nurses. The reviewed studies focused on work-related stress in the nursing profession in foreign countries and in China, where nurses' work stress level can be found both by using different measurements.

Gibb et al. (2010) designed a study to identify work-related stress within 231 mental health nurses in the UK. The work-related stress of nurses was evaluated by HSE Management Standards Work-related Stress Indicator Tool (HSE, 2004). The results demonstrated that the overall work-related stress of mental health nurses was at a

moderate level ($\overline{x}$ = 2.63). The dimensions of peer and role was at high level ($\overline{x}$ = 1.94, $\overline{x}$ = 1.64, respectively). The dimensions of demands, control, managerial support and change were at moderate level ($\overline{x}$ = 3.48, $\overline{x}$ = 2.60, $\overline{x}$ = 2.39, $\overline{x}$ = 2.54, respectively). The dimension of relationships was at a low level ($\overline{x}$ = 3.87).

Esmaeili (2015) conducted a study to evaluate the prevalence of musculoskeletal disorders with occupational-related stress among 940 nurses in Sari hospitals of Iran. The work-related stress was examined by the Persian version of the HSE Management Standards Work-related Stress Indicator Tool. The results showed that nurses have a moderate level of work-related stress.

Lanfranchi et al. (2014) designed a research to evaluate the work-related stress among 306 registered nurses of an emergency unit, surgery department, oncology department and mental health department in a large-size hospital in northern Italy. The work-related stress was examined by the Italian version of the HSE Management Standards Work-related Stress Indicator Tool. The results revealed that the overall work-related stress of registered nurses was at a moderate level. The average score of demand was 2.81 which demonstrated the high risk in surgery department. The average score of role was 3.91 which revealed high risk in the mental health department.

According to the literature review, the work-related stress among nurses showed a moderate level in other countries, mostly measured by the HSE Management Standards Work-related Stress Indicator Tool (HSE, 2004). However, in China, most nursing researchers using the same model and instrument of Nursing Job Stressors Inventory developed by Li (1996) to assess the frequency of job stressors in nursing work. However, no study was found to explore the level of work-related stress of nurses in China using the HSE Management Standards Work-related Stress Indicator Tool. Thus, using the HSE Management Standards Work-related Stress Indicator Tool to identify key causes of work-related stress may expand knowledge regarding to work-related stress from another viewpoint.

Factors Related to Work-related Stress

According to the literature review, some factors are related to work-related stress such as marital status, age, gender and educational level.

Marital status was a factor that associated to work-related stress. Esmaeili (2015) found that marital status was associated with work-related stress. Marinaccio et al. (2013) stated that married workers of both sexes perceived higher work demands which likely reflected the higher burden of family responsibilities on married workers compared to unmarried ones. The burden of family responsibility may lead to a potential family conflict that may reduce the ability of individuals to cope with the increasing demands of their jobs.

Gender was one of factor influencing work-related stress (Rauschenbach & Hertel, 2011). Women suffered more stress than men. Some resreachers stated that females tend to experience higher levels of stress than males (Abdulla, Al-Qahtani, & Al-Kuwari, 2011; Alkhalaf, Singh, Malallah, & Jak, 2009; APA, 2014; Ben-Bakr, Jefri, & Al-Shammari, 1995).

In addition, a positive relationship between age and stress was found, with less stress for younger nurses and shorter service hours (Landa et al., 2008). In another study among a group of family physicians, results showed that those who worked for longer length of service had higher levels of stress and emotional exhaustion (Stanetić & Tesanović, 2013).

Low education levels are linked to higher job stress risk (Niezborala, Marquie, & Baracat, 2003). Based on the literature review, many factors result in work-related stress to employees which increased high burnout and turnover rate. The organizations should address these factors to find effective strategies to help employees decrease their work-related stress.

Relationship Between Emotional Intelligence and Work-related Stress

According to the literature review, nursing work is associated with high levels of stress and burnout (Chang et al., 2005; McGrath et al., 2003; Rothmann et al., 2003). An extreme case of chronic and prolonged stress can turn to burnout (Maslach & Goldberg, 1998). Therefore, finding strategies to manage work-related stress may increase the quality of nursing care. Emotional intelligence significantly contributes to reducing work-related stress whereby a person with a high level of emotional intelligence will be better at identifying feelings of frustration and stress, then, he or she can regulate his or her emotions, which will enable a more rapid recovery from psychosocial distress (Salovey & Mayer, 1990). Research studies indicate that high and low emotional intelligence has a significant differential effect in stress levels. High emotional intelligence indicated low stress and burnout, conversely, low emotional intelligence indicated high stress and burnout (Görgens-Ekermans, & Brand, 2012). As a result, nurses with high emotional intelligence will be better able to cope with stressful events. They are able to perceive, understand and manage their emotions, and manage their emotions, to better cope with stress (Salovey et al., 2000).

From the literature review, there were many studies were conducted to explore the relationship between emotional intelligence and occupational stress or job stress in professional mental health institutions, in human service workers, faculty members. However, there was one study was conducted in nurses. The results of these studies were as follows:

Nikolaou and Tsaousis (2002) conducted a study to explore the effects of emotional intelligence on occupational stress and organizational commitment among 212 participants in professional mental health institutions in Greece. The emotional intelligence was examined by the Emotional Intelligence Questionnaire (EIQ) (Tsaousis, 2003). The EIQ is based on the theoretical model by Salovey and Mayer (1990) and measures four independent dimensions of emotional intelligence: perception and appraisal of emotions, control of emotions, understanding and reasoning of emotions, and use of emotion for problem solving. The occupational stress was examined by the Organizational Stress Screening Tool (ASSET) which measures workplace stress (Cartwright & Cooper, 2002). The ASSET conceptualizes occupational stress as

influenced by a variety of sources (each of them using an independent subscale), such as work relationships, work-life balance, overload, job security, control, resources and communication, pay and benefits, as well as an evaluation of the employee's perception of the potential sources of stress that relate to the fundamental nature of the job itself (e.g., physical working conditions, type of tasks and the amount of satisfaction from the job, etc.). The results showed a negative correlation between emotional intelligence and occupational stress ($r = -0.59$, $P < 0.01$).

Oginska-Bulik (2005) conducted a study to explore the relationship between emotional intelligence and occupational stress in the workplace and health-related consequences in 330 human service workers in Poland. The emotional intelligence was examined by the Emotional Intelligence Questionnaire developed by Schutte et al. (1998), in Polish adaptation by Jaworowska and Matczak (2001). The occupational stress was examined by the Subjective Work Evaluation Questionnaire (SWEQ), developed by Dudek, Waszkowska, and Hanke (1999). The SWEQ includes 10 stressors: work overload, lack of rewards, uncertainty in the workplace, social relations, threat, physical burdens, unpleasant work conditions, lack of control, lack of support, and responsibility. The results showed a significant negative correlation between emotional intelligence and occupational stress in the workplace. The higher the level of emotional intelligence, the lower the experience of stress ($r = -0.23$, $p < 0.001$).

Yamani et al. (2014) conducted a study to investigate the relationship between emotional intelligence and job stress among 202 faculty members of Isfahan University of Medical Sciences (IUMS) in Iran. The emotional intelligence was evaluated by the Bradberry Emotional Intelligence Questionnaire (Bradbery & Grios, 2009) which measures four components of emotional intelligence: self-awareness, self-management, social awareness, and relationship management. The job stress was evaluated by the Job Stress Questionnaire (Mosadeghrad et al., 2011). It measures the level of job stress of the workers in five stress dimensions including task-related stress, role related stress, workplace-related stress, stress related to policy measures, and stress related to interpersonal relationships. The results showed a negative correlation between emotional intelligence and job stress ($r = -0.235$, $p < 0.032$).

Landa et al. (2008) conducted a study to investigate the relationship between emotional intelligence, occupational stress and health among 180 nurses in a general public hospital in Spain. The emotional intelligence was examined by the Trait Meta Mood Scale (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) which identifies three interpersonal factors: emotional clarity, emotional repair, and emotional attention. The occupational stress was examined by the Nursing Stress Scale (Gray-Toft & Anderson, 1981). The results showed that the nurses who score high in clarity and emotional repair reported less stress, whereas those with high scores in attention to emotions experience greater levels of stress. The author didn't report the value of relationship between emotional intelligence and occupational stress.

Karimi et al. (2014) conducted a study to investigate the extent to which emotional labour and emotional intelligence are associated with well-being and job stress among 312 nurses in Australia. The emotional intelligence was evaluated by the Self-Report Emotional Intelligence Test (SREIT) (Schutte et al., 1998), the job stress was examined by SREIT measurement (Parker & DeCotiis, 1983). There was a significant negative relation between emotional intelligence and job stress ($r = -0.12$, $p < 0.05$).

As aforementioned, the results of these studies about relationship between emotional intelligence and occupational stress or job stress showed different levels. There was a high negative relationship between emotional intelligence and occupational stress in professional mental health institutions (Nikolaou & Tsaousis, 2002). A weak negative correlation between emotional intelligence and occupational stress was found in human service workers (Oginska-Bulik, 2005). There were weak negative relationship between emotional intelligence and job stress in faculty members and in nurses (Yamani et al., 2014; Karimi et al., 2014). However, it was found that only one study conducted in nurses. According to the literature review, although the work-related stress, occupational stress and job stress are based on different concepts, they have similar stressors resulting in stress at work, such as heavy workload, time pressure, interpersonal relationship issues, management and colleague support issue (Li, 1996; Osipow, 1998; Palmer et al., 2004). However, no published study was found to explore the relationship between emotional intelligence and work-related stress among nurses in China, especially in Dali. As stated previously, Dali has a different economic and culture setting from other cities in China.

In fact, nurses who are working in the People's Hospitals of Dali are facing a huge ongoing challenge of a multi-ethnic conflict-prone environment, which requires nurses have a high emotional intelligence to deal with the stressful working environment. Therefore, it is necessary to explore the relationship between emotional intelligence and work-related stress among nurses in Dali which can provide basic information to nursing administrators to find strategies to improve the emotional intelligence and decrease the work-related stress among staff nurses.

Situation Related to Emotional Intelligence and Work-related Stress of Nurses in Dali, the People's Republic of China

China officially is called the People's Republic of China (PRC), which is the world's most-populous country, with a population of 1.36 billion and a land of 9.6 million square kilometres (Bureau of Statistic of China, 2014). In China, according to the statistic from the Ministry of Health of China (2015), the nursing profession has been suffering from nursing shortage and over workload which results in stress at work. At the end of June, 2016, there were 28,341 general hospitals and 3.241 million nurses. The ratio of nurses to population was 2.36:1,000 and the ratio of nurses to doctors was 1:1.07. The average number of patient occupation was 101.8%. Despite the fact that nurses are the largest group of health providers in hospitals, China is contending with a very serious nursing shortage compared to many other countries. Approximately 88% of Chinese hospitals are facing a nursing shortage and an average vacancy rate of nursing is about 27.5% (Chen & Li, 2010).

According to the healthcare institution's function and assignment, Ministry of Health of China (1989) set the criteria to classify hospitals into three levels 1) primary hospital: it serves the community population, has less than 100 beds, and its missions are disease prevention, medical services, health care and rehabilitation; 2) secondary hospital: it serves multi-communities, has 101 to 500 beds and its missions are health care services, teaching and scientific research; 3)tertiary hospital: it serves the whole city, province and country, has more than 501 beds, and its missions are high level special medical services, medical education and scientific research.

The People's Hospitals are special facilities, only existing in China, with Chinese characteristics of a public hospital, governed by the local government of the People's Republic of China. This kind of hospital is like the primary one in China, whether in urban or rural. There may be no tertiary hospital, university hospital or other kind of hospital, but there must be a People's Hospital to provide medical service for local people. Just like China is called People's Republic of China, at the beginning of the country's founding, everything is labelled People's, so the People's Hospital has had a long history of development. Thus, everyplace in China has a People's Hospital. They have different levels of development, either tertiary, secondary, or primary hospitals. Some People's Hospitals could even be the affiliated hospitals of universities together with tertiary hospitals. The level of People's Hospitals could be changed, but the property of People could not be change. In total, there are only two People's Hospitals in Dali, which are both secondary hospitals.

There are five educational classes among nurses in China as follows: 1) diploma program; 2) associate degree program; 3) bachelor's degree program; 4) master's degree program; 5) doctor's degree program (Ministry of Health of China, 1981). However, almost all nurses have the same work demands in clinical units although they have received different professional educational levels. Meanwhile, there are five levels of nurse administrative titles in each unit of China hospitals: 1) head nurse; 2) co-head nurse; 3) nurse-in charge; 4) senior nurse; 5) staff nurse. In China, nursing professional development has been lower than that of some countries. There is no complete rule for nurse classification like some developed countries, and there are no nurse aids. Even though the different professional title is related to different salary, nurses are required to do everything including professional and life care, and do the same work in wards no matter to which professional title they hold.

Yunnan province is located in the southwest of China and is a relatively undeveloped province with 394 thousand square kilometers, accounting for 4.1% of the China's area, bordering Myanmar, Laos, and Vietnam. It is one of the country's relatively undeveloped provinces having more poverty-stricken counties as compared to other provinces and regions. The economic condition is at a low level in this area of China compared to the middle areas of China. In 2015, Yunnan's Real GDP per capital was

$4,645, which was lower than country's standard ($7,925), and it was the second lowest in China (the poorest province was Gansu province ($4,149)) (Bureau of Statistic of China, 2016). The health care system of Yunnan is currently facing huge challenges, more than other provinces of China. In Yunnan, at the end of 2015, there were 110,000 nurses (Chinese News Information, 2016), and the nurse to population ratio was 2.05:1,000 which was lower than the country's standard of 2.20:1,000 (Ministry of Health of China, 2015). Dali is located in the midwest of Yunnan which has a lower economic condition, with 29.46 thousand square kilometres, and 3.56 million people (Bureau of Statistics of Dali, 2010). Health Bureau of Dali (2016) reported that there were 1,889 medical and health institutions and 9,287 nurses by the end of 2015. In total, there are only two People's Hospitals in Dali (PHDL), which are both secondary hospitals, the 1stPHDL and 2ndPHDL. The total number of beds in the two People's Hospitals are 1300, the number of staff nurse are 813 (Health Bureau of Dali, 2016).

The First People's Hospital of Dali (1stPHDL) was founded in 1951. It is a public hospital run by the local government and provides medical services to the urban population. It has 24 clinical departments and is the largest emergency center in Dali with 950 hospitals beds. Outpatients totaled more than 450,114 and inpatients more than 35,514 in 2015. Approximately 953 personnel work at the 1stPHDL, of which 562 are nurses. Of these, 497 nurses directly provide nursing care to patients. The ratio of nurses to patient beds is 1:1.91. The occupied bed rate was 118.02% at 1stPHDL (1stPHDL, 2015).

The Second People's Hospital of Dali (2ndPHDL) was founded in 1938. It is the oldest People's Hospital which provides medical service to rural population. It has 20 clinical departments and 350 hospital beds. Outpatients totaled more than 256,243 and inpatients more than 13,826 in 2015. Approximately 320 personnel work at the 2ndPHDL, of which 251 are nurses. Of these, 222 nurses directly provide nursing care to patients. The ratio of nurses to patient beds is 1:1.57. The occupied bed rate was 89.58% at 2ndPHDL (2ndPHDL, 2015).

In China, People's Hospitals usually have the responsibility to provide medical service and health promotion to the local population, they are required to share a bigger proportion of workload and high productivity and performance (Ministry of Health of

China, 1989). It seems that nurses working in People's Hospitals have to take more workload and face more patients. The turnover rates of nurses in People's Hospitals of Yunnan province range from 8.3% to 18% (Health Bureau of Yunnan Provincial, 2008). At one People's Hospital in Kunming, which has 2066 beds, the patient's bed utilization reached to 125.6%, and the out-patient visiting were 2.12 million by the end of 2014 (Duan, 2016). Moreover, Lin (2013) found that nurses who worked in the five People's Hospitals in Kunming suffered a high level of fatigue. In addition, Luo (2011) investigated work burnout among 390 nurses in three People's Hospitals, and the results showed that nurses have a high level of burnout.

The healthcare system in China is moving towards autonomous management with a market-driven economy, which leads to severe competition between public and private hospitals (Ministry of Health of China, 1994). These reforms promote medical care institutions to maintain cost-effectiveness and provide higher quality of care, and one of the strategies to face the challenge is to reduce in the length of patients' stay, which increases work-related stress for nurses, who suffer more risk and face more serious patients. Furthermore, according to the regulations of the Ministry of Health in China, all hospitals must be audited by the National Hospital Assurance every four years. In order to deal with Hospital Assurance [HA], all People's Hospitals have extended working hour regulations, such as full-week working and arranging meeting and training at the evening during HA preparation year. Additionally, nurses must record many documents other than their regular duties. Many nurses complained that they are not able to deal with high job demands and they lost to control over their pace of work. Sometimes they have no time to take lunch or dinner, which leads them to feel exhausted and stressful (Anonymous, Telephone interview, July 2016). Qiao and Wang (2010) reported that nurses are often regarded as assistants of physicians and have less autonomy and control for patient's health and disease. Although nurses have their own opinion, they must follow the orders from the physicians.

Xiao (2008) reported that only 1.46% nurses get support from head nurses. Nurses lack support and get little feedback from the head nurses. Nurses are habituated to deal with problems on their own because they do not want to give an extra burden to colleagues, and they have to deal with problems individually in certain shifts without help

(Fan & Yang, 2008). If nurses feel a lack of support from the organization, it might increase the stress from the work (Joiner & Bartram, 2004). In addition, nurses stated that they feel overloaded and stressed due to conflicting roles, and they have to do extra non-nursing work similar with a practical nurse's role, such as cleaning the nursing practice room, transporting patients, taking medicine from the pharmacy and clearing patient's bill for discharge (Anonymous, telephone interview, July 2016).

In the First People's Hospital of Dali, the hospital administrators considered about the safety of workers by setting the safety policy and assigning a Security Station. The Security Station takes some actions to prevent medical staff from violence, being attacked, and bullying from patients and their families. Some teams of armed guards were sent to serious departments to be on duty in shifts, such as the emergency department, pediatric department and outpatient department. At the same time, a fixed team of armed guards patrol in the hospital 24 hours a day. This is the one way to decrease the stress of medical staff and prevent violence and bullying.

Nurses have been little involved in organizational changes in terms of hospital and department development. In the view of many hospital managers, physicians can attract more patients which can increase profit. However, nurses only performing injections, delivering medicine and basic nursing care, so the hospitals do not provide many chances for nurses to participate in organizational changes such as hospital decision making and policy formulation. A study showed that lack of continuing education opportunities and promotion opportunities were the main cause of stress (Zhao, Li, Zhang, & Yin, 2006). Owing to the reasons above, the nurses suffer a lot of work-related stress in China, as well as in Dali, Yunnan province.

The People's Hospitals of Dali formulate an orientation process for new nurses (1st PHDL, 2015; 2nd PHDL, 2015). After orientation, the new nurses will learn the vision and mission of the hospital, and the function of each department. New nurses, before beginning to work independently, should be under the supervision of senior nurses for three months. Moreover, nurses working in one shift are divided into two teams in daily work. As there are senior nurses and new nurses working together in each team, the senior nurses can guide the new nurses in their work and give more information knowledge and

help. Therefore, new nurses will be familiar with the nursing work of each department and they will know what their responsibilities are.

Dali has a variety of minorities, each with a different language, religion, belief system, and living habits. The population of Dali is 3.569 million, and the minority population is 1.837 million, accounting for 51.48% of the total population. There are 24 minorities living in Dali with different languages and different religions, such as Buddhism, Taoism, Islam, Protestant Christianity and Catholicism (Dali Prefecture Bureau of statistics, 2010). Therefore, different languages and beliefs in the complex hospital environment are prone to cultural conflict. Patients complained that nurses lacked tolerance to understand the emotions and beliefs of patients, and nurses who ask the patients to follow the rules of the hospital are felt to ignore the patients' special circumstances (Anonymous, Personal interview, July 2016).

In the People's Hospitals of Dali, the majority of physicians hold a master degree, and some hold PhD. However, 76.51% of nurses hold a nursing diploma, 23.49% hold a bachelor degree, and no one holds a master degree until now (Health Bureau of Dali, 2016). Influenced by Chinese history and culture, doctors usually represent a superior social status and are respected by people, while nurses are perceived only as service personnel. Nurses usually do not receive enough respect from the patients and physicians. Nurses feel stress and frustration when they put forward their ideas and plans only to be rejected by doctors and patients. Therefore, nurses seldom express their emotions.

As noted above, nurses who are working in the People's Hospitals of Dali are facing ongoing huge challenges of multi-ethnic culture conflict in which is difficult for them to use positive emotions to cope with stress due to a complex working environment. Thus, information about emotional intelligence and work-related stress as well as their relationship among nurses will not only expand knowledge about them in China but provide significant information for nurse administrators to discover strategies to help their staff nurses to increase emotional intelligence competency and decrease work-related stress. As a result, nurses will better manage their nursing care work and provide high quality of nursing care. For these reason, this study was conducted to identify the level of emotional intelligence and work-related stress as well as the relationship between the two of them.

Conceptual Framework

The conceptual framework of this study is based on Model of Work-related Stress Model (Palmer et al., 2004) and Ability Model of Emotional Intelligence (Salovey & Mayer, 1990). Work-related stress refers to a harmful emotional and somatic response to stimuli which are in his/her job when the perceived pressure exceeds the individual's perceived ability to cope. Work-related stress consists of six hazards which are 1) demands, 2) control, 3) support, 4) relationships, 5) role, and 6) change (Palmer et al., 2004). Emotional intelligence refers to the ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action (Salovey & Mayer, 1990). It was divided into four dimensions including 1) self-emotional appraisal, 2) others' emotional appraisal, 3) regulation of emotion, and 4) use of emotion (Salovey & Mayer, 1990). According to Salovey and Mayer (1990), nurses with high emotional intelligence will be able to understand his/her own and other's emotions which make him/her able to regulate his/her emotions and enable them a more rapid recovery from psychological distress, which in working situations can be work-related stress factors. Therefore, the relationship between emotional intelligence and work-related stress was tested.