博士論文

論文題目　Assessment of work engagement, workaholism, and recovery experience, and their role in well-being among hospital nurses in Nepal

(ネパール国の病棟勤務看護師におけるワーク・エンゲイジメント、ワーカホリズム、リカバリーの評価およびウェル・ビーイングに対する効果)

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Assessment of work engagement, workaholism, and recovery experience, and their role in well-being among hospital nurses in Nepal

（ネパール国の病棟勤務看護師におけるワーク・エンゲイジメント、ワーカホリズム、

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ABSTRACT

Background:

Recent research in occupational health focuses on positive attitude and affect at work, such as work engagement, as an important outcome. However, this concept is understudied in developing countries, like Nepal. It is also not clear how work engagement is related to other concepts, such as workaholism and recovery experiences. The main purposes of this study were twofold: (1) to develop and validate the Nepalese versions of scales of these concepts (Utrecht Work Engagement Scale [UWES], Dutch Work Addiction Scale [DUWAS], and Recovery Experience Questionnaire [REQ]); and (2) to test several models of the association of these concepts with health and well-being in Nepalese registered nurses.

Methods:

A cross-sectional study was conducted in May-July 2014 of registered nurses of three hospitals in Nepal. Participation in this study was voluntary, and anonymity was guaranteed. A total of 587 sets of questionnaires were distributed and 455 (77.5%) were returned. Because of missing values on the key items, 438 sets of questionnaires were used in the final analysis (74.5% of the initial subjects). The mean age of the respondents was 30.9 years (SD = 10.0) and the mean work experience was 9.4 years (SD = 9.6). All nurses were informed about the objectives of this study.

The questionnaire included the Nepalese versions of 9-item UWES, DUWAS, REQ, and health and well-being outcomes (psychological distress [K6], job performance, job satisfaction, happiness, and subjective overall health). Prior to the survey, UWES, DUWAS, and REQ were translated into Nepali following a standard procedure (Wild et al., 2005). The psychological distress (K6) scale was also translated into Nepali according to the guideline provided by WHO.

The draft of Nepalese versions of these scales were pilot tested and amended as necessary. The final Nepalese versions of the scales were used for the survey.

Completed questionnaires in sealed envelopes were collected through each department. Consent from participants was confirmed based on their voluntary completion and submission of the questionnaires. The study aims and procedures were approved by the Ethics Committee of Faculty of Medicine, The University of Tokyo and Nepal Health Research Council, as well as hospitals under study, before the study began.

For investigating the reliability and validity of the newly developed scales, Cronbach's alpha internal consistency reliability was calculated; exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and correlation analysis were conducted.

To understand differential direct or mediating role of work engagement on health and well-being, several hypothesized models were tested for recovery experiences and work engagement predicting different health and well-being outcomes by using structural equation modeling. These analyses were conducted using SPSS and AMOS.

Results:

Validation of Nepalese version of questionnaire: For UWES, Cronbach's alpha coefficients for the total score and each of the three subscale was sufficiently high. A hypothesized three-factor model fitted best to the data. The scale score correlated with most outcome variables in an expected direction. For DUWAS, Cronbach's alpha was moderate (0.61-0.74) for the total scale and two subscales. A three-factor structure was emerged by EFA, while the theory supposes a two-factor model, which did not fit well to the data in CFA. The work excessively subscale weakly but significantly correlated with psychological distress. For REQ, Cronbach's alpha coefficients for

four subscales were sufficiently high. A hypothesized four-factor model fitted best to the data. Mastery and control subscales correlated with most health and well-being outcomes in an expected way; psychological detachment subscale rather correlated with poor health and well-being outcomes; relaxation subscale correlated with low job satisfaction.

Interrelations among recovery experience, work engagement, and well-being: Among several models tested, a model with recovery experience predicting health and well-being outcomes mediated by work engagement best fitted to the data. In this model, mastery and control subscales of recovery experience were directly and indirectly, and positively associated with well-being mediated through work engagement. However, psychological detachment subscale of recovery experience was directly and indirectly, but negatively associated with well-being mediated through work engagement.

Conclusions:

The newly developed Nepalese versions of UWES showed high internal consistency reliability and construct validity based on the factor structure and correlations with other variables. The Nepalese version of DUWAS seems to have a factor structure different from its original one; the score did not correlate with most health and well-being outcomes. There may be a cultural difference in measurement of workaholism in Nepal. Regarding REQ, the theory-based four-factor structure was confirmed. Mastery and control subscales were associated with health and well-being in an expected way, while other two subscales were not. Psychosocial function of psychological detachment and relaxation should be investigated further in the Nepali context.

In the best fit model of inter-correlations among recovery experience, work engagement, and health and well-being outcomes, it was found that mastery and control were associated with well-

being mediated through work engagement. Increasing personal resources (such as mastery and control) could improve work engagement, and thus health and well-being of workers. Psychological detachment is unexpectedly associated with poor health and well-being through work engagement, which may indicate that this recovery experience may have a different role in Nepal than in the western countries. Further studies are warranted to clarify the influence of the Nepalese context on the conceptualization, measurement, and psychosocial roles of these concepts.

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Assessment of work engagement, workaholism, and recovery experience, and their role in well-being among hospital nurses in Nepal

INTRODUCTION

1. Background and purpose of the study

In modern era, consideration of both "how to work" (i.e., work engagement and workaholism) and "how to rest" (i.e., recovery experiences) are becoming more important because they are directly associated with employees' well-being and their performance (Sonnentag & Fritz, 2007; Schaufeli, Salanova, Gonzalez-rom, & Bakker, 2002; Shimazu, Sonnentag, Kubota, & Kawakami, 2012). In addition, the concept of modern organization has been gradually changing from employee satisfaction to employee motivation, short term benefit to long-term focus on sustainable growth, vertical structure to horizontal network, and dependence on company to personal responsibility (Schaufeli & Salanova, 2007). Consequently, employees are expected to be proactive and show initiative, collaborate smoothly with others, take responsibility for their own professional development, and be committed to high quality performance (Bakker & Leiter, 2010).

This study focused on two factors; how to work (work engagement and workaholism) and how to rest after work (recovery experiences) to explore employee well-being among hospital nurses in Nepal. Previous research has already shown that how individuals work at workplace and how they spend their free time after work determine their well-being the next day (Sonnentag, 2003). Each concept (work engagement, workaholism, and recovery experience) has been explained in details in the following segments:

Work Engagement

The concept of work engagement has received increased attention in the past decade since the turn of positive psychology which focused on strength and virtue rather than pathology, weakness, and damage (Seligman & Csikszentmihalyi, 2000) to help people become stronger and more productive and increase their potential. Detecting such psychological strength is an important part of research and practice (Lopez & Snyder, 2006). This study also focused work engagement as a positive affective and cognitive state regarding the work one is doing. Work engagement is defined as a positive, fulfilling work-related state of mind that is characterized by vigor (i.e., high levels of energy and mental resilience while working, the willingness to invest effort in one's work and persistence even in the face of difficulties), dedication (i.e., a sense of significance, enthusiasm, inspiration, pride, and challenge), and absorption (i.e., being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties detaching oneself from work) (Schaufeli et al., 2002). It should be noted that these definitions focus on employees' experience of work activity, not the predictors or outcomes of these experiences (Bakker & Leiter, 2010). Thus, engaged employees are assumed to have a sense of energetic and effective connection with their work activities and to see themselves able to deal with the demands of their job (Schaufeli et al., 2002), and to conserve their own engagement through a process of job crafting (Bakker, Albrecht, & Leiter, 2011). Engaged workers work hard and sometime for long hours as well, because work is fun for them and they like it to do happily (Bakker & Demerouti, 2008).

Workaholism

The term workaholism was coined by Oates (1971) as an excessive and uncontrollable need to work incessantly that disturbs health, happiness, and relationships. The rapidly changing work environment (Shimazu & Schaufeli, 2009), i.e., the frequent use of mobile devices such as cell phone, laptop, computers, makes it possible to work not only during the office hours but also outside of it (Van Wijhe, Peeters, & Schaufeli, 2011). Based on the concept of workaholism developed by Oates (1971), other researchers Schaufeli, Taris, and Bakker (2008) defined workaholism as the tendency to work excessively hard (behavioral dimension) and be obsessed with work (cognitive dimension) which manifests itself as working compulsively. Thus, workaholics work hard because they are driven by a strong inner urge they cannot resist rather than being motivated by external or contextual factors, such as financial problems, poor marriage, organizational culture, supervisory pressure, or a strong desire for career advancement (Shimazu & Schaufeli, 2009). Porter (1996) argues that, like alcoholism, workaholism is an addiction which is characterized by (1) excess work behavior implying the neglect of family, personal relationships and other responsibilities; (2) distorted self-concept (striving through work for better feelings of self); (3) rigidity in thinking (perfectionist about work details, non-delegation of tasks); (4) physical withdrawal into work and anxiety if away from work; (5) progressive nature (needs increasingly to work more to boost self-esteem and block other feelings), and (6) denial (uses work place affirmations to offset objections from others).

To sum up, both work engagement and workaholism are individual attitudes (i.e., behaviors and cognitions) towards work that share their behavioral aspect (work excessively hard). However, the underlying motivation for this behavior (i.e., the cognitive aspect) differs in the sense that

engaged employees are intrinsically motivated whereas workaholics are propelled by an obsessive inner drive they cannot resist (Shimazu & Schaufeli, 2009).

Recovery Experiences

The concept of recovery refers to a process during which the levels of physiological and psychological arousal return to pre-stressor levels. The Effort-Recovery Model (Meijman & Mulder, 1998) assumes that effort expenditure at work leads to load reaction such as fatigue or physiological activation. Under normal conditions, when an individual is no longer exposed to the work or similar demands, load reactions are reversed leading to recovery. However, if adequate recovery does not take place, these load reactions do not return to pre-stressor level (Geurts & Sonnentag, 2006). Therefore, it is most important in this theory that the functional systems taxed during work will not be called upon any longer. Adequate recovery is associated with a restoration of depleted resources, such as normal heart rate, reduced fatigue, improved mood (Sonnentag & Bayer, 2005). Thus, to fully recover from the strain after work, an individual needs to engage in different types of leisure activities (e.g., meeting with friends, involving in yoga) or doing some physical activities (e.g., walking, cycling etc.). Similarly, the Conservation of Resource Theory (COR) Hobfoll (1998) assumes that people strive to protect, retain and foster the resources when resources are threatened to loss or lost or when individuals fail to gain resources after investment of certain resources. These resources include personal characteristics (e.g. self-esteem), conditions (e.g. marriage, tenure, seniority), and energies (e.g. time, money, knowledge). Stress threatens these resources impending the individual's health and well-being. Therefore, to facilitate the recovery process after stress, individuals either need to gain new resources or restore threatened or lost resources through their individual or joint efforts such as involvement in the music class,

dance class or doing anything to broaden their own horizon like learning new skills or learning new language among many others.

The mechanism contributing to recovery is called recovery experiences (Sonnentag & Fritz, 2007). It includes psychological detachment from work, relaxation and the experiences of mastery and control. The former two experiences (i.e., psychological detachment and relaxation) are linked with the Effort-Recovery Model because they imply that no further demands are imposed on one's resources that are called upon during work (Sonnentag & Fritz, 2007). The latter two experiences (i.e., mastery and control) are linked with the Conservation of Resources Theory because they are related to master one's intellectuality or self-confidence or efficacy. However, when demands are continuously put on the individual, recovery does not occur, which in turn results into accumulation of load reaction. Thus, engaging in recovery experiences is likely to serve as an antidote of all sorts to the potentially detrimental effects of demanding or threatening situations. However, it is not a specific activity per se that helps to recover from job stress but its underlying attributes such as relaxation or psychological distance from job-related issues. (Sonnentag & Fritz, 2007). People may differ with respect to the specific activities they experience as recovering while the underlying psychological experiences crucial for recovery may be relatively uniform among people.

Based on the conceptualization of above mentioned three concepts (work engagement, workaholism, and recovery experience), it can be summarized that both engaged workers and workaholics work hard and spend long hours on work. They invest their energy or resources on work. Therefore, both types of workers need to take rest (i.e. recover) during free time after work. In doing so, they can restore their depleted energy or build up new energy for the next day and

maintain well-being. Thus, these three concepts are inter related and play a vital role in employee well-being.

It is noteworthy that involvement in the recovery experience after work (such strategies that individuals can do by themselves to promote recovery such as; by involving in distancing themselves from work related activities, participating in some relaxing activities they prefer, or mastering themselves as their own interests) rather than looking at factors that are less readily modifiable (such as workloads and exposure to stressful experiences) is associated with well-being. If the mechanism of the association of recovery experience with well-being becomes clear, it will be very useful to apply recovery experiences as interventional program to promote the well-being of employees and build up positive work environment in the organization.

General health care system and working condition of health work force of Nepal

Nepal is a small underdeveloped country with the population of about 30 million. The total number of registered nurses is 28,364 (Nepal Nursing Council [NNC], 2015). Although, Nepal does not have a national epidemiological data on mental illness, it is speculated that about 20-30 percent of total population could be suffering from any kind of mental illness, with 1-3 percent suffering from serious mental illness (Karki, 2010). In addition, many people still die of diarrhea and malnutrition though, there are health centers providing services even in remote rural areas (Rai, Hirai, Abe, & Ohno, 2002). Almost a quarter of the population lacks access to even the most basic health care services (Department of Health Services, 2011). Every hour, a woman in Nepal dies due to pregnancy and child-birth related complications and only one in five births is attended by a Skilled Birth Attendants (Department of Health Services, 2012). Availability of trained human resources has been one of the key hindrances in delivery of primary health care services.

Nurses are frontline service providers in the health-care system in Nepal and are generally present at their allocated place (94%) in comparison with the doctors (88%) (South Asian Institute for Policy Analysis and Leadership [SAIPAL], 2010). In addition, nurses are the largest group of health care professionals in Nepal. They have a crucial role in improving the health of the community at both tertiary and grass root levels. The quality of service provided to the individual largely depends on the nurses' performance.

According to Nepalese system, to become a staff nurse, the basic nursing education comprises three-year diploma course following the completion of 10-year schooling. Subsequently, Bachelor in Nursing (BN), Masters in Nursing (MN), and PhD in nursing courses are offered to individuals interested in pursuing nursing careers. The largest group of nurses in Nepal is diploma prepared staff nurses. Nurses can get a job in a hospital or community immediately upon the completion of the diploma course, while it is difficult for younger people in other occupations to get a job immediately upon graduation. In general, the public believes that nurses simply assist doctors during and after the treatment of illness; assist patients with their personal hygiene; assist patients by giving them their prescribed medicine, dressing the wounds, and providing other types of support. Thus, although nursing is a professional job, nurses are still considered as supporting staff in Nepal. This view has been changing, as many nurses work abroad in western countries with better working condition and share their experiences with other people. Shift work, especially night work is also perceived as a negative aspect of nursing jobs, as most general workers work daytime from 10 am to 5 pm.

Regarding working condition of health-related work force in Nepal, generally they work 8 hours a day with one hour break in between; and they work for 6 days a week. Nursing staff works

in three shifts; morning and evening shifts of 8 hours each and night shifts of 12 hours. Regarding the provision concerning paid leave, each employee has 30 days home leave, 12 days sick leave, and 12 days causal/festival leave in one year. Also, they have up to 4-6 year study leave, but predefined requirements should be met to get approval for study leave. Female staff can get 60 days maternity leave, and fathers get 15 days paternity leave (Shrestha & Neupane, 2012).

Nepal has different cultural aspects than that of western culture. It also has different working situation and work behavior, where only females are allowed to study nursing. Therefore, we cannot generalize the previous study results (Schaufeli et al., 2002; Shimazu & Schaufeli, 2009) among Nepalese nurses. In addition, lifestyle pattern are different as Nepal rely on collectivistic society. People in a family live together and in some contexts two-three generations are living together. In addition, nurses have multiple roles at home when they live in large joint families. Nepal is a male dominated society where females are not free to make decisions. It is mandatory for female employees to handle/manage their household activities and rear their children despite working outside the home.

In sum, nurses are an important labor force in health care, since they are involved directly in the lives of individuals, and their performance determines the quality of service. In the context of Nepal, nurses face two burdens. The image of nurses in the public is still negative. Female nurses are required to pursue double duties at workplace and home. Accordingly, it is important to explore health and well-being of nurses, focusing especially on investigating and promoting a positive aspect of mental health to maintain and improve nurses' performance. To my knowledge, it is yet not known about the work attitude and their free time after work of the Nepalese nurses.

Assessment of work engagement, workaholism, and recovery experiences

Assessment of attitude towards work and the use of free time after work is an essential component to evaluate the well-being of the nurses. For this purpose, necessarily the first step is the need of valid instruments to measure it. Instruments selected for this study have shown good psychometric properties and have been translated into many different languages. For instance, work engagement scale has about 30 language versions, workaholism and recovery experience has about 6 language versions. However, there are no Nepalese translations of these instruments. Therefore, first, I translated and examined their psychometric properties (Utrecht Work Engagement Scale, Dutch Work Addiction Scale and Recovery Experience Questionnaire). Second, I examined the mechanism of relationship between recovery experience and well-being through work engagement hospital nurses in Nepal. The current literature shows mixed results regarding the association of recovery experience and well-being among workers. For instance, Burke and El-Kot (2009) found no association of recovery experience and psychological well-being, while Sonnentag and Fritz (2007) found positive association of recovery experience and well-being. These inconsistent results dragged my attention to explore the mechanism of association of recovery experience and well-being. As recovery experience is associated with work engagement and work engagement is also found to be positively associated with well-being, I speculated that the positive association of recovery experience would be through work engagement.

2. Organization of thesis writing

This dissertation is composed of two sections. Section 1 includes development and examination of psychometric properties of Nepali language versions of three scales: Utrecht Work Engagement Scale (UWES), Dutch Work Addiction Scale (DUWAS) and Recovery Experience Questionnaire (REQ). I distributed a set of questionnaire (demographic variables, UWES, DUWAS, REQ scales, and well-being questionnaire (psychological distress, job satisfaction, job performance, happiness, and health) with participants' information sheet to the nurses of three hospitals in Nepal. As I used the same translation procedure and same sample and method for the entire study, detailed explanation of the translation procedure, sample and method section is included in section 1 (validation of Nepalese version of Utrecht Work Engagement Scale). In addition, the well-being variable measures (psychological distress, job satisfaction, job performance, happiness, and health) are also explained in detail in section 1 to minimize the redundancy of the information. Section 2 explores the association of recovery experience and well-being through work engagement. Following the discussion segment of section 2, I have summarized and integrated the results of all 3 validation studies and mediation analysis.

SECTION 1

Development and Validation of Nepalese version of scales

1. Validation of Nepalese version of Utrecht Work Engagement Scale
2. Validation of Nepalese version of Dutch Work Addiction Scale
3. Validation of Nepalese version of Recovery Experience Questionnaire

1. Validation of Nepalese Version of Utrecht Work Engagement Scale

Introduction:

Recently, work engagement has been identified as one of the positive states, as opposite to burnout (Schaufeli et al., 2002). It is defined as a positive, fulfilling work-related state of mind that is characterized by vigor, dedication and absorption (Schaufeli et al., 2002). Engaged workers have high levels of energy and identify themselves strongly with their work (Bakker, Schaufeli, Leiter, & Taris, 2008).

Previous studies have found that work engagement has been positively associated with job satisfaction and quality of life (Mache, Vitzthum, Klapp, & Danzer, 2013), happiness (Rodriguez-Munoz, Sanz-Vergel, Demerouti, & Bakker, 2013), health (Bakken & Torp, 2012), job performance and life satisfaction (Shimazu & Schaufeli, 2009), and negatively associated with ill health (Shimazu & Schaufeli, 2009).

The Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002) has been extensively studied to measure work engagement. The development of this scale was based on the theoretical definition of work engagement, which included three dimensions, namely vigor, dedication, and absorption. Both long (17-item) and short (9-item) versions are available. The translated versions

of the UWES, including the Dutch, Spanish, Chinese, and Japanese versions, have been widely adopted in many international studies (Schaufeli, Shimazu, & Taris, 2009; Extremera, Sanchez-Garcia, & Duran, 2012; Fong & Ng, 2012; Shimazu et al., 2008). In addition, the scale has been shown to have acceptable psychometric properties across cultures (Schaufeli, Bakker, & Salanova, 2006).

For over a decade, Nepal has been facing political instability, which has been directly influencing job security and economic uncertainty. In addition, the direct influence of politics on the work environment is another issue in Nepal. Despite the adverse work environment, every organization seeks highly motivated and energetic (engaged) employees. Therefore, I believe that the time has come to follow the lead of positive psychology such as work engagement. As in other developed countries, the concept of work engagement might be beneficial for the well-being of Nepalese workers. In order to study and apply the concept of work engagement in Nepal, the first step was to validate the Nepalese version of the UWES (UWES-N).

The objective of this current study was to examine the psychometric properties of the UWES-N. More specifically, I aimed at the following: (1) to evaluate the factorial validity by comparing the fit of the original three-factor model to that of the one-factor model (which assumes that all items load on one single underlying dimension) for both the 17-item and 9-item versions of the UWES-N. Since the three dimensions are closely related (Schaufeli & Bakker, 2010), I chose the one-factor model (2) to examine the scale reliability using Cronbach's alpha, (3) to confirm the construct validity by examining the relationship between work engagement and its potential outcomes (psychological distress, overall health, job satisfaction, happiness, and job performance), and (4) to explore the relation of work engagement with demographic characteristics.

Overall, I hypothesized that the UWES-N will show adequate construct validity in the Nepalese context.

Methods:

Translation procedure

The translation procedure followed the established guideline (Wild et al., 2005). First, two independent translators (a freelance translator and a member of the Nepal Notary Public Council) translated the English version of the Utrecht Work Engagement Scale (UWES) into Nepali. I compared the two independent forward translations and prepared the final forward translation into Nepali after discussion with the forward translators. Then, two independent bilingual persons (an individual with a medical degree and a researcher in the field of chemical biology) performed back-translation into English. I compared the original English and back-translated versions and created a preliminary Nepalese version after correcting some of the words, meanings, and contents for each item in cooperation with the original developer (Prof. Wilmar Schaufeli) of the UWES. The preliminary version was tested in a pilot study with 20 Nepali participants who were working in Japan on a working visa. Some additional words and concepts were corrected after the pilot study. For instance, most participants were confused about the item "It is difficult to detach myself from my job" in the absorption subscale. The respondents preferred to know the reason for having difficulties in detaching themselves; therefore, one additional item was added, that is, "It is difficult to detach myself from my job because I enjoy my work," to see whether any significant differences could be found in the reasons behind the difficulty detaching oneself from the job. This item was added at the end of the questionnaire.

Participants

The participants in this study were registered nurses in Nepal. Participation in this study was voluntary, and anonymity was guaranteed. I recruited nurses from three hospitals. Two hospitals were located in the capital city of Nepal (Kathmandu) (Central Development Region), and one hospital was located in the Western Development Region of Nepal (Rupandehi). Those three hospitals were selected purposively. All nurses working in those hospitals in the three months of study period, received a set of questionnaires. Exclusion criteria was not set when distributing the questionnaire. In total, I distributed 587 sets of questionnaires and received 455 sets back, giving a response rate of 77.5%. Because of missing values on the key items, 438 questionnaires were used in the final analysis, representing a final response rate of 74.5%. The mean age of the respondents was 30.9 years (SD = 10.0), and the mean work experience was 9.4 years (SD = 9.6).

All nurses/participants were informed about the objectives of this study via the nurse in charge of each department. Questionnaires along with envelopes were distributed and collected through each department in charge to maximize the response rate. In addition, the questionnaires were returned by the participants in sealed envelopes to ensure their privacy. Consent from participants was confirmed based on their voluntary completion and submission of the questionnaires. The ethics committee of The University of Tokyo, Nepal Health Research Council and the associated hospitals approved the study procedures before the study began.

Measures

Work engagement was assessed using the preliminary Nepalese Version of the Utrecht Work Engagement Scale (UWES-N) comprising three subscales/dimensions assessing vigor, dedication, and absorption. Both long and short versions are available. The long version is a 17-

item scale, with 6 items measuring vigor, 5 items measuring dedication, and 7 items measuring absorption. The short version is a 9-item scale consisting of the same 3 dimensions (vigor, dedication and absorption). Each dimension has 3 items. All items are scored in a 7-point Likert scale ranging from 0 ("Never") to 6 ("Always") in both versions. In my study, I used the short version.

Job performance was assessed by a single item (1×10) from the World Health Organization Health and Work Performance Questionnaire (HPQ) (Kessler, Barber, Beck, et al., 2003), which asks the participants to rate their overall work performance during the past 30 days on a 0 to 10-point Likert scale, with 0 indicating "Worst performance" and 10 indicating "Best performance."

Job satisfaction was assessed using a single item (1×5) (Scarpello & Campbell, 1983), i.e., "How satisfied are you with your job in general?" measured in a 5-point Likert scale, with 1 indicating "Extremely satisfied" and 5 indicating "Not satisfied at all."

Overall health was assessed using 1 self-constructed item (1×5), i.e., "In general, how would you say your health is?" measured on a scale from 1 "Excellent" to 5 "Poor."

Happiness was assessed by a single question (1×4) (Libano, Llorens, Salanova, & Schaufeli, 2010), i.e., "Taking everything into account, how happy are you with your life?" measured in a 4-point Likert scale, with 1 indicating "Very unhappy" and 4 indicating "Very happy."

Psychological distress was assessed using the Nepalese version of psychological distress questionnaire (K6) (Kessler, Bakker, Clope, et al., 2003), with items measured in a 5-point Likert scale ranging from 1 indicating "Always" to 5 indicating "Never." It was translated using the guideline provided by WHO. The translated Nepalese version is available at

http://www.hcp.med.harvard.edu/ncs/ftpdir/k6/Nepali_K6.pdf. This 6-item questionnaire assesses both anxiety and depression. Cronbach's alpha coefficient for this study sample was 0.81.

Most constructs were measured with a single item. One of the reasons for using one-item questionnaires is the lack of availability of Nepalese versions of questionnaires.

Demographic characteristics included age (in years), marital status (in five categories; married, unmarried, divorced, widowed and widower), work position (in three categories; general staff, ward in charge and supervisor), level of education was asked in four categories: staff nurse, BN, MN, and PhD, religion (in four categories; Hinduism, Buddhism, Christian, and Others), family type (in four categories; nuclear, joint, extended, and living alone), work hour/week and work experience (in years). In addition, work place was asked as an open ended question.

Statistical analysis

Exploratory factor analysis, correlation analysis, reliability analysis, and other descriptive analyses were conducted using SPSS version 21. Confirmatory factor analysis (CFA) of both the 17-item and 9-item versions of the UWES-N was performed in AMOS Arbuckle, (1997) version 21 using structural equation modeling (SEM) methods. Maximum likelihood estimation was used to examine goodness of fit of the models using the following criteria (Schermelleh-Engel, Moosbrugger, & Muller, 2003) for goodness of fit indices: GFI $\geq$.95, AGFI $\geq$.90, PGFI $\geq$ .80, TLI $\geq$ .90, CFI $\geq$ .90, RMSEA $\leq$ .08 and a small AIC that would indicate a more parsimonious model. Cronbach's alpha coefficients were calculated for overall engagement, vigor, dedication, and absorption subscales. Calculating Cronbach's alpha is not be sufficient for measuring the homogeneity of each item (Schmitt, 1996). Therefore, I reported inter-item correlations as well.

As poor mental health status of the participants may have influenced their responses to the questionnaire, I used the cutoff point of 13+ (Kessler et al., 2002) of K6 to exclude cases with poor mental health. However, only six respondents had a score of K6 of 13 or above. The following results would not be affected by including or excluding these six respondents.

Results:

Demographic characteristics

About 54% of participants were married. Regarding the level of education, 51% were staff nurses. Only 4% had master degree in Nursing. Ninety percent were Hindus and about 62% lived in nuclear family (Table 1).

Factor structure

Before conducting EFA, I explored all 17 items' response with mean and SD, and percentage of each response category (Table 2). The lowest mean score 3.5 (SD = 2.1) was observed for item number 1 ("At my work, I feel bursting with energy") which is related to vigor followed by 4.0 (SD = 1.8) for item number 16 ("It is difficult to detach myself from my job") which is related to absorption subscale. The highest mean score 5.3 (SD = 1.0) was observed for item number 10 ("I am proud of the work that I do") which is related to dedication subscale. Correlations among items are shown in Table 3. Then, I employed exploratory factor analyses of both 17- and 9-item questionnaires. Principal axis factoring with promax rotation confirmed the existence of a three-factor structure in the 17-item version of the UWES-N (UWES-N-17) (Table 4) and a two-factor structure in the 9-item version of the UWES-N (UWES-N-9) (Table 5). The three factors in the UWES-N-17 and two factors in the UWES-N-9 with eigenvalues greater than one were extracted, accounting for 43.5% and 49.2% of the total variance, respectively. The

correlation between the item added to the absorption subscale, "It is difficult to detach myself from my job because I enjoy my work," and the original item, "It is difficult to detach myself from my job," was .67, which is marginally high. Therefore, I continued the analysis with the original 17 items. Though three factors emerged for the UWES-N-17, the factor structure was not consistent with that of the original version. For instance, 7 items were loaded on the first factor, 5 items on the second factor, and the remaining 5 items on the third factor. Each factor consisted of items related to either vigor, dedication or absorption (i.e., no items related to vigor, dedication and absorption were loaded on their respective factor) (Table 4). However, the UWES-N-9 had a two-factor structure, with items measuring absorption (AB3, AB4, AB5) and dedication (DE2, DE3, DE4) loaded on the first factor and those measuring vigor (VI1, VI2, VI3) loaded on the second factor, except for one item for vigor (VI3), i.e., "When I get up in the morning, I feel like going to work," which was loaded on both factors (loadings of .40 and .36 on factors 1 and 2, respectively) (Table 5). Subsequently, I decided to test one-factor, two-factor and three-factor solutions by CFA.

Table 1. Demographic characteristics of respondents (N = 438)

Variables	Number	Percent	Mean	SD
Age (Years)			30.8	10.7
Marital status				
Married	237	54.2		
Unmarried	196	44.7		
Widow	4	0.9		
Divorced	1	0.2		
Position				
Supervisor	24	5.5		
Ward in-charge	46	10.5		
General staff	368	84.0		
Working ward				
ER	25	5.7		
Medical	176	40.2		
Surgical	117	26.7		
Maternity	32	7.3		
Psychiatric	9	2.1		
ICU/NICU	61	13.9		
Pediatric	18	4.1		
Education				
Staff nurse	225	51.4		
BN	206	47.0		
MN	7	1.6		
Religion				
Hinduism	386	88.1		
Buddhism	45	10.3		
Christian	4	0.9		
Others	3	0.7		
Family type				
Nuclear	273	62.3		
Joint	152	34.7		
Extended	13	3.0		
Type of work (N = 412)				
Permanent	154	35.2		
Temporary	236	59.8		
Daily wages	22	5.0		
Working hour/week			47.5	4.6
Experience (Years)			9.4	9.7

Note: ER, Emergency; ICU/CCU, Intensive Care Unit/Coronary Care Unit; BN, Bachelor in Nursing; MN, Master in Nursing

Table 2. Mean, standard deviation and percentage of each item of Utrecht Work Engagement Scale (N = 438)

No.	Items	Mean	SD	Never % 1	Almost never % 2	Rarely % 3	Sometimes % 4	Often % 5	Very often % 6	Always % 7
1	At my work I feel bursting with energy (VI1)*	3.5	2.1	15.3	6.8	7.1	18.0	11.2	22.4	19.2
2	I find the work that I do full of meaning and purpose (DE1)	5.0	1.3	.5	1.1	4.1	9.1	11.4	24.4	49.3
3	Time flies when I am working (AB1)	5.2	1.1	-	.5	1.1	8.4	10.0	27.4	52.5
4	At my job I feel strong and vigorous (VI2)*	5.0	1.2	1.1	.9	1.6	10.0	13.0	31.1	42.2
5	I am enthusiastic about my job (DE2)*	5.0	1.3	.7	.9	3.0	11.2	12.1	26.5	45.7
6	When I am working, I forget everything else around me (AB2)	4.6	1.7	3.7	1.8	3.2	14.6	10.5	28.3	37.9
7	My job inspires me (DE3)*	5.1	1.3	.9	1.4	3.2	8.9	9.1	26.3	50.2
8	When I get up in the morning, I feel like going to work (VI3)*	4.1	1.7	5.0	3.7	8.0	17.6	16.9	26.5	22.4
9	I feel happy when I am working intensely (AB3)*	5.3	1.0	.5	.2	1.6	5.7	7.1	25.3	59.6
10	I am proud of the work that I do (DE4)*	5.3	1.1	.2	.2	2.3	6.2	6.2	23.1	61.9
11	I am immersed in my work (AB4)*	5.3	1.1	.5	.7	0.7	5.3	10.5	26.3	56.2
12	I can continue working for very long periods at a time (VI4)	4.2	1.5	3.7	3.2	5.3	16.0	19.2	36.3	16.4
13	To me, my job is challenging (DE5)	5.2	1.3	2.1	1.1	1.8	6.4	8.7	19.6	60.3
14	I get carried away when I am working (AB5)*	5.4	1.0	.5	.7	0.2	2.7	8.4	24.0	63.5
15	At my job, I am very resilient mentally (VI5)	5.0	1.1	.2	.5	1.6	7.1	15.5	38.6	36.5
16	It is difficult to detach myself from my job (AB6)	4.0	2.1	7.8	3.7	8.0	17.4	13.9	24.2	25.1
17	At my work I always persevere even when things do not go well (VI6)	5.0	1.2	1.6	-	2.5	9.1	14.6	30.6	41.6

Note: VI, vigor; DE, dedication; AB, absorption; *, shortened version (Utrecht Work Engagement Scale-9 [UWES-9]).

Table 3. Correlation matrix for each item of Utrecht Work Engagement Scale (N = 438)

	1	2	3	**4**	**5**	6	**7**	**8**	**9**	**10**	**11**	12	13	**14**	15	16
1	1															
2	.29**	1														
3	.29**	.43**	1													
4	.43**	.43**	.43**	1												
5	.28**	.52**	.43**	.55**	1											
6	.28**	.22**	.34**	.27**	.31**	1										
7	.20**	.40**	.27**	.39**	.57**	.23**	1									
8	.28**	.31**	.36**	.40**	.42**	.27**	.48**	1								
9	.16**	.37**	.32**	.33**	.48**	.24**	.44**	.38**	1							
10	.25**	.47**	.32**	.40**	.55**	.28**	.55**	.44**	.54**	1						
11	.24**	.46**	.41**	.38**	.52**	.32**	.45**	.37**	.49**	.58**	1					
12	.28**	.22**	.29**	.33**	.32**	.32**	.29**	.37**	.31**	.26**	.35**	1				
13	.10*	.29**	.24**	.31**	.38**	.20**	.32**	.25**	.31**	.37**	.36**	.24**	1			
14	.16**	.43**	.31**	.34**	.44**	.31**	.43**	.32**	.46**	.46**	.57**	.28**	.42**	1		
15	.20**	.39**	.32**	.41**	.42**	.25**	.36**	.37**	.31**	.38**	.38**	.33**	.27**	.52**	1	
16	.19**	.29**	.28**	.28**	.40**	.23**	.36**	.47**	.36**	.36**	.28**	.26**	.19**	.25**	.33**	1
17	.26**	.35**	.31**	.33**	.38**	.26**	.31**	.32**	.36**	.34**	.46**	.32**	.28**	.47**	.51**	.33**

Note: **p value < 0.01, *p value < 0.5, bold number are the items related to 9-item version questionnaire

Table 4. Factor loadings for the 17-item Nepalese version of the UWES (UWES-N-17) by exploratory factor analysis with the principal axis factoring method and promax rotation (N = 438)

No.	Item	Factors		
		1	2	3
10	I am proud of the work that I do (DE4*)	**.79**	-.09	.06
7	My job inspires me (DE3*)	**.79**	-.03	-.05
5	I am enthusiastic about my job (DE2*)	**.61**	.21	-.00
9	I feel happy when I am working intensely (AB3*)	**.58**	-.08	.17
8	When I get up in the morning, I feel like going to work (VI3*)	**.43**	.33	-.08
16	It is difficult to detach myself from my job (AB6)	**.36**	.23	-.03
2	I find the work that I do full of meaning and purpose (DE1)	**.32**	.20	.17
1	At my work, I feel bursting with energy (VI1*)	-.09	**.69**	-.09
4	At my job, I feel strong and vigorous (VI2*)	.17	**.58**	-.01
3	Time flies when I'm working (AB1)	.07	**.47**	.10
12	I can continue working for very long periods at a time (VI4)	-.00	**.41**	.17
6	When I am working, I forget everything else around me (AB2)	-.04	**.38**	.18
14	I get carried away when I'm working (AB5*)	.10	-.17	**.85**
17	At my work I always persevere, even when things do not go well (VI6)	-.11	.24	**.57**
15	At my job, I am very resilient, mentally (VI5)	-.03	.23	**.52**
11	I am immersed in my work (AB4*)	.36	.01	**.42**
13	To me, my job is challenging (DE5)	.27	-.04	**.30**
Total % of variance explained		36.7	3.8	2.9
Cumulative % of variance explained		36.7	40.6	43.5

Note: VI, vigor; DE, dedication; AB, absorption, higher loading in each factor is denoted by bold; No, items are numbered in the same way as in the original UWES. *Shortened version (Utrecht Work Engagement Scale-9 [UWES-9]).

Table 5. Factor loadings for the 9-item Nepalese version of the UWES (UWES-N-9) by exploratory factor analysis with the principal axis factoring method and promax rotation (N = 438)

No.	Item	Factors	
		1	2
11	I am immersed in my work (AB4)	**.77**	-.04
10	I am proud of the work that I do (DE4)	**.75**	.01
9	I feel happy when I am working intensely (AB3)	**.74**	-.08
14	I get carried away when I'm working (AB5)	**.73**	-.10
7	My job inspires me (DE3)	**.61**	.12
5	I am enthusiastic about my job (DE2)	**.50**	.31
8	When I get up in the morning, I feel like going to work (VI3)	.40	**.36**
4	At my job, I feel strong and vigorous (VI2)	-.01	**.81**
1	At my work, I feel bursting with energy (VI1)	-.10	**.60**
Total % of variance explained		43.3	5.9
Cumulative % of variance explained		43.4	49.2

Note: VI, vigor; DE, dedication; AB, absorption, higher loading in each factor is denoted by bold; No, items are numbered in the same way as in the original UWES.

Although I found different factor structures, with three factors for the UWES-N-17 and two factors for the UWES-N-9, the concept of work engagement should be tested if the dimensions still fit to these models as comparable to results of previous international studies. Therefore, I assessed the fit of the three models (i.e., one-factor, two-factor, and three-factor models). First, I assessed the fit of the one-factor model. Next, I assessed the fit of the two-factor model (i.e., absorption and dedication factor and vigor factor) of the 9-item version. I then tested the hypothesized three-factor solution for both the UWES-N-17 and UWES-N-9. As shown in Table 6, the three-factor solution fitted the data best for both the UWES-N-17 and UWES-N-9. The 9-item version with the three-factor structure fitted the data better than the 17-item three-factor

structure. In addition, all items of the 9-item version had loadings >.4 (Figure 1), though the loading was somewhat low (.47) for VI1, i.e., "At my work, I feel bursting with energy." Therefore, the three-factor model of the 9-item version was used for further analysis.

Table 6. Results of confirmatory factor analysis: comparison of goodness-of-fit indices among one-factor, two-factor, and three factor models in the short and long versions of the Nepalese version of the Utrecht Work Engagement Scale (UWES-N) (N = 438)

Model	GFI	AGFI	PGFI	TLI	AIC	CFI	RMSEA	Chi-square	*df*	*p*
UWES-N-17										
1-factor [a)]	.88	.85	.69	.86	510.67	.88	.07	442.67	119	.00
3-factor [c)]	**.89**	**.86**	**.68**	**.87**	**471.54**	**.89**	**.07**	**397.54**	**116**	**.00**
UWES-N-9										
1-factor [a)]	.92	.88	.55	.89	180.45	.92	.10	144.45	27	.00
2-factor [b)]	.94	.90	.54	.91	154.93	.93	.08	116.93	26	.00
3-factor [c)]	**.95**	**.91**	**.51**	**.93**	**132.11**	**.95**	**.07**	**90.11**	**24**	**.00**

Note: GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; PGFI, Parsimony Goodness of Fit Index; TLI, Tucker Lewis Index; AIC, Akaike Information Criterion; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; df, degree of freedom, better fit models are denoted by bold letters.

[a)] All items measuring the three constructs loaded on one general work engagement factor.

[b)] Dedication and absorption items loaded on the first factor and vigor items loaded on the second factor.

[c)] Each item loaded on a hypothesized three-factor model.

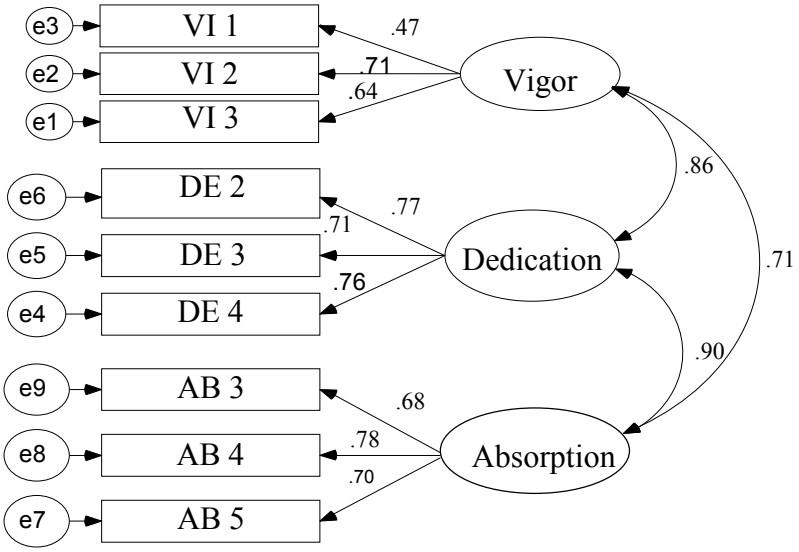

Figure 1. Path diagram of the 9-item Nepalese version of the UWES (UWES-N-9) showing standardized coefficients from confirmatory factor analysis.

Note: VI, vigor; DE, dedication; AB, absorption.

Regarding the UWES-N-9, the Cronbach's alpha coefficients were .83, .60, .78, and .76 for the overall work engagement, and vigor, dedication, and absorption subscales, respectively. The inter-item correlations were significant at p <.001 and ranged from .16 to .55 (Table 3), showing the homogeneity of the items. The Cronbach's alpha coefficients for the UWES-N-17 were .88, .73, .79 and .72 for the overall engagement, vigor, dedication, and absorption subscale, respectively. The inter-item correlations for the UWES-N-17 were significant at the <.001 level and ranged from .10 to .57 (Table 3), indicating that the 17 items were homogeneous. In addition, the Cronbach's alpha coefficient for the absorption subscale of the long version was .75 after I replaced the original item with the revised item. The correlation between the original 17-item version and 9-item version was very high (.95).

Relationship with other well-being variables

To investigate the construct validity of the UWES-N, the relationship with other indicators of well-being (job performance, job satisfaction, happiness, overall health, and psychological distress) was tested using bivariate correlation analysis. The results showed that overall engagement was significantly negatively associated with psychological distress ($r = -.35$, $p < .01$) but positively associated with overall health ($r = .24$, $p < .01$), job satisfaction ($r = .39$, $p < .01$), happiness ($r = .25$, $p < .01$), and job performance ($r = .38$, $p < .01$) (Table 7).

Table 7. Correlation matrix for the 9-item Nepalese version of the UWES (UWES-N-9) and other validating variables (N = 438)

	Overall engagement	Vigor	Dedication	Absorption	Psychological distress	Overall health	Job satisfaction	Happiness
Overall engagement								
Vigor	.84							
Dedication	.88	.57						
Absorption	.80	.46	.69					
Psychological distress	-.35	-.26	-.38	-.25				
Overall Health	.24	.23	.23	.14	-.31			
Job satisfaction	.39	.31	.41	.27	-.33	.31		
Happiness	.25	.21	.27	.15	-.29	.28	.36	
Job performance	.38	.35	.34	.26	-.35	.31	.22	.27

Note: All correlations are significant at the .01 level (2-tailed)

Characteristics of the UWES-N across demographic subgroups

Table 8 reports the descriptive statistics of the UWES-N-9 by demographic subgroups. Regarding age, a significant difference was found between groups in total score ($F = 10.89$, $p < .001$), vigor ($F = 11.87$, $p < .001$), dedication ($F = 7.87$, $p < .001$), and absorption ($F = 3.16$, $p < .05$). The post hoc Tukey's HSD test revealed that the higher age group (46-59 years) had significantly higher engagement compared with the 18-30 years and 31-45 years age groups ($p = <.001$). In terms of the positions held, groups differed significantly in overall engagement ($F = 12.21$, $p < .001$), vigor ($F = 15.01$, $p < .001$), dedication ($F = 7.61$, $p < .01$), and absorption ($F = 3.16$, $p <.05$). The level of overall engagement was significantly higher for supervisors ($5.4 \pm .4$, $p <.01$) and wards in charges ($5.3 \pm .6$, $p <.001$) compared with general staffs (4.8 ± 1.0). However, no significant differences were found between supervisors and ward in charges ($p >.05$). Concerning work experience, the groups differed significantly in overall engagement ($F = 8.01$, $p < .001$), vigor ($F = 8.85$, $p < .001$) and dedication ($F = 5.93$, $p < .01$); however, the same was not found for absorption. Regarding type of work, the groups differed significantly in overall engagement ($F = 4.70$, $p < .05$) and vigor ($F = 4.72$, $p < .01$) but not in dedication and absorption. Nurses with a permanent job showed a higher level of overall engagement (5.1 ± 1.0, $p <.01$) compared with nurses with a temporary job. The level of overall engagement was high among nurses with 21-30 years (5.4 ± 1.0, $p < .001$) and 31-39 years (5.3 ± 1.1, $p <.01$) of experience compared with the group with one month to 10 years of work experience. Similarly, nurses with 21-30 years of experience showed a significantly higher level of overall engagement compared with nurses with 10-20 years of experience (5.0 ± 1.0, $p <.05$). The results revealed no significant difference between nurses with 21-30 years and 31-39 years of experience.

Table 8. Descriptive statistics, one-way ANOVA and multiple comparisons of the 9-item Nepalese version of the UWES (UWES-N-9) across demographic variables (N = 438)

Demographic variables	Mean score (SD)			
	Overall engagement	Vigor	Dedication	Absorption
Age group (years)				
1) 18-30 (n = 284)	4.8 (1.0) ***	4.1(1.2) ***	5.1 (1.1) ***	5.3 (1.0) *
2) 31-45 (n = 98)	4.8 (1.0)	4.1 (1.2)	5.0 (1.0)	5.3(1.0)
3) 46-59 (n = 56)	5.4 (.8)	5.0 (1.2)	5.6 (1.0)	5.6 (.7)
Post hoc test	1<3, 2<3	1<3, 2<3	1<3, 2<3	1<3, 2<3
Position				
1) General staff (n = 368)	5.0 (1.0) ***	4.1 (1.3) ***	5.1(1.1) **	5.3 (1.0) *
2) Ward in charge (n = 46)	5.3 (.6)	5.0 (1.0)	5.6 (.6)	6.1 (.5)
3) Supervisor (n = 24)	5.4 (.4)	5.1 (.7)	5.6 (.5)	6.1 (.5)
Post hoc test	1<2, 1<3	1<2, 1<3	1<3, 2<3	1<2
Type of work				
1) Permanent (n = 154)	5.1 (1.0) **	4.4 (1.3) *	5.2 (1.0) ns	5.5 (1.0) ns
2) Temporary (n = 236)	5.0 (1.0)	4.1 (1.2)	5.1 (1.0)	5.3 (1.0)
3) Daily wages (n = 22)	4.8 (1.0)	4.1 (1.2)	5.2 (1.0)	5.2 (.7)
Post hoc test	1>2	1>2		
Work experience (years)				
1) 0.1-10 (n = 307)	5.0 (1.0) ***	4.0 (1.2) ***	5.1 (1.1) **	5.3 (1.0) ns
2) 11-20 (n = 66)	5.0 (.8)	4.2 (1.2)	5.1 (1.1)	5.4 (1.0)
3) 21-30 (n = 47)	5.4 (.6)	5.1 (1.1)	5.6 (.5)	5.6 (.5)
4) 31-39 (n = 18)	5 (5.0)	5.0 (1.4)	5.5 (1.1)	5.5 (1.0)
Post hoc test	1<3, 1<4, 2<3	1<3, 1<4, 2<3, 2<4	1<3, 2<3	

Note: *p value <.05; ** p value <.01; *** p value <.001. SD, standard deviation; ns, non-significant. Only significant post hoc results are shown in the table.

Discussion:

This study examined the psychometric properties of the UWES in the Nepalese context in a sample of hospital nurses. The factorial validity, construct validity, and internal consistency of the UWES-N were examined.

To obtain the factor structure that best represents the UWES, exploratory factor analysis was used. The three factor solution for the 17-item version could not be interpreted meaningfully (Table 4), suggesting that participants in this study could not differentiate items in each dimension. This also might be the result of having many items measuring similar concepts. The 9-item version showed a two-factor structure (Table 5), with dedication and absorption factors merged into one factor. These results are in contrast with the basic theory Schaufeli et al. (2002), which assumes high correlation between vigor and absorption, suggesting that full immersion in one's activities is associated with high levels of energy and vice versa. The concept of work engagement is a new concept in Nepal; therefore, it requires further research in this area taking into consideration different occupational group and both genders.

Although I found different factor structures using the EFA, I considered the concept of work engagement and employed the hypothesized three-factor solution to perform CFA so as to compare my study findings with the currently available literature. For the 17-item version, I compared the hypothesized three-factor model with the one-factor model. CFA revealed that the three-factor model fitted data better compared with the one-factor model. For the 9-item version, I compared the hypothesized three-factor model with the two-factor model (result from EFA) and one-factor model. Among the three models (one-factor, two-factor, and three-factor models), the three-factor model had the best model fit. Furthermore, comparison of the 17-item and 9-item versions revealed that the 9-item version with the three-factor model displayed the best model fit with the lowest chi-square statistic and AIC and the highest CFI and TLI. These findings are consistent with the findings of previous validation studies in which the three-factor UWES-9 exhibited stronger psychometric properties than the UWES-17 (Extremera, Sanchez-Gracia, & Duran, 2012; Schaufeli et al., 2006; Seppala et al., 2009). However, these findings are inconsistent

with a study conducted in Japan Shimazu et al. (2008), which reported that one-factor model was the best fitted model. However, high correlation among the three dimensions (vigor, dedication, and absorption) supports the possibility of a one-dimensional nature.

Furthermore, the internal consistency of the 9-item three-factor UWES-N was sufficient according to the guidelines of Nummally and Bernstein (Nummally & Bernstein, 1997), except for vigor (.60). The alpha coefficient of .83 for the one-factor model was considerably higher. These results suggest that the 9-item UWES-N version is a reliable scale of work engagement in the Nepalese context. In addition, removing any of the items did not increase the alpha level, which underlines the importance of including all items in the scale. However, the low correlation (.29 and .23) of the item "At my work, I feel bursting with energy" (VI1) with the dedication and absorption subscales needs to be considered when using it in the Nepalese context.

Consistent with my expectation, work engagement was negatively associated with psychological distress and positively associated with health, job satisfaction, happiness, and job performance. These findings are consistent with previous studies (Mache et al., 2013; Rodriguez-Munoz et al., 2013; Shimazu & Schaufeli, 2009; Shimazu et al., 2008) that provided support for the construct validity of the UWES-N. However, because of the cross-sectional design of the current study, I cannot infer the causal direction of the relationships. Future research with longitudinal study designs is required to elucidate potential causal relationships.

Older workers reported a significantly higher level of engagement. This is consistent with prior studies in which work engagement was positively (though weakly) associated with age (Schaufeli et al., 2006). Regarding position, supervisors and ward in charges showed higher levels of work engagement compared with general staff. This result is also consistent with a previous study (Schaufeli et al., 2006). In that study, educators, managers, and police officers showed high

levels of engagement, which was in contrast with a study conducted in China (Fong & Ng, 2012). In that study, support staff were more engaged compared with professional staff. At this moment, we do not have interventional evidence suggesting that educational methods or lifestyle habits would increase work engagement level. However, an empirical study by Bakker, Emmerik, and Euwema (2006) showed that higher occupational groups, like managers, have higher levels of engagement and share positive experiences with team members. Therefore, I believe that although the general staff in my study had low engagement levels, the higher engagement levels of supervisors and ward in charges may help increase the engagement level of their subordinate nurses. Similarly, permanent workers and workers with higher work experience showed higher engagement. Generally, permanent workers have higher salaries, more career opportunities and greater job security compared with temporary workers. Moreover, longer work experience might be associated with task identity. The above mentioned characteristics (high salary, career opportunity, job security, task identity and significance) are related to job resources at work (Bakker & Demerouti, 2007). According to the Job Demands-Resources model Schaufeli and Bakker (2003), higher job resources are related to higher work engagement. Thus, my results are consistent with the Job Demands-Resources model (Bakker & Demerouti, 2007). However, a previous study by Rivera, Fitzpatrick, and Boyle (2011) found that salary and benefits were not the primary drivers of work engagement among nurses. This relationship needs to be investigated further. It can also be hypothesized that higher engagement is related to higher salary in terms of reward. Although my study lacks information regarding salary, I recommend measuring the association of salary with the level work engagement in future studies. As this study was conducted only in one occupational group (i.e. nurses) and only in female, this study results cannot be generalized to all group of occupation.

Conclusion:

In conclusion, this study confirmed that the 9-item version of the UWES-N has satisfactory psychometric properties and provides supportive evidence for its use in the Nepalese context. I believe that validation of the UWES-N is the first step to introducing the concept of work engagement in Nepal. It will not only promote a better understanding of work engagement in the Nepalese context but also inspire further researchers to explore different perspectives of work engagement.

2. Validation of Nepalese Version of Dutch Work Addiction Scale

Introduction:

Workaholism is viewed as one of such personal characteristics (Burke, Matthiesen & Pallesen, 2006) which is considered as an addiction and as destructive as alcoholism, highlighting its negative nature. Based on the concept of workaholism developed by Oates (1971), Schaufeli, et al. (2008), defined workaholism as the tendency to work excessively hard (behavioral dimension) and being obsessed with work (cognitive dimension) which manifests itself as working compulsively.

Although the term workaholism existed for four decades, there were not valid measurement tools for a long time. Spence and Robins (1992) developed Workaholism Battery (WorkBAT) scale to measure workaholism. It consists of three dimensions (work involvement, drive, and enjoyment subscale) with 25 items in a 5-point Likert scale. However, the enjoyment subscale is often criticized as it is not the definitive characteristics of workaholism. In addition, many researchers could not find the three-factor structure of WorkBAT (Sussman, 2012). Another scale was developed by Robbinson (1999) named Work Addiction Risk Test (WART). It consists of 5 subscales (compulsive tendencies, control, self-absorption/impaired communication, inability to delegate, and self-worth) with 25 items in a 4 point Likert scale. This scale also got criticism that the items used in this scale overlap the ideas of workaholism. In 2006, Schaufeli, Taris, and Bakker developed a new scale to measure workaholism based on their definition which is working excessively (cognitive dimension) and compulsively (behavioral dimension) which they claim that they consider both behavioral and cognitive aspects of workaholism. They derived items from WorkBAT Scale and WART. From WorkBAT they derived an eight-item work drive subscale and from WART they derived a nine-item control tendency subscale thereby coming up with 17 item

Dutch Work Addiction Scale (DUWAS). This 17-item DUWAS showed good internal consistencies. However, in 2009, Schaufeli, et al. re-worked on it for the shorter version of workaholism scale and came up with 10 items Dutch Work Addiction Scale (DUWAS) which measures workaholism in a precise way.

DUWAS has two dimensions: working excessively (WE) and working compulsively (WC). Each dimension has 5 items. Two factor structure was superior to one factor structure. Internal consistency was adequate except for Japanese sample for WC scale which has a value slightly below the criterion (alpha = .68). It also showed a good construct validity showing its positive association with burn-out and negative association with work engagement.

Although workaholism is a personal characteristic, it is a negative construct and has negative impact on employee well-being, society and organization as well. It is important to identify the nature of each individual's attitude towards work for his/her health and organizational welfare in early phase. As far as my understanding, it has not been paid attention towards employee well-being in terms of workaholism in Nepalese context where many people die of diarrhea and malnutrition. To provide a quality service to the community, each employee's health plays a big role. If we could identify our employee's attitude towards work (i.e., workaholic), we could manage it accordingly. Therefore, necessarily the first step is the validation of the workaholism scale in Nepalese context. I hypothesized that Nepalese version of DUWAS will show acceptable levels of reliability and validity.

Methods:

Translation procedure

I translated the English version of the DUWAS Schaufeli, Shimazu, and Taris (2009) into Nepali following the guideline (Wild et al., 2005). The translation procedure has been described earlier in the validation of Nepalese version of Utrecht work engagement scale of this thesis on page 13. I discussed some ambiguities with translators and it was also discussed with the original developer (Prof. Wilmer Schaufeli) of the questionnaire. After that, I prepared a first Nepalese version of DUWAS. After pilot study, I created a preliminary Nepalese version of DUWAS after some corrections for words, meanings and content of each item.

Participants

The participants were the same as the study of validation of Nepalese version of Utrecht work engagement scale of section 1 on page 14.

Measures

The measures I used in this study were (1) workaholism and (2) outcome variables (i.e., psychological distress, job performance, happiness, health, and job satisfaction).

Workaholism was assessed using preliminary Nepalese version of DUWAS. It is a 10-item questionnaire with two subscales; Working Excessively (WE) and Working Compulsively (WC). Each subscale has 5 items. All items were scored on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). Details of outcome variables and demographic variables are explained in previous study on validation of Nepalese version of Utrecht work engagement scale on page 15.

Statistical analysis

I used exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to confirm its factor structure. I extracted factors with eigenvalues of greater than one, and used principal axis-factoring and promax rotation to obtain final factor structure. CFA was conducted using structural equation modeling (SEM) methods as implemented by AMOS (Arbuckl, 1997) version 21. Maximum Likelihood estimation was used to examine goodness of fit of the models using following criteria (Schermelleh-Engel et al., 2003) on goodness of fit indices; GFI ≥.95, AGFI ≥.90, PGFI ≥ .80, TLI ≥ .90, CFI ≥ .90, RMSEA, ≤ .08, and AIC. The smaller the AIC the more parsimonious the model would be. To confirm its construct validity, I used correlation analysis with the outcome variables (psychological distress, job performance, happiness, overall health and job satisfaction). EFA, correlation analysis, reliability analysis and other descriptive analysis were conducted using SPSS version 21. To examine the reliability of the instrument, Cronbach's alpha coefficient was calculated.

Results:

First of all, I checked participants' response to each item of DUWAS (Table 9). I found that the most commonly experienced item was "I feel that there is something inside me that drives me to work hard (WC)" M = 3.3, SD = .8, followed by "It is important for me to work hard even when I do not enjoy what I am doing (WC)" M = 3.1, SD = 1.0. The least commonly experienced item was "I feel guilty when I take time off work (WC)" M = 1.5, SD = .8. Remaining items were normally distributed. Subsequently, I checked the correlations among the questionnaire items (Table 10). Few correlations among items were non-significant. For instance, item 5 related to working excessively (I find myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone) and item 10 related to working compulsively (It is

hard for me to relax when I am not working) were weakly correlated (.08). Similarly, items related to working compulsively (items 8 and 9) were not significantly related to each other (Table 10).

Factor structure

After that, I performed exploratory factor analysis (EFA) using principal axis factoring method and promax rotation to determine the subscale of the DUWAS. Two distinct Schaufeli's (2009) scale was not apparent. Using Floyd and Widaman (1995) combined criteria of eigenvalues >1 and the scree test, a three factor solution emerged which explained 35.3% of total variance (Table 11). All four items out of five of WE were loaded in their own respective factor except for one item which loaded to both (i.e., WE and third factor) with almost similar factor loadings (.31 and .39 for WE and third factor, respectively). Similarly, three items out of five of WC were loaded to their own respective factor except for two items which were loaded to third factor. Those items were: "I feel guilty when I take time off work" and "It is hard for me to relax when I am not working". The item ("I spend more time on working than on socializing with friends, on hobbies, or on leisure activities") that was loaded to both factor (WE and third factor) was included in its own respective factor, i.e., WE, because the factor loading value was not that much different. The remaining two items which were loaded to third factor were associated with WC. It is recommended that absolutely no fewer than three items per factor be adhered to throughout (Raubenheimer, 2004). Therefore, I included these two items in their original place i.e., WC dimension and checked its confirmatory factor analysis with one factor structure and two factor structure.

Table 9. Mean, standard deviation and percentage of each item of Dutch Work Addiction Scale (N = 438)

No.	Items	Mean	SD	Almost never (%)	Sometimes (%)	Often (%)	Almost always (%)
1	I seem to be in a hurry and racing against the clock	2.4	1.0	12.1	48.2	27.9	11.9
2	I find myself continuing to work after my coworkers have called it quits	2.3	1.0	15.3	49.1	25.1	10.5
3	I stay busy and keep many irons in the fire	2.2	1.0	22.1	43.6	26.7	7.5
4	I spend more time working than on socializing with friends, on hobbies, or on leisure activities	3.0	1.0	12.6	23.7	40.9	22.8
5	I find myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone	2.2	1.0	23.1	45.2	21.9	9.8
6	It is important for me to work hard even when I do not enjoy what I am doing	3.1	1.0	7.8	19.2	27.9	45.2
7	I feel that there is something inside me to work hard	3.3	.8	3.0	14.4	34.9	47.7
8	I feel obliged to work hard, even when it is not enjoyable	2.6	1.0	13.7	38.4	22.8	25.1
9	I feel guilty when I take time off work	1.5	.8	61.4	29.9	4.8	3.9
10	It is hard for me to relax when I am not working	2.8	1.0	12.6	26.5	33.6	27.4

Table 10. Correlation matrix of each item of Dutch Workaholism Scale (N = 438)

Item	1	2	3	4	5	6	7	8	9	10
1	1									
2	.27**	1								
3	.31**	.30**	1							
4	.25**	.28**	.27**	1						
5	.18**	.30**	.32**	.24**	1					
6	.24**	.17**	.23**	.26**	.20**	1				
7	.11*	.18**	.17**	.33**	.12**	.41**	1			
8	.27**	.10*	.23**	.21**	.17**	.45**	.29**	1		
9	.15**	.25**	.15**	.21**	.23**	.13**	.09*	.06	1	
10	.18**	.23**	.13**	.33**	.08	.24**	.25**	.13	.30**	1

Note: **p value <.01, *p value <.05

Table 11. Factor loadings for the Nepalese version of Dutch Work Addiction Scale by exploratory factor analysis with principal axis factoring method and promax rotation (N = 438)

No.	Items	Factors		
		1	2	3
6	It is important to me to work hard even when I do not enjoy what I am doing (WC 1)	**.67**	.17	.15
8	I feel obliged to work hard, even when it is not enjoyable (WC 3)	**.60**	.21	-.01
7	I feel that there is something inside me that drives me to work hard (WC 2)	**.50**	.08	.26
3	I stay busy and keep many irons in the fire (WE 3)	**.**20	**.56**	**.07**
5	I find myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone (WE 5)	.14	**.51**	.10
2	I find myself continuing to work after my coworkers have called it quits (WE 2)	.05	**.49**	.30
1	I seem to be in a hurry and racing against the clock (WE 1)	.23	**.40**	.12
10	It is hard for me to relax when I am not working (WC 5)	.19	.06	**.65**
9	I feel guilty when I take time off work (WC 4)	.00	.27	**.40**
4	I spend more time on working than on socializing with friends, on hobbies, or on leisure activities (WE 4)	.28	**.31**	**.39**
Total % of variance explained		13.09	12.50	9.74
Cumulative % of variance explained		13.09	25.59	35.34

Note: WE, working excessively; WC, working compulsively, higher loadings are presented in bold; No, Item number, items are numbered in the same way as in the original measures (Schaufeli, Shimazu, and Taris, (2009)

Confirmatory factor analysis was then undertaken (Table 12). The analysis revealed that the hypothesized two-factor structure was better fit than the one-factor structure. For the two-factor structure, GFI was .93, adjusted goodness-of-fit index was .90, comparative fit index (CFI) was .85, showing the moderate fit as GFI and AGFI had met the desired threshold of .90 (Floyd & Widaman, 1995). In addition, RMSEA was slightly greater than the commonly acceptable

threshold (.08). The normed chi-square (χ^2/df) was slightly above the accepted threshold of 3 (Schweizer, 2010). The standardized coefficients were >.4 for all items except for one i.e., "I feel obliged to work hard even when it is not enjoyable" (.29) (Figure 2).

Table 12. Results of confirmatory factor analysis: Comparison of goodness-of-fit indices between one factor and two factor model of Dutch Work Addiction Scale (N = 438)

Model	GFI	AGFI	PGFI	TLI	AIC	CFI	PNFI	RMSEA	Chi-square	df	P
One factor model	.92	.87	.58	.74	208.05	.80	.59	.09	168.05	35	.00
Two factor model	.93	.90	.58	.80	175.23	.85	.61	.08	133.23	34	.00

Note: GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; PGFI, Parsimony Goodness of Fit Index; TLI, Tucker Lewis Index; AIC, Akaike Information Criterion; CFI, Comparative Fit Index; PNFI, Parsimony Normed Fit Index; RMSEA, Root Mean Square Error of Approximation.

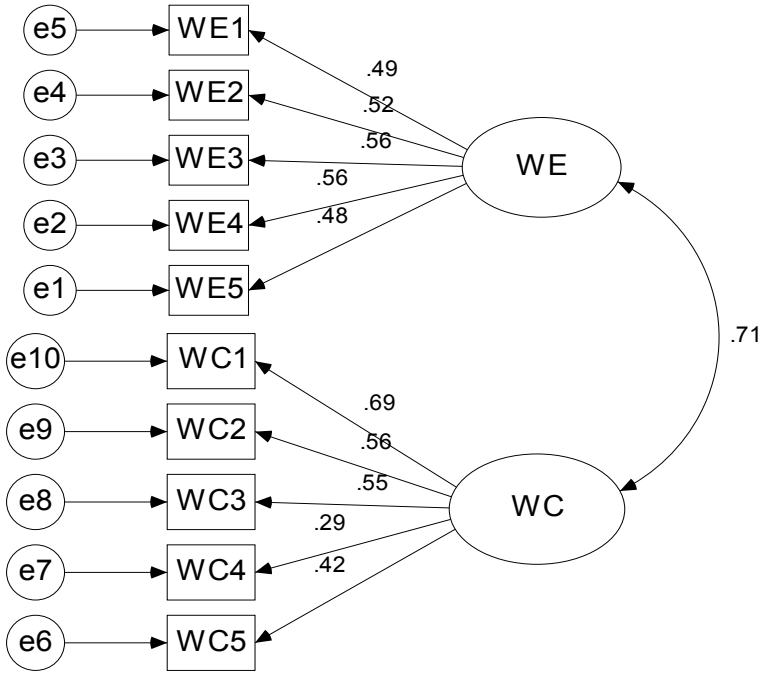

Figure 2. Path diagram of two-factor structure workaholism scale showing standardized coefficient from confirmatory factor analysis

Note: WE, working excessively; WC working compulsively

The internal consistency for the total, WE, and WC scales was also examined and Cronbach's alpha coefficients were .74, .65 and .61, respectively.

Relationship with other well-being variables

To test the construct validity, I used the bivariate correlation analysis between workaholism and outcome variables (Table 13). The total score of workaholism did not show a significant association with any outcome variable used in the study. However, for the subscales, WC was significantly associated with psychological distress. Although it was not significant, the directions of associations between the scales and some of the outcome variables were contrary to my expectation. For instance, workaholism was positively associated with job satisfaction, job performance and health.

Table 13. Correlation matrix for the Nepalese version of the DUWAS and other validating variables (N = 438)

	WR	Health	JS	JP	K6	Happiness	WH	WE
WR								
Health	.07							
JS	.07	.31**						
JP	.01	.30**	.22**					
K6	-.03	-.31**	-.33**	-.33**				
Happiness	.002	.28**	.36**	.26**	-.29**			
WH	-.003	.06	.04	.03	.09	-.02		
WE	.006	.05	.03	.01	.06	-.01	.86**	
WC	-.01	.04	.04	.04	.09*	-.03	.86**	.50**

Note: * p value <.05; ** p value <.01; WR, working hour, JS, job satisfaction; JP, Job performance; K6, psychological distress; WH, workaholism; WE, working excessively; WC, working compulsively

Characteristics of DUWAS-N across demographic subgroups

When I analyzed workaholism, working excessively and working compulsively with different demographic variables, I did not find any significant difference in the level of workaholic behavior with respect to demographic characteristics (Table 14).

Table 14. Descriptive statistics and one-way ANOVA of the Nepalese version of DUWAS (DUWAS-N) across demographic variables (N = 438)

Demographic variables	Mean score (SD)		
	Workaholism	Working excessively	Working compulsively
Age group (years)			
1) 18-30 (n = 284)	2.5 (.5) (ns)	2.4 (.5) (ns)	2.6 (.5) (ns)
2) 31-45 (n = 98)	2.5 (.6)	2.3 (.6)	2.6 (.6)
3) 46-59 (n = 56)	2.6 (.6)	2.5 (.6)	2.7 (.7)
	P = .17	P = .07	P = .59
Position			
1) General staff (n = 368)	2.5 (.5) (ns)	2.3 (.6) (ns)	2.6 (.6) (ns)
2) Ward in charge (n = 46)	2.6 (.6)	2.5 (.6)	2.6 (.7)
3) Supervisor (n = 24)	2.6 (.5)	2.6 (.6)	2.7 (.6)
	P =.38	P = .10	P = .95
Type of work (N = 412)			
1) Permanent (n = 154)	2.5 (.5) (ns)	2.4 (.6) (ns)	2.6 (.6) ns
2) Temporary (n = 236)	2.5 (.5)	2.3 (.6)	2.6 (.6)
3) Daily wages (n = 22)	2.5 (.4)	2.3 (.4)	2.7 (.6)
	P = .76	P = .37	P = .96
Work experience (years)			
1) 0.1-10 (n = 307)	2.5 (.5) (ns)	2.3 (.5) (ns)	2.6 (.5) (ns)
2) 11-20 (n = 66)	2.5 (.6)	2.4 (.6)	2.7 (.6)
3) 21-30 (n = 47)	2.6 (.8)	2.5 (.6)	2.7 (.6)
4) 31-39 (n = 18)	2.5 (.5)	2.3 (.8)	2.6 (.1)
	P = .47	P = .39	P = .74

Note: ns, non-significant (p>.05); SD, standard deviation

Discussion:

Current findings did not provide the evidence fully supporting the validity of the DUAS in Nepalese context, although the hypothesized two-factor model was better fit than the one-factor model. While Cronbach's alpha coefficient for total scale was .74, these were lower for the two subscales (.65 for working excessively and .61 for working compulsively), which were below the minimum threshold (Nunnally & Bernstein, 1994). In addition, none of the item deletion increased the Cronbach's alpha coefficient of total scale or subscales. On the other hand, two items related to WC were isolated to third factor which is on the contrary to some previous findings (Schaufeli et al., 2009; Shimazu & Schaufeli, 2009). Furthermore, the non-significant association between item 8 (I feel obliged to work hard, even when it is not enjoyable) and item 9 (I feel guilty when I take time off work), although they are both related to working compulsively subscale, might be associated with Nepalese perception of guilt. Probably, Nepalese people perceive guilt differently from western or Japanese culture.

The correlation between workaholism (WE and WC) and working hours was non-significant (Table 13) which is also in contrast with the conceptual definition of workaholism. Workaholism was not significantly associated with any criterion variables used in my study, while workaholism was supposed to be associated with poor health, poor job performance, low job satisfaction, high psychological distress, and unhappiness. Though non-significant, the pattern of relationship with some variables such as health, job performance, and job satisfaction was even slightly positive. This means that even though they are workaholic, their health is good, they perform well and are satisfied with their job. This kind of relationship raises many questions in the concept of workaholism in Nepalese context. For instance, whether workaholism concept fits to Nepalese context or if at all it does not really exist. The frequently used items were: "I feel that

there is something inside me that drives me to work hard" and "It is important for me to work hard even when I do not enjoy what I am doing". Both items are related to WC subscale. The higher compulsion tendency among the participants needs further investigation to rule out if they are really suffering from it. They might have different reasons for working hard, even if they do not enjoy the work they are doing. The non-significant associations among demographic variables require further investigation across different occupational groups and genders.

Based on the results of this study, further investigation of psychometric properties of DUWAS with a broader group of participants would be desirable. In addition, further research to include exploratory method would also be required to find out whether Nepalese employees are healthy or how they think of their work.

Conclusion:

The results of my current study did not support the validity of Nepalese version of Dutch Work Addiction Scale. It requires further study to get detailed information regarding the attitude of Nepalese employees towards their work. I suggest design of exploratory studies to extract the real feelings of individuals' attitude towards their work and use of physiological indicators may also be beneficial.

3. Validation of Nepalese Version of Recovery Experience Questionnaire

Introduction:

Stressful work situation leads to poor psychological well-being (De Lange, Taris, Kompier, Houtman & Bongers, 2003; Demerouti, Bakker, Geurts, & Taris, 2009) highlighting the importance of recovery (Eden, 2001; Sonnentag & Fritz, 2007). The concept of recovery has been defined as a psychophysiological unwinding after exposure to stressful situation that requires effort (Geurts & Sonnentag, 2006).

Earlier studies on recovery paid their attention on vacation effects (Westman & Eden, 1997; Fritz & Sonnentag, 2006; Bloom, Kompier, Gerutrs, Weerth, Taris, & Sonnentag, 2009), weekend effects (Fritz & Sonnentag, 2005), short break during job effect and recovery after work. Consequently, previous research showed that long vacation effects faded out gradually. Weekend effect and short break did not show a significant effect. Therefore, Sonnentag and Fritz (2007) suggested that recovery during leisure time after work is effective to improve level of health and well-being. They highlighted that recovery is a psychological process of feeling relaxation or disconnection which makes a person feel recovered. It also highlights that the types of activity individuals engage in after work influence well-being. Based on this idea, Sonnentag and Fritz developed an instrument to assess these underlying psychological process, which is known as the Recovery Experience Questionnaire, based on conservation of resource theory (Hobfoll, 1998), effort-recovery model (Meijman & Mulder, 1998), and mood regulation literature. The Recovery Experience Questionnaire has 16 items, consisting of four subscales namely; psychological detachment from work, relaxation, mastery, and control. Each subscale has 4 items.

Psychological detachment from work: Psychological detachment from work refers to an individual's sense of being away from the work situation (Etzion, Eden, & Lapidot, 1998). It also means disengaging oneself mentally from work or switching off mentally from work (Sonnentag & Fritz, 2007), where an individual not only be away from physical presence from the workplace during off-job time but also distance himself/herself from work psychologically. As for example, he/she does not receive phone calls from work and talk about the work condition at home. No further demands are made on functional systems called upon during work thereby helping preserve resources.

Relaxation: Relaxation is characterized by a state of low activation thereby increasing positive affect. However, some degree of relaxation can be achieved by performing small activities such as taking a light walk in a peaceful environment. Other low activation states are: meditation, yoga, sleep, watching favorite TV channel, reading magazine or book etc. To get the benefit from relaxation there should also not be further demands on functional systems called upon during work as in psychological detachment (Sonnentag & Fritz, 2007).

Mastery experiences: Mastery experiences are the off-job activities that distract an individual from the job. Those activities are challenging without overtaxing the capabilities of the individual and provide learning opportunities so that the individual can get the sense of achievement and competence. Although individuals need to invest their energy to get the mastery experiences, it is supposed that these experiences help build up new internal resources such as skills, competencies and self-efficacy (Sonnentag & Fritz, 2007).

Control during leisure time: This component is the ability of an individual to decide which activity to pursue and when and how to pursue an activity of his/her interest during leisure time. Here, an individual chooses the specific activity he/she prefers most from available many options.

Therefore, control experiences during leisure time are supposed to play an important role in recovery process. Feeling of control experiences during leisure time may satisfy ones' desire, increase self-efficacy and feelings of competence, thereby increase well-being, acting as external resources that enhance recovery from work during off-job time (Sonnentag & Fritz, 2007).

Some previous studies found that recovery experience after work is positively associated with psychological well-being such as life satisfaction, need for recovery, sleep, work engagement and negatively associated with health complaints, burnout and depressive symptoms (Sonnentag & Fritz, 2007; Shimazu et al., 2012). However, Burke and El-Kot (2009) did not find the significant association of four recovery experiences with psychological well-being (exhaustion, work/family conflict, psychosomatic symptoms and life satisfaction) among Egyptian managers. Also, they found negative association of psychological detachment to job satisfaction. In addition, it has been also proposed that the relationship of recovery experience among well-being may not be linear, rather curvilinear (Shimazu et al., 2012; Fritz & Sonnentag, 2006).

It is important to investigate the relationship between recovery experience and health and well-being of workers in a different socio-cultural setting such as Nepal, because very little research was conducted on this topic in developing countries, particularly focusing of one of stressful occupations, i.e., nurse. However, to apply the concept of recovery into Nepalese context, the necessary first step is the validation of REQ in Nepal. Therefore, the aim of this study was to validate the Nepalese version of REQ among hospital nurses in Nepal.

Methods:

Translation procedure

I translated the English version of the Recovery Experience Questionnaire (REQ) (Sonnentag & Fritz, 2007) into Nepali using the guideline (Wild et al., 2005). The translation procedure was same as one used for the validation of Nepalese version of Utrecht work engagement scale of this thesis on page 13. For this questionnaire, I discussed the ambiguities during translation with the translators and original developer (Prof. Sabine Sonnentag) of the questionnaire For instance, for item number 6 ("I kick back and relax"), we do not have the exact phrase in Nepali, therefore, I translated it into a sentence providing its meaning. Similarly, item number 15 ("I do something to broaden my horizon"), I provided the example to clarify the meaning of horizon so that participants could provide the same meaning of horizon which I expected for. Thus, I prepared a first Nepalese version of REQ. That translation was evaluated and some discussion was made to clarify the meaning and concept. After pilot study, I created a preliminary Nepalese version of REQ after some corrections for words, meanings and content of each item.

Participants

The participants were the same as the study of validation of Nepalese version of Utrecht work engagement scale of section 1 on page 14.

Measures

The measures I used in this study were (1) recovery experiences, (2) outcome variables (i.e., psychological distress, job performance, happiness, health, and job satisfaction) and (3)

demographic characteristics. The details of demographic characteristics are shown in previous study of this thesis on page 19 (Table 1).

Recovery experiences were assessed using preliminary Nepalese version of REQ. It is a 16-item questionnaire with four subscales; psychological detachment, relaxation, mastery, and control, that demonstrate the underlying dimensions of recovery experiences. Each subscale has 4 items. All items were scored in a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Statistical analysis

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were utilized to confirm its factor structure. Factors with eigenvalues of greater than one were extracted and used principal axis-factoring and promax rotation to obtain final factor structure. CFA was conducted using structural equation modeling (SEM) methods as implemented by AMOS (Arbuckl, 1997) version 21. Maximum Likelihood estimation was used to examine goodness of fit of the models using following criteria (Schermelleh-Engel et al., 2003) on goodness of fit indices; GFI $\geq$.95, AGFI $\geq$.90, PGFI $\geq$ .80, TLI $\geq$ .90, CFI $\geq$ .90, RMSEA, $\leq$ .08, and AIC the smaller the AIC the more parsimonious the model. To confirm its construct validity I used correlation analysis with the outcome variables (psychological distress, job performance, happiness, overall health and job satisfaction). EFA, correlation analysis, reliability analysis, and other descriptive analysis were conducted using SPSS version 21. To examine the internal consistency of the instrument, Cronbach's alpha coefficient was calculated.

Results:

Factor structure

For mean and SD, and percentage of each response category of each of the 16 items (Table 15), the lowest mean score 1.9 (SD = 1.1) was observed for item number 5 ("I don't think about work at all") which is related to psychological detachment followed by 2.1 (SD = 1.1) for item number 10 ("I distance myself from my work") which is also related to psychological detachment. The highest mean score 4.4 (SD = .7) was observed for item number 2 ("I learn new things") which is related to mastery. Correlations among questionnaire items are shown in Table 16.

Table 17 shows the result of EFA. In line with my expectations, four factors with eigenvalues of greater than one were extracted. However, cross loadings was observed for two items. For instance, item 13 ("I take care of things the way that I want them done which was related to control") was loaded to both relaxation and control and item 6 ("I kick back and relax which was related to relaxation") was loaded to psychological detachment.

Table 15. Mean, standard deviation and percentage of each item of Recovery Experience Questionnaire (N = 438)

No.	Items	Mean	SD	Strongly disagree % 1	Disagree % 2	Neither agree nor disagree % 3	Agree % 4	Strongly agree % 5
12	I use the time to relax (Relx3)	3.0	1.3	14.8	29.9	15.5	30.1	9.6
14	I take time for leisure (Relx4)	3.1	1.2	9.6	26.3	20.8	31.1	12.3
11	I do relaxing things (Relx2)	3.2	1.2	10.5	19.6	20.3	33.8	15.8
13	I take care of things the way that I want them done (Contr4)	3.7	1.1	3.7	11.9	23.1	40.0	21.5
5	I don't think about work at all (PD2)	2.0	1.1	44.5	34	10.5	7.3	3.7
10	I distance myself from my work (PD3)	2.1	1.1	36.1	38.6	11.4	10.0	3.9
3	I forget about work (PD1)	2.4	1.2	24.9	31.1	19.9	19.4	4.8
6	I kick back and relax (Relx1)	2.1	1.2	39.7	31.5	12.8	11.2	4.8
16	I get a break from the demands of work (PD4)	3.0	1.2	17.6	32.9	19.9	20.5	9.1
7	I seek out intellectual challenges (Mast2)	4.0	1.0	.9	5.3	19.9	55.7	18.3
2	I learn new things (Mast1)	4.4	1.0	.5	2.1	4.1	41.6	51.8
8	I do things that challenge me (Mast3)	4.0	1.0	1.6	5.3	19.2	52.7	21.2
15	I do something to broaden my horizons (Mast4)	4.0	1.0	.9	2.5	13.0	60.3	23.3
4	I decide my own schedule (Contr2)	4.0	1.1	4.8	9.6	11.6	40.4	33.6
9	I determine for myself how I will spend my time (Contr3)	4.2	.8	.7	3.2	8.0	46.3	41.8
1	I feel like I can decide for myself what to do (Contr1)	4.3	.8	.7	1.8	7.3	43.2	47.0

Note: Relx, Relaxation; PD, Psychological detachment; Mast, Mastery; Contr, Control, No, Item number, items are numbered in the same way as in the original measures (Sonnentag & Fritz, 2007)

Table 16. Correlation matrix of each item of Recovery Experience Questionnaire (N = 438)

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	.27**	1													
3	-.12*	-.14**	1												
4	.35**	.10*	.02	1											
5	-.06	-.15**	.41**	.03	1										
6	-.01	-.16**	.25**	.07	.44**	1									
7	.21**	.41**	-.15**	.05	-.12**	-.12*	1								
8	.20**	.36**	-.14**	.19**	-.14**	-.21**	.44**	1							
9	.42**	.19**	-.04	.40**	-.05	-.02	.22**	.44**	1						
10	-.02	-.12**	.37**	.04	.45**	.47**	-.16**	-.09	-.03	1					
11	.07	.06	.14**	.11*	.17**	.30**	-.07	-.06	.10	.33**	1				
12	.04	-.10*	.22**	.07	.23**	.36**	-.07	-.05	.05	.37**	.46**	1			
13	.23**	.07	.09	.32**	.10*	.13**	.13**	.14**	.31**	.12**	.29**	.25**	1		
14	.07	-.02	.18**	.09*	.21**	.27**	-.04	.01	.13**	.34**	.37**	.48**	.36**	1	
15	.27**	.28	-.16**	.19**	-.06	-.14**	.41**	.30**	.30**	-.16**	.01	-.04	.20**	.14**	1
16	.06	-.04	.31**	.03	.32**	.33**	-.02	-.03	.05	.35**	.35**	.34**	.19**	.34**	-.08

Note: **p value <.01, *p value <.05

Table17. Factor loadings for the Nepalese version of Recovery Experience Questionnaire by exploratory factor analysis with principal axis factoring method and promax rotation (N = 438)

No.	Items	Factors			
		Relaxation	Psychological detachment	Mastery	control
12	I use time to relax (Relx 3)	**.71**	-.00	-.06	-.04
14	I take time for leisure (Relx 4)	**.67**	-.02	.01	.02
11	I do relaxing things (Relx 2)	**.65**	-.02	.00	-.02
13	I take care of things the way that I want them done (Contr 4)	**.36**	-.01	.04	**.35**
5	I don't think about my work (PD 2)	-.14	**.82**	.06	.03
10	I distance myself from my work (PD 3)	.19	**.56**	-.01	-.00
3	I forget about work (PD 1)	-.04	**.55**	-.05	.02
6	I kick back and relax (Relx 1)	.20	**.46**	-.08	.01
16	I get break for the demands of work (PD 4)	.33	**.34**	-.08	-.03
7	I seek out intellectual challenges (Mast 2)	-.01	.06	**.86**	-.17
2	I learn new things (Mast 1)	-.01	-.03	**.54**	-.00
8	I do things that challenge me (Mast 3)	-.09	.02	**.52**	.19
15	I do something to broaden my horizons (Mast 4)	.08	-.10	**.43**	.15
4	I decide my own schedule (Contr 2)	-.07	.07	-.15	**.73**
9	I determine for myself how I will spend my time (Contr 3)	-.01	.00	.11	**.65**
1	I feel like I can decide for myself what to do (Contrl 1)	.03	-.04	.11	**.49**
Total % of variance explained		18.95	15.19	3.98	3.46
Cumulative % of variance explained		18.9	34.15	38.08	41.54

Note: Relx, Relaxation; PD, Psychological detachment; Mast, Mastery; Contr, Control, higher loadings are presented in bold; No., Item number, items are numbered in the same way as in the original measures (Sonnentag & Fritz, 2007).

In the next step, I conducted CFA. Although I found four-factor structure in the EFA, some items were loaded differently from the original REQ. Hence, I assessed three models (i.e., one-factor model, hypothesized four-factor model, and four-factor model obtained from EFA results). As shown in Table 18, the four-factor models (i.e., hypothesized four-factor model, and four-factor model obtained from EFA) fitted to the data better than the one-factor model. The hypothesized four-factor model and model obtained from EFA did not differ much and all standardized estimates for hypothesized four-factor model were >.4 (Figure 3). Therefore, I chose the hypothesized four-factor model for further analysis so as to compare these findings with contemporary literature.

Cronbach's alpha was computed to check the internal consistency. Cronbach's alphas for psychological detachment, relaxation, mastery, and control were .70, .70, .70, and .67, respectively.

Table 18. Results of confirmatory factor analysis: comparison of goodness-of-fit indices between one factor and four factor model of recovery experience questionnaire (N = 438)

Model	GFI	AGFI	PGFI	TLI	AIC	CFI	PNFI	RMSEA	Chi-square	df	P
One-factor model (a)	.70	.62	.54	.42	1027.40	.48	.39	.13	963.40	104	.00
Four-factor model (b)	.91	.87	.65	.82	417.88	.85	.66	.07	341.88	98	.00
Four-factor model (c)	.92	.89	.66	.85	372.88	.88	.68	.07	296.88	98	.00

Note: GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; PGFI, Parsimony Goodness of Fit Index; TLI, Tucker Lewis Index; AIC, Akaike Information Criterion; CFI, Comparative Fit Index; PNFI, Parsimony Normed Fit Index; RMSEA, Root Mean Square Error of Approximation, (a) All items measuring the four constructs of recovery experience load on one general recovery experience factor; (b), Each item loads on a hypothesized factor (a Four-factor model); (c), Four-factor structure obtained from EFA in Table 14.

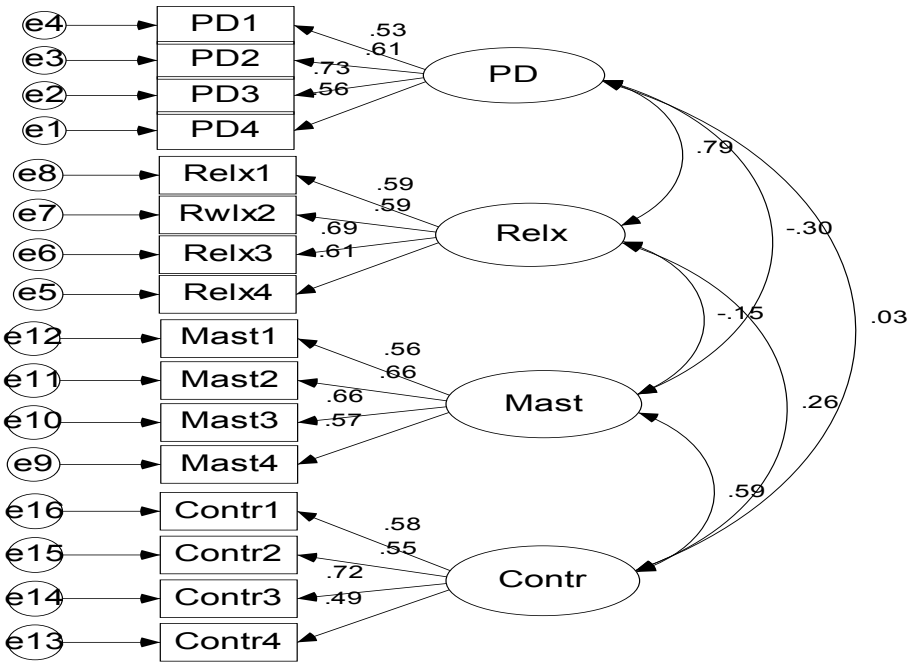

Figure 3. Path diagram of Recovery Experience Questionnaire showing standardized coefficient on hypothesized four factor model from confirmatory factor analysis

Note: PD, psychological detachment; Relx, relaxation; Mast, mastery; Contr, control, each item represent the item reported as in Table 10.

Relationship with other well-being variables

In order to examine its construct validity, a correlation analysis between REQ and well-being variables was conducted (Table 19). Psychological detachment was significantly and positively associated with psychological distress. In addition, a negative association of psychological detachment with job satisfaction and happiness was observed. Similarly, relaxation showed a significant and negative association with job satisfaction. Mastery showed a significant positive association with overall health, happiness, and job performance, and also showed a significant negative association with psychological distress. Control showed a significant negative

association with psychological distress, and a significant positive association with job satisfaction, overall health, happiness, and job performance.

Table 19. Correlation matrix for the Nepalese version of the REQ and other validating variables (N = 438)

	Psychological detachment	Relaxation	Mastery	Control	Psychological distress	Job satisfaction	Overall health	happiness
Psychological detachment								
Relaxation	.55**							
Mastery	-.21**	-.10*						
Control	.07	.23**	.37**					
Psychological distress	.14**	.03	-.26**	-.26**				
Job satisfaction	-.18**	-.12**	.09	.13**	-.33			
Overall health	-.07	-.02	.18**	.17**	-.31**	.31**		
Happiness	-.18**	-.08	.14**	.14**	-.29**	.36**	.28**	
Job performance	-.09	-.04	.26**	.23**	-.35**	.22**	.31**	.27**

Note: ** p value <.01, *p value <.05

For the association of psychological detachment with outcome variables (psychological distress, job satisfaction, and happiness) and for that between relaxation and job satisfaction, for which unexpected findings were observed, a curvilinear relationship was tested using regression analysis with curve estimation. A significant standardized betas of squared psychological detachment and psychological distress was observed (β = -.46, p <.05) (Figure 4). The curve showed that at intermediate levels of psychological detachment, the distress level became high and did not further increase and distress level gradually decreased when psychological detachment further increased. Except for psychological distress, all linear effects were negative. The standardized beta of squared psychological detachment and job satisfaction and happiness were

not significant (β = .23, p >.05; β = .16, p >.05 respectively) and it was also non-significant with squared relaxation and job satisfaction (β = -.08, p >.05) accepting linear relationship.

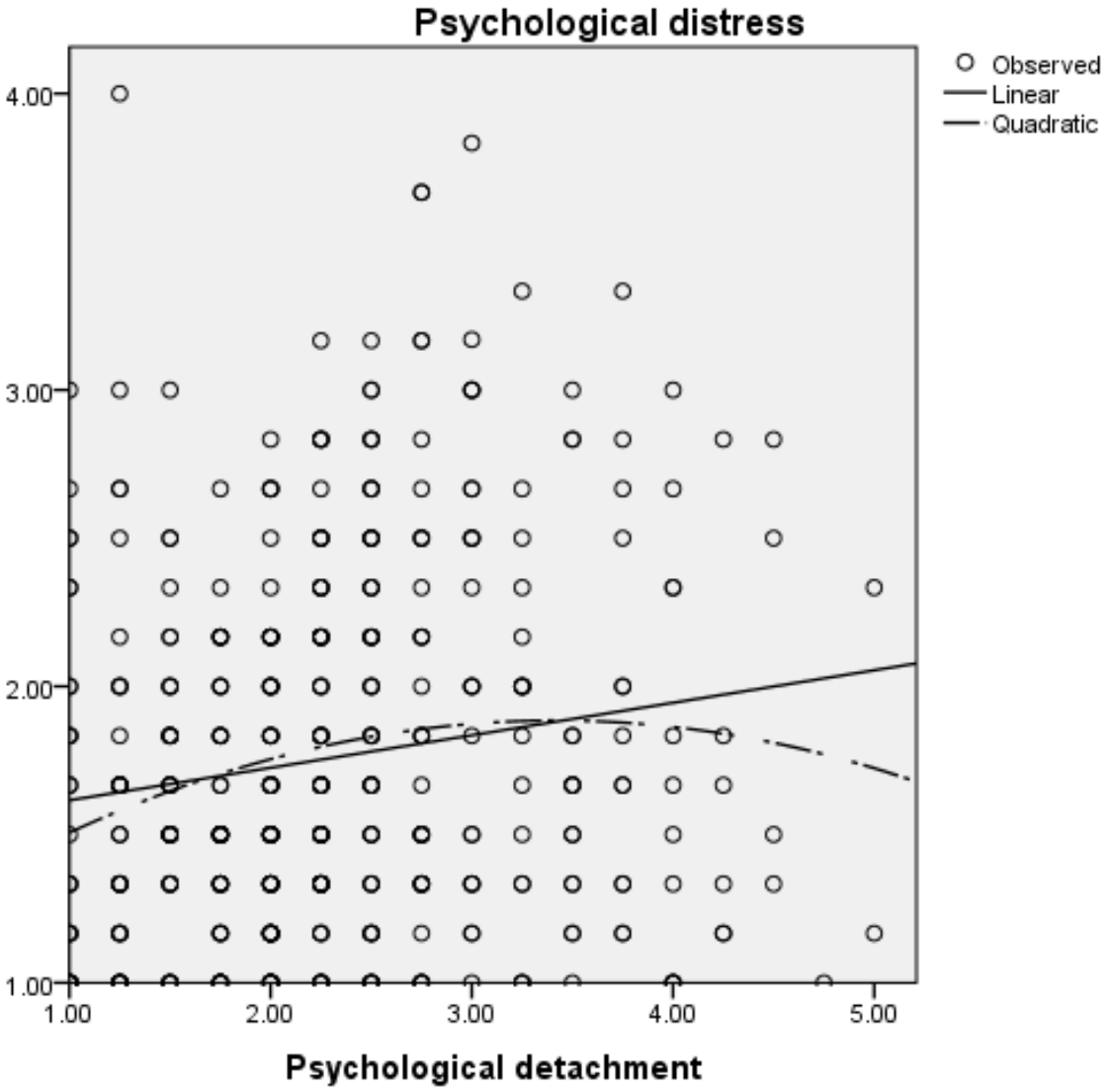

Figure 4. Curvilinear relationship between psychological detachment and psychological distress.

Characteristics of REQ-N across demographic subgroups

The use of recovery experience was different according to demographic characteristics (Table 20). For instance, there was a significant difference in the use of psychological detachment and relaxation according to age, marital status, and position. A significant difference was found in the use of mastery according to marital status, position, and religion. In addition, a significant difference in the use of control according to age and position was also observed.

Table 20. Descriptive statistics and one-way ANOVA of the Nepalese version of Recovery Experience Questionnaire (REQ-N) across demographic variables (N = 438)

Demographic variables	Mean score (SD)			
	PD	Relaxation	Mastery	Control
Age group (years)				
1) 18-30 (n = 284)	2.4 (.8) ***	3.1 (1.0) *	4.1 (.5)	4.0 (.6) *
2) 31-45 (n = 98)	2.4 (.9)	3.0 (1.2)	4.1 (.5)	4.1 (.7)
3) 46-59 (n = 56)	2.0 (.7)	2.5 (1.0)	4.2 (.6)	4.2 (.7)
Marital status				
1) Married (n = 237)	2.2 (1.0) **	3.0 (.1.0) **	4.1 (.6) *	4.1 (.6)
2) Unmarried (n = 196)	2.3 (1.0)	3.0 (1.0)	4.0 (.5)	4.0 (.5)
3) Widow (n = 4)	2.0 (.4)	2.1 (1.0)	3.6 (.7)	4.1 (1.0)
4) Divorced (n = 1)	-	-	-	-
Position				
1) Supervisor (n = 24)	2.2 (1.0) **	3.0 (1.0) *	4.3 (.4) **	4.4 (1.0) *
2) Ward in charge (n = 46)	2.0 (1.0	2.5 (1.0)	4.2 (.4)	4.1 (.7)
3) General staff (n = 368)	2.3 (.8)	3.0 (1.0)	4.0 (.6)	4.0 (.7)
Type of work (N = 412)				
1) Permanent (n = 154)	2.2 (1.0)	2.7 (1.0)*	4.1 (.6)	4.2 (.6)**
2) Temporary (n = 236)	2.4 (1.0)	3.0 (1.0)	4.1 (.5)	4.0 (.7)
3) Daily wages (n = 22)	2.2 (1.0)	2.7 (1.0)	4.0 (.6)	4.0 (.6)
Religion				
1) Hinduism (n = 386)	2.3 (1.0) ns	2.8 (1.0) ns	4.1 (.6)*	4.1 (.7) ns
2) Buddhism (n = 45)	2.2 (1.0)	2.7 (.8)	4.1 (.5)	4.1 (.6)
3) Christian (n = 4)	3.0 (1.2)	3.1 (1.5)	3.1 (1.4)	4.4 (.6)
4) Others (n = 3)	3.0 (1.5)	2.4 (1.3)	4.1 (.3)	4.2 (.5)
Work experience (years)				
1) 0.1-10 (n = 307)	2.4 (1.0)**	3.0 (1.0) **	4.1 (.6) *	4.0 (.6) *
2) 11-20 (n = 66)	2.4 (1.0)	2.7 (.7)	4.1 (.5)	4.1 (.5)
3) 21-30 (n = 47)	2.0 (.7)	2.6 (1.0)	4.3 (.4)	4.3 (.7)
4) 31-39 (n = 18)	1.8 (.7)	2.3 (1.0)	4.0 (1.0)	4.2 (1.0)

Note: ***p value <.001, **p value <.01, *p value <.05. SD, standard deviation; non-significant. Only significant results are shown in table.

Discussion:

The aim of this study was to analyze the psychometric properties of the Nepalese version of the Recovery Experience Questionnaire developed by Sonnentag and Fritz (2007). For this purpose, exploratory factor analysis and confirmatory factor analysis were done to evaluate the factorial validity; and internal consistency was tested by calculating Cronbach's alpha. Construct validity was tested by correlating each subscale of REQ with its outcome variables.

Exploratory factor analysis revealed four factor structure as in the original questionnaire (Sonnentag & Fritz, 2007). However, some of the items were cross-loaded. For instance, "I kick back and relax" (item number 6), which was supposed to load on relaxation factor, was loaded to psychological detachment, and "I take care of things the way that I want them done" (item number 13), which was supposed to load on control factor, was loaded to both relaxation and control. The item related to relaxation loaded to psychological detachment, which was consistent with a previous study Shimazu et al. (2012) that relaxation and psychological detachment were condensed in one factor. However in this study, only one item was loaded to psychological detachment. Finally, among different factor structures, the model fit was good for the hypothesized four factor model, which provides evidence that hypothesized four factors measured by REQ are relevant in Nepalese context.

Furthermore, the internal consistency lies on the acceptable level for all four subscales. Highest correlation was found between psychological detachment and relaxation followed by mastery and control. High correlation between psychological detachment and relaxation is consistent with the study by Sonnentag and Fritz (2007).

Regarding the correlation between recovery experience and the well-being variable, psychological detachment and relaxation showed different associations with the outcome variables. For instance, psychological detachment was positively associated with psychological distress and negatively associated with job satisfaction and happiness which is in contrast with the previous study results (Sonnentag & Fritz, 2007; Shimazu et al., 2012). For this unexpected association, I checked if there is any curvilinear relationship and found that there is a significant curvilinear relationship between psychological detachment and psychological distress. This might mean that individuals who use psychological detachment at intermediate level have high distress and when they further continue using it, their distress level decreases. In that sense, the mean score of psychological detachment in this study sample was 2.3 which falls under the intermediate level and it is consistent with the results of curvilinear relationship. Therefore, these findings suggest that the use of psychological detachment at intermediate level is detrimental for Nepalese nurses suggesting to provide some intervention to increase the use of psychological detachment. In Japanese sample Shimazu et al. (2012), psychological detachment was negatively associated with work engagement, and in Egyptian sample Burke and El-Kot (2009), none of the recovery experiences were associated with psychological well-being variable such as exhaustion and life satisfaction. Similarly, M.G. Poulsen, A. A. Poulsen, A. Khan, E. E. Poulsen, and S. R. Khan (2014) did not find a significant association between psychological detachment or relaxation with work engagement. Psychological detachment and relaxation may be associated with health and well-being of workers in a different way in Nepal compared with other countries, particularly western countries and Japan. However, a further study is needed because this study was a cross-sectional one and conducted only in one group of people i.e., nurses. Further exploration should be done on whether psychological detachment and relaxation are useful in Nepalese context. On

the other hand, mastery and control experience had significant associations with outcome variables as in line with my expectation showing that mastery and control experience had important role to the well-being of Nepalese hospital nurses.

In general, age, marital status, and position showed a significant role in the use of recovery experience. Nurses within the age of 18-45 years used more psychological detachment and relaxation. But nurses within the age of 46-59 years used more control. Probably, younger nurses may have a fewer resources to engage in the control recovery behavior, thus they may use other recovery strategies more often. Similarly, unmarried nurses used more psychological detachment, relaxation, control, and mastery. It seems that nurses who are not married are fully utilizing recovery strategies, suggesting future studies if marital status affects the use of recovery strategies. General nursing staff used more psychological detachment and relaxation but supervisors used more mastery and control. It suggests that supervisors might have more resources to master themselves and thereby develop confidence and self-control.

Conclusion:

In conclusion, Nepalese version of REQ showed acceptable levels of internal consistency reliability and a four dimension structure as found in the original questionnaire. Mastery and control experience are more beneficial for the well-being of the hospital nurses of Nepal. Psychological detachment and relaxation are to be further explored in the Nepalese context.

4. **Summary findings of the Section 1**

Overall, the hypothesized short version of Utrecht Work Engagement Scale showed satisfactory psychometric properties. However, 17-item Utrecht Work Engagement Scale could not be interpreted meaningfully based on the exploratory factory analysis in this study. Similarly, 9-item version also had different factor structure compared to the original one. Moreover, Dutch Workaholism Scale did not have sound psychometric properties. Regarding Recovery Experience Questionnaire, the hypothesized four-factor structure was satisfactory, but psychological detachment and relaxation were not associated in the expected direction with outcome variables.

Work attitude/behavior, recovery opportunities, and recovery experiences that predict health and well-being of the employee may largely vary across jobs. The original questionnaire (UWES, DUWAS, and REQ) was developed and validated on samples of participants from various occupations, such as teachers, college staffs, civil servants, managers, physicians, nurses, hospital workers, blue collar workers, organizational consultants, and others (Schaufeli et al., 2002; Schaufeli et al., 2009; Sonnentag & Fritz, 2007), of both genders.

In this study, Nepalese version of questionnaire was developed and validated on a sample of nurses because nursing profession differs from other general profession in several aspects. Specifically, nurses suffer from occupational stress, have to work shifts, have high workload, have limited decision power, and have high responsibility and accountability for the lives of other individuals, unlike individuals in some other professions. In addition, occupational stress is highly prevalent among nurses (Salehi, Jayanbakht, & Ezzatababdi, 2014).

However, the Nepalese version of these three instruments did not show to have sound psychometric properties. Differences between western and Nepalese culture might have affected the results. Furthermore, major limitation of this validation study was the recruitment of only one

occupational group (i.e., nurses) who were all female. Total registered nurses in Nepal account only for 0.1% of the total population (NNC, 2015). In addition, nurses from three hospitals of urban area do not represent the entire nurse population.

Despite the lack of validation of Nepalese version of these questionnaires, I proceeded to the second part of the study because this preliminary study is the first to explore these concepts in Nepal. Exploring the associations among recovery experience, work engagement, health, and well-being of the nurses can inform further researcher to extend research in different aspects.

SECTION 2

Association of recovery experience to the well-being through work engagement

Introduction:

In Study 1, I developed the Nepalese versions of scales of work engagement (UWES), workaholism (DUWAS), and recovery experience (REQ) and tested their reliability and validity among nurses in Nepal. While not all scales showed sufficient levels of reliability and validity, the 9-item Nepalese UWES (UWES-N) showed high internal consistency reliability and factor-based validity comparable to those in western countries. The Nepalese version of REQ showed acceptable levels of internal consistency reliability and factor-based validity. Using these validated scales, Study 2 was designed to investigate behavioral factors contributing to health and well-being of nurses in Nepal. The general purpose of Study 2 was to preliminarily ascertain the associations among recovery experiences, work engagement, health, and well-being outcomes among nurses in Nepal.

Recovery experiences are generally associated with well-being (Sonnentag, Binnewies, & Mojz, 2008). However, some of the recovery experiences such as psychological detachment, the most commonly studied and found to be the most important part of recovery experience, (Sonnentag, & Fritz, 2007), showed their associations with health and well-being sometimes inconsistent. For instance, Shimazu et al. (2012) found that psychological detachment was negatively associated with work engagement in Japanese employees. The reason behind this negative association was considered that when individuals are mentally detached from their work during free time, they may feel difficulty in switching on again in the next day and they may need more time to mobilize their energy for their work which results in low work engagement (Shimazu

et al., 2012). Similarly, it was reported that none of the recovery experiences were associated with psychological well-being (Burke et. al., 2009) among Egyptian managers. Researchers speculated that these inconsistent findings may depend on sample characteristics. Those samples were young, mostly single, mostly without children, and worked few hours a week in less work-intense jobs. However, this does not provide a full reason why the use of recovery experiences was not associated with psychological health in the Egyptian study. A further idea is to sort out these inconsistent findings by investigating inter-correlations among recovery experience, work engagement, and health and well-being of nurses in Nepal, looking at a possible mediation effect of work engagement in the relationship between recovery experience and health/well-being to understand the complex relationship of recovery experience with health and well-being. As the first step for this approach, I intend to test this conceptual model among nurses in Nepal.

I conceptualized the idea based on conversation of resource theory (COR) (Hobfoll, 1998) and effort-recovery model (Meijman & Mulder, 1998). COR theory suggests that resources of an individual are threatened when the individual is confronted with the demands during stressful work. Those resources can be restored by removing the demands during time periods such as work breaks or respites that allow for such a restoration of resources. I adapted the COR theory because this study deals with the restoration of resources during free time after work which thereby facilitate increase work engagement (gain spiral) which in turn is associated with well-being. Similarly, effort-recovery model holds that effort expenditure at work leads to load reactions such as fatigue. Under normal conditions, once the individual is no longer exposed to the work or similar demands, load reactions are reversed and recovery occurs. According to this model, it is an important precondition for recovery that the functional systems taxed during work will not be called upon any longer. Therefore, it is assumed that when an individual feels recovered well in

the free time after work, he/she thinks about good sides of work and can sustain his/her engagement level the next day at the same level (Sonnentag, 2003). Similarly, when employees are fully recovered, they conserve or build up their energy as a personal resource, which may encourage them to invest energy and feel dedicated about their work and in turn, that motivates them to foster accomplishments, for instance, they want to go extra-mile with positive outcomes such as high job performance, proactive behavior, job satisfaction etc.

In addition, COR theory assumes that resources may diminish as a result of so-called "loss spiral" and that resources may increase as a result of "gain spiral" (Hobfoll, 1998). The former implies that people who lack resources are susceptible to losing even more resources. On the other hand, gaining resources increases the resources pool which makes it more likely that additional resources will be subsequently acquired.

To link the process of recovery experience (psychological detachment, relaxation, mastery, and control), work engagement, and well-being, two hypotheses were created. Hypothesis 1: Recovery experiences will be positively associated with well-being.

Hypothesis 2: Recovery experiences will be positively associated with work engagement which in turn will be positively associated with well-being.

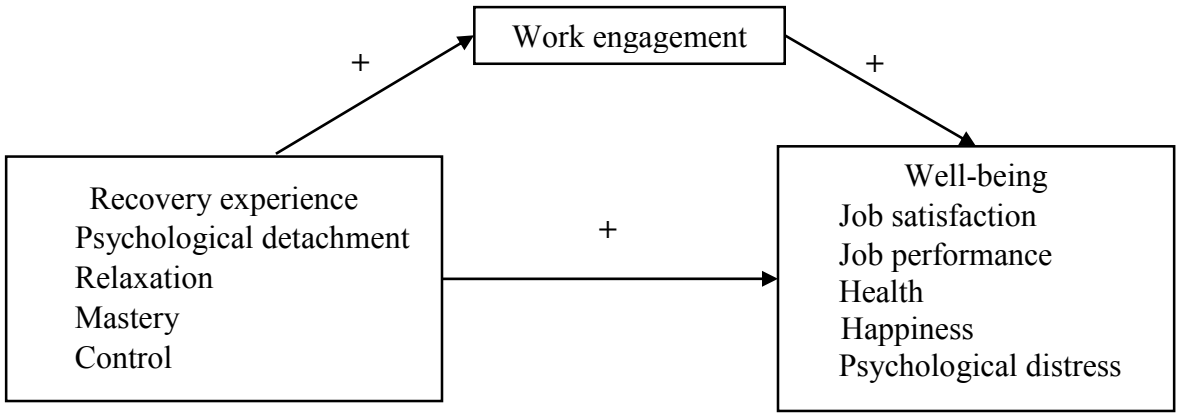

Figure 5. Conceptual framework of the study

Methods:

Participants

The participants were the same as the study of validation of Nepalese version of Utrecht work engagement scale of section 1 on page 13 of this thesis.

Measures

I used UWES, REQ, scales measuring outcome variables (job satisfaction, job performance, health, happiness, and psychological distress), and questions of demographic characteristics. Detailed explanations of UWES and REQ are in section 1. Details of demographic variables are included on validation study of work engagement scale on page 16.

Data analysis

AMOS 21 software package was utilized for analysis of mediation effect. The following criteria were used to establish mediation: First, the independent variable must be significantly related to mediator in the first equation. Second, the mediator must be significantly related to dependent variable. If these conditions met, then the effect of the independent variable on the

dependent variable must be less in the third equation than in the second equation. Perfect mediation or full mediation holds if the independent variable has no effect when the mediator is controlled or should become significantly smaller (partial mediation) (Baron & Kenny, 1986). The goodness of fit of the models was evaluated using the following absolute goodness-of-fit indices GFI $\geq$.95, AGFI $\geq$.90, PGFI $\geq$ .80, TLI $\geq$ .90, CFI $\geq$ .90, RMSEA $\leq$ .08 and a small AIC that would indicate a more parsimonious model (Schermelleh-Engel et al., 2003)**.** Further analysis was conducted using Sobel's test in order to determine the strength of the mediating effect of each mediator between independent variable and dependent variable (Sobel, 1982).

In addition, I compared alternative models with the hypothesized model. For instance, I tested four recovery experiences as mediators (Figure 12). Model with control variables was also tested. Similarly, I performed subgroup analysis. For recovery experiences, psychological detachment, relaxation, mastery, and control were used as independent variables. Three subscales were used to assess work engagement, and total score was computed to reflect to overall work engagement. In case of well-being variables, total score for each variable was used.

Results:

The mean scores were 5.0, 2.3, 2.8, 4.1, and 4.1 for work engagement, psychological detachment, relaxation, mastery, and control, respectively (Table 21). Table 22 shows the correlation among all variables used in the study. Table 23 shows the results of one way ANOVA with all dependent variables. The mean scores for psychological distress, job satisfaction, and job performance differed significantly by age group, position, experience, and type of work. However, the mean scores for health and happiness did not differ significantly by the abovementioned demographic variables. Fequencies and percentages for each dependent variable (health,

happiness, job performance, job satisfaction, and psychological distress) are presented in Appendix (Table 27-31).

Table 21. Mean score of psychological detachment, relaxation, mastery, control, work engagement, vigor, dedication, absorption, health, happiness, job satisfaction, job performance, and psychological distress (N = 438)

	Recovery experience				Work engagement				Health/well-being				
	PD	Relx	Mast	Contr	Total	Vigor	Dedi	Absor	Health	Happi	JS	JP	K6
Mean	2.3	2.8	4.1	4.1	5.0	4.2	5.1	4.9	2.97	3.12	3.10	7.80	4.54
SD	.8	1.0	.6	.66	1.0	1.3	1.1	1.0	.78	.51	.76	1.21	3.70

Note: PD, psychological detachment; Relx, relaxation; Mast, mastery; Contr, control; Dedi, dedication; Absor, absorption; Happi, happiness; JS, job satisfaction; JP, job performance; K6, psychological distress; SD, standard deciation

Table 22: Correlation matrix for all variables used in the study (N = 438)

	EN	VIG	DEDI	ABSR	PD	RELX	MAST	CONT	K6	HAPPI	HEALTH	JS
EN	1											
VIG	.84**	1										
DEDI	.88**	.57**	1									
ABSR	.80**	.46**	.69**	1								
PD	-.22**	-.13**	-.25**	-.20**	1							
RELX	-.12**	-.08	-.11*	-.12**	.55**	1						
MAST	.35**	.29**	.32**	.28**	-.21**	-.10*	1					
CONT	.32**	.27**	.29**	.24**	.07	.23**	.37**	1				
K6	-.35**	-.26**	-.38**	-.25**	.14**	.03	-.26**	-.26**	1			
HAPPI	.25**	.21**	.27**	.15**	-.18**	-.08	.14**	.14**	-.29**	1		
HEALTH	.24**	.23**	.23**	.14**	-.07	-.02	.18**	.17**	-.31**	.28**	1	
JS	.39**	.31**	.41**	.27**	-.18**	-.12**	.09	.13**	-.33**	.36**	.30**	1
JP	.37**	.34**	.32**	.25**	-.08	-.04	.25**	.23**	-.33**	.26**	.30**	.22**

Note: **p<.01,*p<.05; EN**,** Overall engagement; VIG, vigor; DEDI, dedication; ABSR, absorption; PD, psychological detachment, RELX, relaxation; MAST, mastery; CONT, control; K6, psychological distress; HAPPI, happiness; JS, job satisfaction; JP, job performance

Table 23: Descriptive statistics and one way ANOVA with health and well-being variables (N = 438)

Demographic variables	Mean score (SD)				
	K6	Happiness	Health	Job performance	Job satisfaction
Age group (years)					
4) 18-30 (n = 284)	4.84 (3.68)*	3.09 (.45)	2.95 (.78)	7.62 (1.17)***	3.03 (.70)***
5) 31-45 (n = 98)	4.19 (3.43)	3.14 (.59)	2.94 (.67)	7.96 (1.22)	3.09 (.82)
6) 46-59 (n = 56)	3.66 (4.12)	3.21 (.65)	3.16 (.94)	8.38 (1.14)	3.50 (.78)
Position					
4) General staff (n = 368)	2.95 (3.39)*	3.33 (.70)	3.12 (.79)	8.49 (.89)***	3.66 (.63)***
5) Ward in charge (n = 46)	4.06 (3.41)	3.17 (.56)	3.08 (.91)	8.21 (.98)	3.43 (.80)
6) Supervisor (n = 24)	4.70 (3.74)	3.10 (.49)	2.95 (.77)	7.70 (1.23)	3.03 (.73)
Type of work					
4) Permanent (n = 154)	3.86 (3.70)*	3.16 (.62)	3.01 (.79)	8.09 (1.24)**	3.28 (.79)**
5) Temporary (n = 236)	4.88 (3.69)	3.09 (.46)	2.96 (.79)	7.62 (1.12)	3.01 (.74)
6) Daily wages (n = 22)	5.04 (3.34)	3.13 (.35)	2.90 (.75)	7.85 (1.52)	3.04 (.48)
Work experience (years)					
5) 0.1-10 (n = 307)	4.82 (3.64)**	3.09 (.44)	2.95 (.79)	7.65 (7.97)***	3.01 (.70)**
6) 11-20 (n = 66)	4.37 (3.60)	3.21 (.62)	2.93 (.72)	7.97 (1.25)	3.22 (.89)
7) 21-30 (n = 47)	2.61 (3.13)	3.23 (.66)	3.14 (.77)	8.34 (1.07)	3.46 (.80)
8) 31-39 (n = 18)	5.38 (5.05)	3.05 (.72)	3.05 (.99)	8.22 (1.26)	3.27 (.75)

***p<.001,**p<.01,*p<.05

Test of hypothesized model

First, I tested the hypothesized model. In this model (Figure 6), I entered work engagement as a mediator of the association between recovery experiences and well-being.

Chi = .00
df = 0
Probability level could not be computed

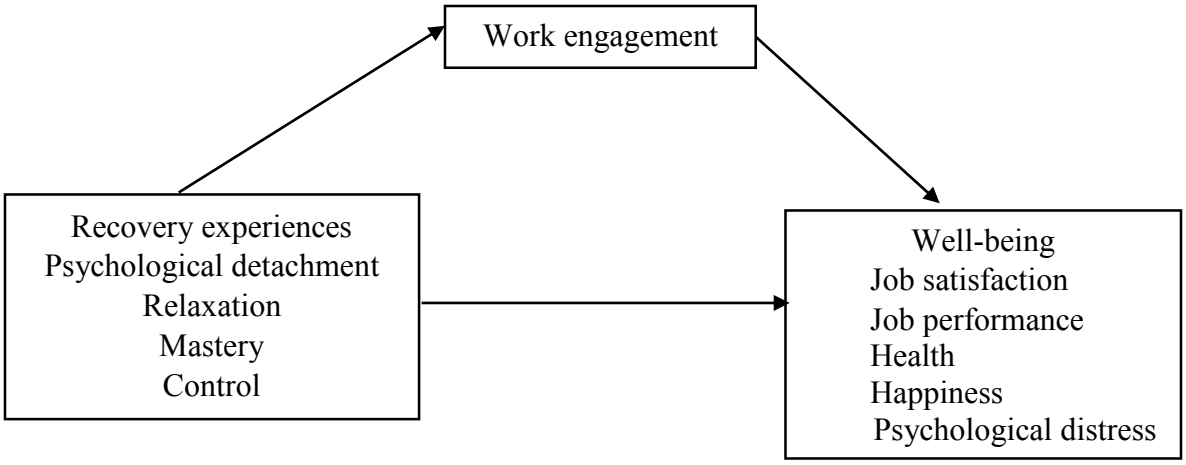

Figure 6. Model fit of the hypothesized model

Note: Chi, Chi Square; *df,* degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion

To test the hypothesized model, I entered four recovery experiences (psychological detachment, relaxation, mastery, and control) as independent variables. Work engagement was entered as a mediator variable in the model. I examined the relationship among four recovery experiences, work engagement (mediator), and five outcome variables, considering all possible covariance combinations (6 covariances). However, this model could not be computed (Figure 6), and it did not fit the data well. Therefore, I re-analyzed the model using the modification indices to keep the covariance, where I kept only four covariances. In addition, I retained only significant

paths among variables in this model. This model had a good fit to the data. However, adding control variables (age, experience, type of work and position) in this model decreased the model fit compared to the model without control variables. Therefore, I used the models without control variables for further interpretation and discussion.

Figures 7, 8, 9, 10, and 11 show the results for the models tested. Mechanism of recovery experiences with each outcome variables has been explained as following:

Job satisfaction

Linking the mechanism of recovery experience through work engagement with job satisfaction, the overall fit of the model had the following fit indices Chi square = 15.75, degree of freedom = 1, p = .01, GFI = .98, AGFI = .95, CFI = .96, RMSEA = .06, and AIC = 45.75 (Figure 7).

Psychological detachment was negatively associated with work engagement (β = -.19, p <.001), which was in turn positively associated with job satisfaction (β = .38, p <.001). Relaxation was not significantly associated with work engagement; therefore, the path is not included in the figure. Mastery and control were positively associated with work engagement (β = .22, p <.001; β = .25, p <.001; respectively) (Figure 7).

Regarding direct relationship between recovery experience and job satisfaction, only psychological detachment was significantly and negatively associated with job satisfaction (Figure 7).

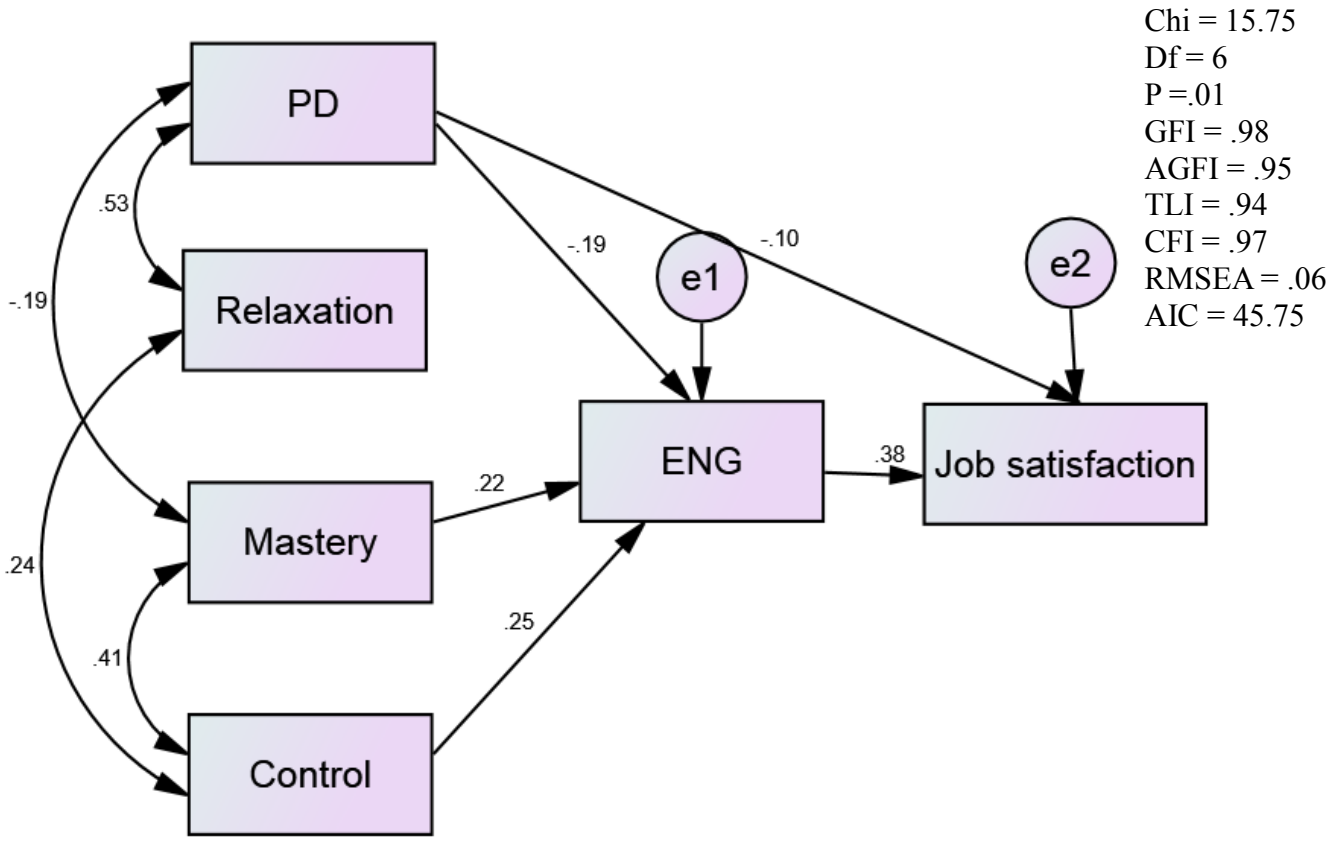

Figure 7. Standardized path coefficient in the hypothesized model with job satisfaction

Note: Chi, Chi Square; *df,* degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion; better fit models denoted by bold letters; PD, psychological detachment; RELX, Relaxation; MAST, Mastery; CONTR, Control; WE, Work engagement

According to the mediation analysis, work engagement partially mediated (z = -4.52, p <.001) the relationship between psychological detachment and job satisfaction. As mastery and control were not directly associated with job satisfaction, indirect effect was tested. Work engagement had indirect effect on the relationships between mastery and job satisfaction and between control and job satisfaction (z = 4.42, p <.001; z = 4.88, p <.001, respectively).

Job performance

The model linking the mechanism of recovery experience through work engagement with job performance had the following fit indices: Chi square = 14.93, degree of freedom = 6, P =.02, GFI = .98, AGFI = .96, TLI = .95, CFI = .98, RMSEA = .05, and AIC = 44.93 (Figure 8).

Psychological detachment was negatively associated with work engagement (β = -.19, p <.001), which was in turn positively associated with job performance (β = .32, p <.001). Relaxation was not significantly associated with work engagement. Mastery and control were positively associated with work engagement (β = .22, p <.001, β = .25, p <.001, respectively) (Figure 8).

The direct association of recovery experience with job performance, psychological detachment, relaxation, and control was not significantly associated with job performance (p >.05.), whereas mastery was significantly and positively associated with job performance (β = .15, p <.05) (Figure 8).

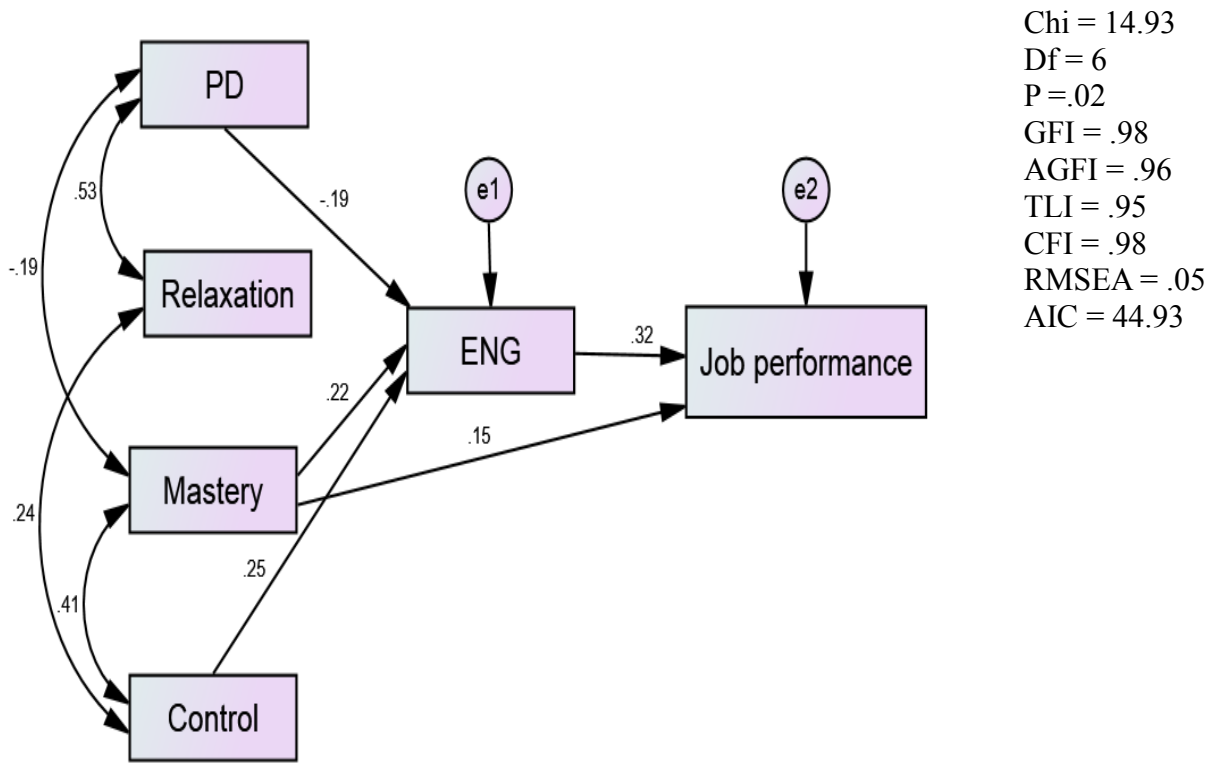

Figure 8. Standardized path coefficient in the hypothesized model with job performance

Chi, Chi Square; *df,* degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion; better fit models denoted by bold letters; PD, psychological detachment; RELX, Relaxation; MAST, Mastery; CONTR, Control; WE, Work engagement

Concerning the mediation analysis, I could only test the mediation effect on the relationship between mastery and job performance. The results indicated that work engagement partially mediated the abovementioned relationship (z = 4.04, p <.001). I found significant indirect effect on the relationship between psychological detachment and job performance and between control and job performance (z = -3.69, p <.001, z = 4.40, p <.001, respectively) (Figure 8).

Health

The model linking the mechanism of recovery experience with health through work engagement had the following fit indices: Chi square = 18.75, *df* = 7, *P* =.05, GFI = .98, AGFI = .95, TLI = .97, CFI = .98, RMSEA = .06, AIC = 46.75 (Figure 9).

In the model linking recovery experience with health through work engagement, psychological detachment was negatively associated with work engagement (β = -.19, p <.001), which was in turn positively associated with health (β = .25, p <.001). Relaxation was not significantly associated with work engagement. Mastery and control were positively associated with work engagement (β = .22, p <.001; β = .25, p <.001, respectively) (Figure 9).

Regarding the direct relationship between recovery experiences and health, none of the recovery experiences were significantly associated with health (Figure 9).

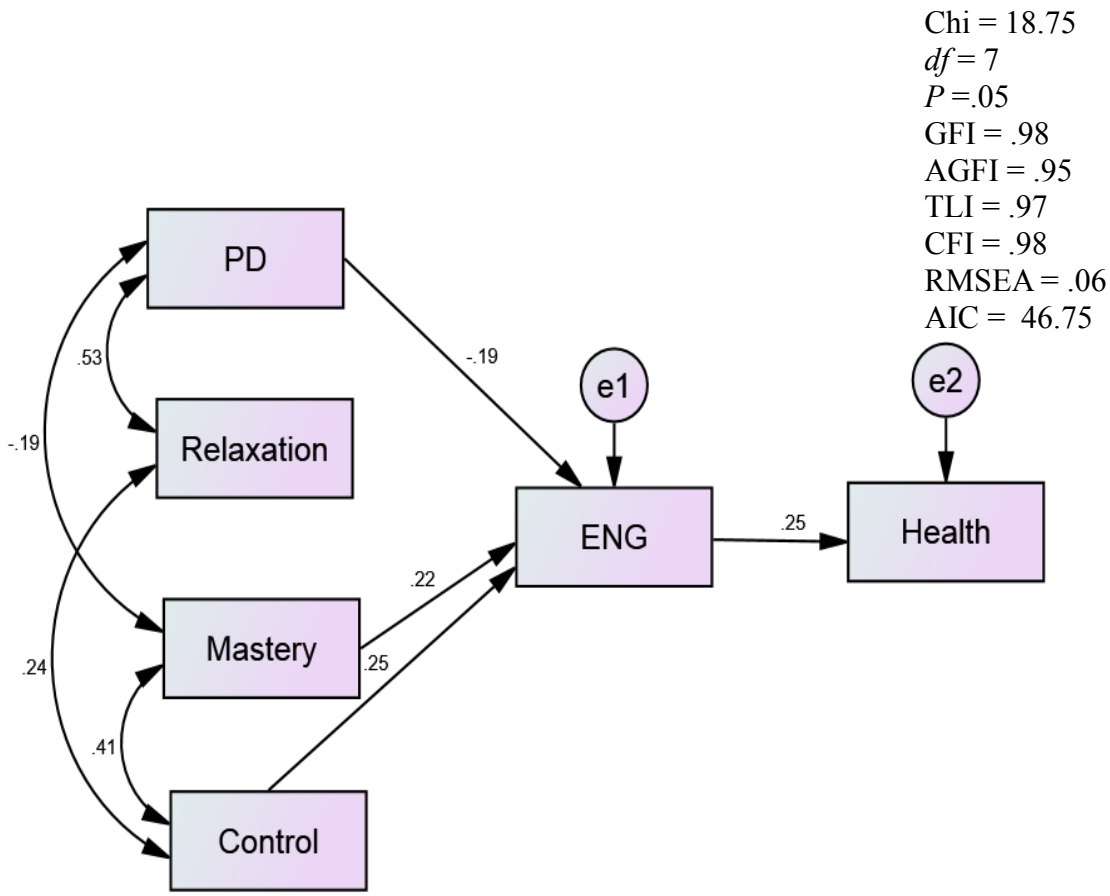

Figure 9. Standardized path coefficient in the hypothesized model with health

Note: Chi, Chi Square; *df,* degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion; better fit models denoted by bold letters; PD, psychological detachment; RELX, Relaxation; MAST, Mastery; CONTR, Control; WE, Work engagement

When conducting the mediation analysis, I could not examine the mediation effect, as none of the recovery experiences were associated with health. Therefore, I checked the indirect effects through work engagement. Work engagement had an indirect effect on the relationship between psychological detachment and health, between mastery and health, and between control and health (z = -3.69, p <.01; z = 3.64, p <.01; z = 3.88, p <.01, respectively).

Happiness

The model linking the mechanism of recovery experience with happiness through work engagement had the following fit indices: Chi square = 11.08, *df* = 5, *P* =.05, GFI = .99, AGFI = .96, TLI = .95, CFI = .98, RMSEA = .05, AIC = 43.08 (Figure 10).

Concerning the path between recovery experience and happiness through work engagement, psychological detachment was negatively associated with work engagement (β = -.19, p <.001), which was in turn positively associated with happiness (β = .20, p <.001). Relaxation was not significantly associated with work engagement. Mastery and control were positively associated with work engagement (β = .22, p <.001; β = .25, p <.001, respectively) (Figure 10).

Regarding the direct relationship between recovery experiences and happiness, psychological detachment was significantly negatively associated with happiness (β = -.15, p <.01) and control was significantly positively associated with happiness (β = .10, p <.05), whereas relaxation and mastery were not associated with happiness (Figure 10).

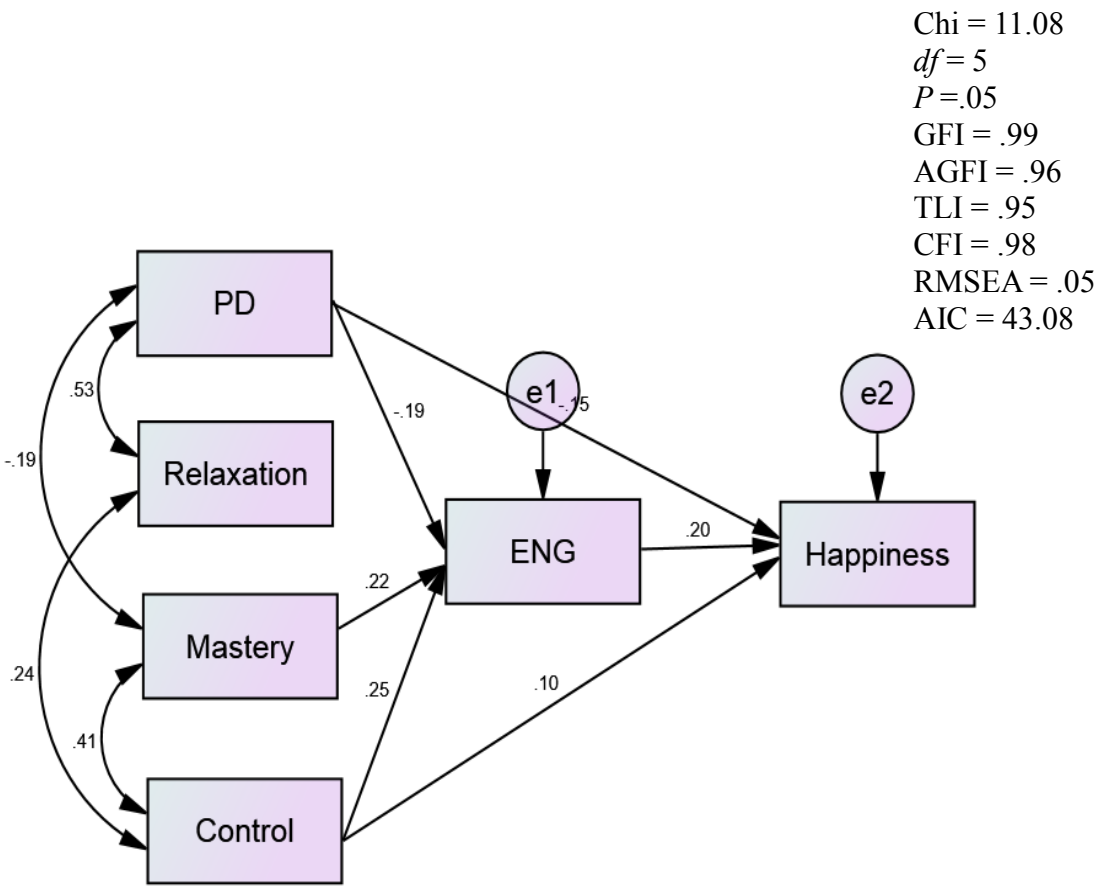

Figure 10. Standardized path coefficient in the hypothesized model with happiness

Note: Chi, Chi Square; *df*, degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion; better fit models denoted by bold letters; PD, psychological detachment; RELX, Relaxation; MAST, Mastery; CONTR, Control; WE, Work engagement

When analyzing the mediating effect, I found a significant partial mediation effect (z = -3.69, p <.01) on the relationship between psychological detachment and happiness through work engagement. In the relationship between mastery and happiness, work engagement showed a significant indirect effect (z = 3.64, p <.01), but in the relationship between control and happiness, work engagement had a significant partial mediation effect (z = 3.88, p <.01) (Figure 10).

Psychological distress

The model linking the mechanism of recovery experience with psychological distress through work engagement had the following fit indices: Chi square = 14.37, *df* = 5, *P* =.01, GFI = .98, AGFI = .95, TLI = .93, CFI = .98, RMSEA = .06, AIC = 46.37 (Figure 11).

Concerning the path between recovery experience and psychological distress through work engagement, psychological detachment was negatively associated with work engagement (β = -.19, p <.001), which was in turn negatively associated with psychological distress (β = -.27, p <.001). Relaxation was not significantly associated with work engagement. Mastery and control were positively associated with work engagement (β = .22, p <.001; β = .25, p <.001, respectively) (Figure 11).

The direct relationships between recovery experiences and psychological distress and between psychological detachment and relaxation were not significantly associated with psychological distress. Mastery and control were significantly negatively associated with psychological distress (β = -.12, p <.05, β = -.14, p <.01, respectively) (Figure 11).

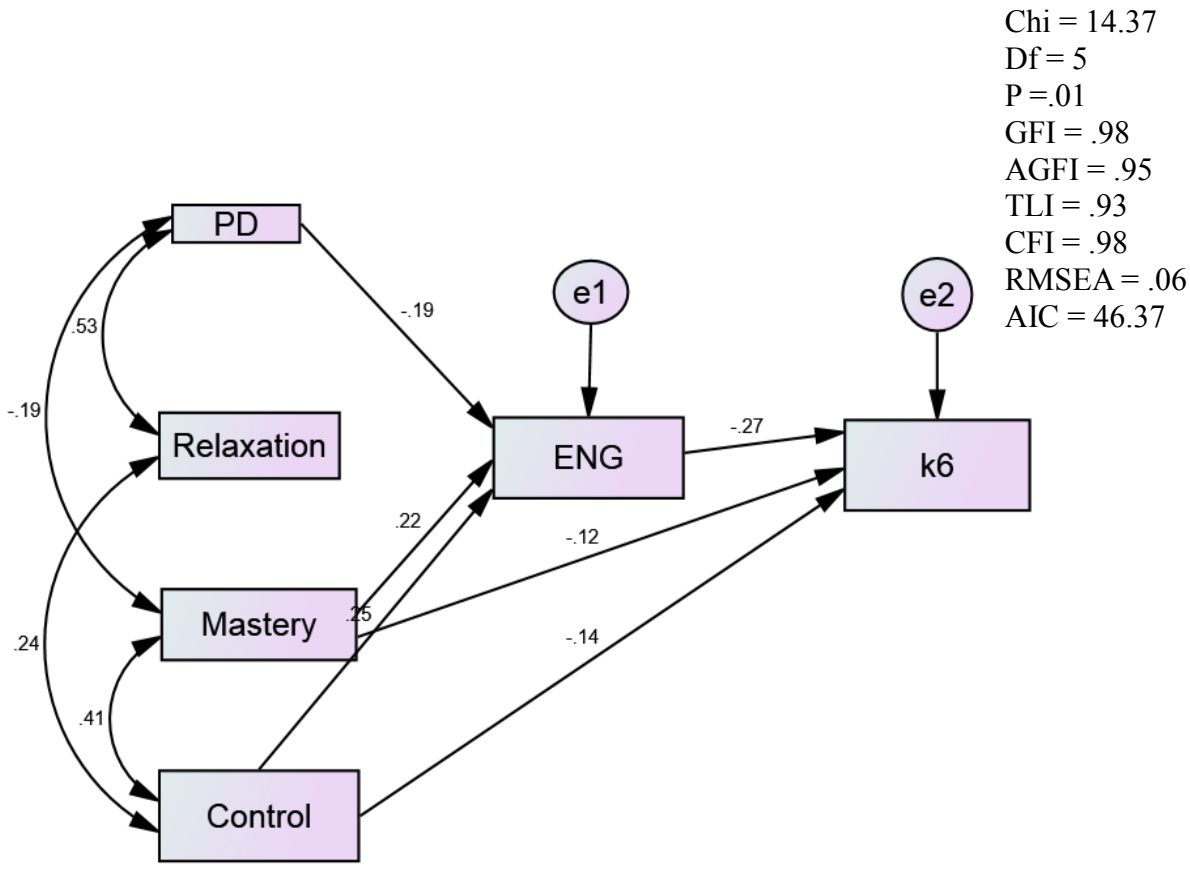

Figure 11. Standardized path coefficient in the hypothesized model with psychological distress

Note: Chi, Chi Square; *df*, degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion; better fit models denoted by bold letters; PD, psychological detachment; RELX, Relaxation; MAST, Mastery; CONTR, Control; WE, Work engagement; K6, Psychological distress

When analyzing mediating effect, I found a significant indirect effect ($z = 3.74$, $p < .01$) on the relationship between psychological detachment and psychological distress through work engagement. Work engagement showed a significant partial mediation effect on the relationship of mastery and control with psychological distress ($z = -3.68$, $p < .01$, $z = -3.94$, $p < .05$, respectively) (Figure 11).

Summary results of five different models

In summary, work engagement had a partial mediation effect and an indirect effect on the relation of mastery and control with job satisfaction. Furthermore, work engagement had a partial mediation effect on the relation between mastery and job performance and indirect effect in the relationship with psychological detachment and control to job performance. Regarding health, no mediation analysis was possible. An indirect effect was found through work engagement with psychological detachment, mastery, and control to health. Regarding happiness, a partial mediation effect was found through work engagement in the relationship of psychological detachment and control to happiness and an indirect effect was found through work engagement in the relationship between mastery and happiness. Similarly, partial mediation effect was found through work engagement in the relationship of mastery and control to psychological distress and an indirect effect was found in the relationship between psychological detachment and psychological distress (Table 24).

Table 24: Summary table of mediation analysis (Figure 7-11)

Figure	Recovery experiences	Mediator	Outcome	Effect
7	Psychological detachment	Work engagement	Job satisfaction	Partial mediation
	Relaxation			Neither mediation, nor indirect
	Mastery			Indirect
	Control			Indirect
8	Psychological detachment	Work engagement	Job performance	Indirect
	Relaxation			Neither mediation, nor indirect
	Mastery			Partial mediation
	Control			Indirect
9	Psychological detachment	Work engagement	Health	Indirect
	Relaxation			Neither mediation, nor indirect
	Mastery			Indirect
	Control			Indirect
10	Psychological detachment	Work engagement	Happiness	Partial mediation
	Relaxation			No mediation, no indirect
	Mastery			Indirect
	Control			Partial mediation
11	Psychological detachment	Work engagement	Psychological distress	Indirect
	Relaxation			Neither mediation, nor indirect
	Mastery			Partial mediation
	Control			Partial mediation

Additional analysis:

I conducted similar analyses, adjusting for age, position, experience, and type of work. However, the model fit was poor when controlling for these demographic variables compared to the model without these control variables. For instance, for the model with psychological distress, the values of model fit were as following: Chi square = 314.90, *df* = 24, *P* =.00, GFI = .89, AGFI = .75, TLI = .65, CFI = .81, RMSEA = .16, AIC = 376.90. For the model with job satisfaction, the model fit was as following: Chi square = 312.71, *df* = 24, *P* =.00, GFI = .89, AGFI = .75, TLI = .66, CFI = .82, RMSEA = .16, AIC = 374.91. For the model with job performance, the model fit was as following: Chi square = 314.90, *df* = 24, *P* =.00, GFI = .89, AGFI = .76, TLI = .67, CFI = .81, RMSEA = .16, AIC = 374.90. For the model with health, the model fit was as following: Chi square = 319.21, *df* = 26, *P* =.00, GFI = .89, AGFI = .77, TLI = .67, CFI = .81, RMSEA = .16, AIC

= 377.21. For the model with happiness, Chi square = 311.71, *df* = 24, *P* =.00, GFI = .89, AGFI = .75, TLI = .65, CFI = .81, RMSEA = .16, AIC = 373.71. In addition, the strength of path coefficient did not differ much when controlling for the demographic variables. Therefore, I decided to use the original model.

I also performed the subgroup analysis by age group, position, and type of work. Sample sizes of supervisor, ward in-charge, and daily wages workers were small; therefore, the results are not reported. The results are shown in the Appendix (Figure 13-Figure 37). The strengths of path coefficients among subgroups in the association of recovery experiences with work engagement are similar with the hypothesized model with 438 cases but it was different in the association of recovery experiences with outcome variables.

Furthermore, I examined another model (an alternative model) (Figure 12) where I entered recovery experiences as mediators of the relation between work engagement and well-being to see whether any other alternative model fits better. However, this alternative model did not fit the data well, and the model fit indices were the same for all dependent variables.

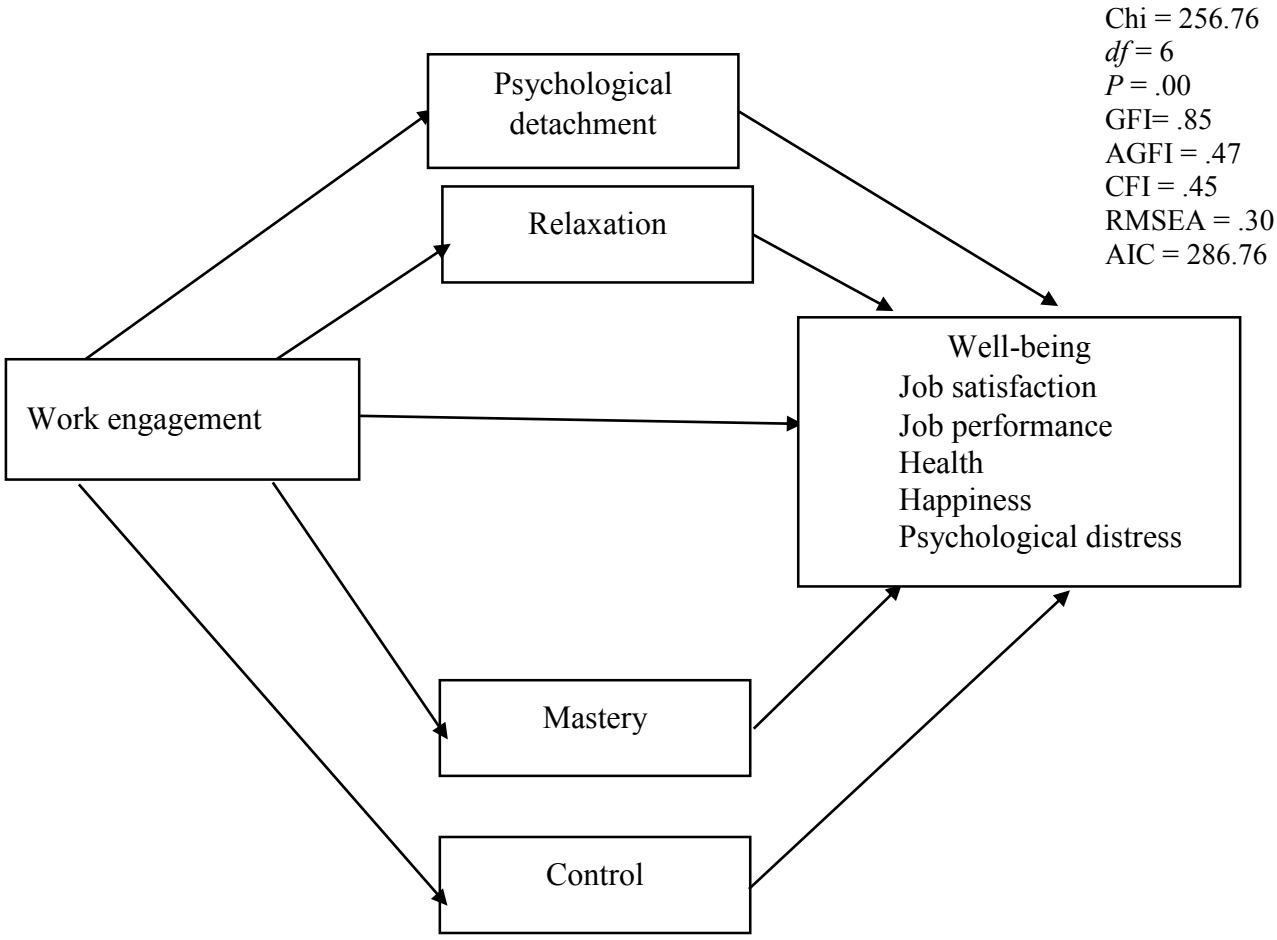

Figure 12. Model fit when recovery experiences are the mediators in the relationship between work engagement to well-being

Chi, Chi Square; *df,* degree of freedom; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker Lewis Index; CFI, Confirmatory Fit Index; RMSEA, Root Mean Square Error of Approximation; AIC, Akaike Information Criterion

Discussion:

The present study among Nepalese hospital nurses examined the mechanism of association between recovery experience and well-being focusing on the role of work engagement. Different models were tested with individual recovery experiences and well-being (job satisfaction, job performance, health, happiness, and psychological distress). To my knowledge, this is the first

study to explore the mechanism of relationship between recovery experiences and well-being through work engagement.

Job satisfaction: Work engagement had partial mediation effect in the relationship between psychological detachment and job satisfaction. The negative association of psychological detachment and job satisfaction was explained through work engagement. High levels of detachment may take longer to get back into a work mentality (Fritz, Yankelevich, Zarubin & Barger, 2010) thereby decreasing the level of work engagement which in turn low job satisfaction because they may be unable to emerge towards their work in the same level as they could do before. It suggests that lack of detachment might not always be bad (Fritz et al., 2010). However, mastery and control were indirectly and positively connected with job satisfaction through work engagement, which is in line with my expectation.

Job performance: Similar to my hypothesis, mastery was both directly and indirectly (through work engagement) associated with job performance. The association of mastery to job performance was partially mediated through work engagement. Engaging oneself to master during free time after work is linked to higher level of engagement which thereby is associated with high job performance. In addition, control was indirectly associated with job performance through work engagement. When individual build up self-confidence as a personal resource, their level of engagement also increases which thereby increases their performance as well. However, psychological detachment was indirectly (through work engagement) associated with poor job performance. Although employees may need to mentally detach from work to restore their well-being, high levels of detachment may require a longer time to get back into "working mode" (Fritz et al., 2010). For instance, people who detach too much from work during off-hours need additional time and effort to become sufficiently immersed in their work when returning after off-job time.

They may need time to plan which tasks need to be done and which may have priority over others. In addition, employees may need time to think through a work-related problem that needs to be solved. If non-work time had been used to think about the problem that arise at work, they may have found a solution a shorter period of time once they got back to work. Thus, very high level of detachment may be associated with lower level of job performance.

Health: My findings showed that psychological detachment was only indirectly (through work engagement) associated with poor health. However, both mastery and control were also only indirectly (through work engagement) but positively associated with health, which is in line with my hypothesis.

Happiness: Psychological detachment was both directly and indirectly (through work engagement) but negatively associated with happiness. The association was partially mediated by work engagement. It was not in line with my expectation. When fully detached from work, an individual feels difficulty to gain the same level of engagement on the next day (Shimazu et al., 2012) and may feel regret towards himself/herself, which can lead to unhappiness. However, control was both directly and indirectly but positively associated with happiness, which is also partially mediated through work engagement. It is consistent with the theory that when an individual has high personal resources such as self-control and self-confidence, one can build up one's resources for the next day and thereby reflecting happiness. However, mastery and happiness were only indirectly connected through work engagement.

Interestingly, I found no direct association of relaxation to any of the well-being variables and work engagement. Therefore, I could not analyze neither mediation nor indirect effect.

To sum up, the association of mastery and control to well-being was explained by work engagement which is in consistent with theory such as COR. However, association of psychological detachment and well-being was a little bit complex despite the fact that psychological detachment is the most relevant recovery experience in the aspect of well-being (Sonnentag & Fritz, 2007; Fritz et al., 2010; Kuhnel, Sonnentag, & Westman, 2009; Sonnentag, 2012). However, some studies also found the inconsistent results to psychological detachment and well-being (Shimazu et al., 2012; Burke et al., 2009). For instance, Shimazu et al. found negative association of psychological detachment and work engagement. Burke et al. found no association of psychological detachment and psychosocial well-being. Similarly, Fritz, et al. (2010) showed curvilinear relationship of psychological detachment and job performance indicating that medium levels of detachment are most beneficial for job performance. In Nepalese context, I also found negative association of psychological detachment with well-being. It might be because, despite the high psychological detachment from work, being female, nurses in Nepal have multiple roles at home. They have to handle many activities at home, such as take care of children, many household activities (cleaning, washing, kitchen activities, etc.), and maintaining relationship with neighborhood. If they are living in a joint family, their role gets increased further. Therefore, I speculate that even though nurses in Nepal have high level of detachment from work, because of their multiple roles at home, their engagement level is which in turn might be negatively associated with well-being. Future research on this topic may be promising.

Conclusion:

In conclusion, this study clarified a mediating role of work engagement in linking recovery experience to health and well-being among nurses in Nepal. Mastery and control were associated with well-being through work engagement, which highlights the importance of increasing the level

of mastery and control experience during off-job time. Psychological detachment was unexpectedly associated with poor well-being through work engagement, suggesting the need to examine any curvilinear relationship as found in previous studies. No mediation or indirect effect was observed between relaxation and well-being, which demands further studies in future in more details.

GENERAL DISCUSSION

The main goals of this dissertation were two folds: (1) to examine the psychometric properties of three existing scales (UWES, DUWAS, and REQ) translated into Nepali and (2) to investigate the mechanism of association between recovery experiences and health/well-being through work engagement. In the following segment, I summarize the findings of the studies and highlight the contribution of these findings to advance research work in the field of work and organizational behavior. Finally, strengths and limitations of this dissertation and practical implications are explained.

Summary of findings

In the first section, I translated UWES, DUWAS, and REQ into Nepali using a standard translation guideline. I had to clarify many items while translating them into Nepali because some of the phrases and idioms did not exist in Nepali language. Similarly, in some contexts, I had to provide an example to clarify the concept so that I could get the same meaning which I intended to get as of original one. As I did forward translation, backward translation and comparison of backward translation with the original version and finally discussed with the original developers, I am confident that my translation procedure was sufficient.

Results of validation of UWES showed satisfactory psychometric properties. The findings showed that UWES-9 has stronger psychometric properties than UWES-17. In addition, the internal consistency revealed satisfactory results as well. The positive association of work engagement with well-being variables showed its construct validity.

While examining the psychometric properties of DUWAS, I found that the results did not completely meet the criteria of validation. As such, the factor loadings were relatively low and Cronbach's alpha coefficients were also relatively low. In addition, I found no association of workaholism with well-being except for working compulsively to psychological distress. Therefore, it needs further studies in heterogeneous sample with both genders to rule out whether workaholism concept fits Nepalese context.

Regarding the REQ, the results revealed a four-factor structure as found in the original study. The factor structure was interpretable and Cronbach's alpha coefficients were also within an acceptable range. Regarding the construct validity, the association of mastery and control were in line with the hypothesized direction. However, association of psychological detachment and relaxation showed a complex relationship. The REQ seems to measure concepts/behaviors as theoretically supposed among nurses in Nepal. However, a further study is required to examine their association in larger study with both genders with different occupational group.

In the second section, I investigated the association of recovery experiences with well-being focusing on a mediating role of work engagement. Based on Conservation of Resources (COR) theory (Hobfoll, 1989) and the Effort-Recovery model (Meijman & Mulder, 1998), I expected that getting involved in recovery experiences is associated with increased level of work engagement which, in turn, will be associated with well-being. Results highlighted the importance of mastery and control experience to well-being through work engagement. The experience of

being mastered and self-determination (i.e., the mastery experience and control during free time after work) are crucial for the rebuilding of the resources which are threatened during work that increases the level of engagement, which in turn will be associated with well-being (job satisfaction, job performance, health, happiness) and low psychological distress). Psychological detachment, which is most relevant and most studied in recovery process after work, was directly and indirectly associated with poor well-being.

I also examined alternating models, controlling for the demographic variables. However, the model with the control variables did not fit the data well. I also tested alternative models to find out if any other alternative models could fit better. For instance, I examined mediation effect of recovery experience in the relationship between work engagement and well-being. Current literature has evidence that involvement in recovery strategies is the predictor of work engagement (Sonnentag, 2003) and work engagement is known as a significant mediator between job/personal resources and well-being (Sulea, Vigra, Maricutoiu, Schaufeli, Dumitru, & Save, 2012). As such, daily coping activities may interfere an individual's working attitude the next day.

To sum up, based on the findings of my study, work engagement scale may be relevant to use in Nepalese context. For recovery experiences, mastery and control experiences seem relevant in Nepalese context; but for psychological detachment and relaxation, cautions should be taken. For workaholism, we need a further study to clarify whether the concept of workaholism really fits in Nepalese context.

Regarding association of recovery experience to the well-being, the mechanism through work engagement is clear except for psychological detachment and relaxation. It seems that mastery and control are most crucial psychological experiences during free time after work for recovery by building up new resources such as energy (self-confidence, self-efficacy) (Fritz &

Sonnentag, 2005). Thus, my findings support the assumption of COR theory Hobfoll, (1998) that engaging to master and having self-control during free-time after work are beneficial to build up resources for the next day's and upcoming work demands which in turn is associated with well-being.

Strengths, practical implication, and Limitations of the study

As this is the first study of this kind to explore the mechanism of association of recovery experience and well-being in Nepal, it provided the evidence for future studies in different ways. Nurses are the front-line health care professionals in the health care system. Therefore, researching the nurses' well-being is important to provide quality of service to the community. In addition, I recruited three different hospitals which included government, private and semi-government hospitals thereby representing different groups of nurses.

Based on my study results, Utrecht Work Engagement Scale can be used to measure work engagement level among Nepalese workers, at least nurses. Regarding recovery experience questionnaire, at this moment, mastery and control experience can be used but relaxation and psychological detachment need further study to conclude that they can be used in Nepalese context. Similarly, at this moment, Dutch Work Addiction Scale needs further study to conclude that it is well-validated in Nepalese context. In addition, mastery and control experiences were found to be beneficial to maintain well-being of the nurses. Therefore, an intervention can be done to increase the mastery and control as a recovery behavior by providing in-service education. In addition, psychological detachment was detrimental when it was used at intermediate level but when it was gradually increased from intermediate to higher level, it was beneficial. Therefore, an intervention to increase the use of psychological detachment would also be beneficial for the hospital nurses of Nepal.

Finally, limitations of this study need to be addressed. Despite multisite recruitment and the high response rate of the study participants, the study sample was from a specific occupational field (i.e., hospital nurses). All nurses were female. Thus, the results of this study may not be generalizable to the employees in other occupations or both genders. Future studies should be conducted with workers in different and perhaps male-dominated occupations. Nepal is a collectivistic society where people live together in expanded family and share common values that may influence the use of recovery experience in their free time and their level of work engagement. As nurses have to work shift, the results might be different for the employees who work regular hours from 10am-5pm. In addition, due to a cross-sectional design of this study, causal relationship cannot be addressed. All questionnaires used were self-report measure which may result into bias when answering the question. Furthermore, I used single-item measure on health, job performance, job satisfaction and life satisfaction that may not capture the whole idea of the concept.

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APPENDICES

APPENDIX 1

Table 25. Four group of workers with the cutoff point >75th percentile

	Frequency	Percent	Valid percent	Cumulative percent
Relaxed worker	279	63.7	63.7	63.7
Hard worker	61	13.9	13.9	77.6
Compulsive worker	50	11.4	11.4	89.0
Workaholics	48	11.0	11.0	100.0

Note: Relaxed worker, Low on both WE and WC; Hard worker, High on WE but low on WC; Compulsive worker, Low on WE but high on WC; Workaholics = High on both WE and WC

Table 26. Four group of workers with the cutoff point as median score

	Frequency	Percent	Valid percent	Cumulative percent
Relaxed worker	178	40.6	40.6	40.6
Hard worker	49	11.2	11.2	51.8
Compulsive worker	96	21.9	21.9	73.7
Workaholics	115	26.3	26.3	100

Note: Relaxed worker, Low on both WE and WC; Hard worker, High on WE but low on WC; Compulsive worker, Low on WE but high on WC; Workaholics = High on both WE and WC

Table 27: Distribution of frequency and percentage of Happiness with demographic variables (N = 438)

	Very unhappy n (%)	Unhappy n (%)	Happy n (%)	Very happy n (%)
Religion				
Hindu	5 (1.3%)	14 (3.6%)	296 (76.7%)	71 (18.4%)
Buddhism	1 (2.2%)	3 (6.7%)	30 (66.7%)	11 (24.4%)
Christian	0 (0%)	0 (0%)	3 (75%)	1 (25%)
Position				
Supervisor	1(4.2)*	0	13 (54.2)	10 (41.7)
Ward in-charge	1 (2.2)	1 (2.2)	33 (71.7)	11 (23.9)
General staff	4 (1.1)	16 (4.3)	286 (77.7)	62 (16.8)
Marital status				
Married	4 (1.7)	9 (3.8%)	166 (70.0%)	58 (24.5%)
Unmarried	2 (1.0%)	8 (4.1%)	163 (83.2%)	23 (11.7%)
Widowed or widower	0	0	2 (50%)	2 (50%)
Divorced	0	0	1 (100%)	0
Type of work				
Permanent	4 (2.6%)*	7 (4.5%)	103 (66.9%)	40 (26.0%)
Temporary	2 (.8%)	10 (3.8%)	210 (80.2%)	40 (15.3%)
Daily wages	0	0	19 (86.4%)	3 (13.6%)
Age				
18-30 years	2 (.7%)*	11(3.9%)	228 (80.3%)	43 (15.1%)
31-45 years	2 (2.0%)	5 (5.1%)	68 (69.4%)	23 (23.5%)
46 -59 years	2 (3.6%)	1 (1.8%)	36 (64.3%)	17 (30.4%)
Experience				
.1-10 years	2 (.7%)**	12 (3.9%)	249 (81.1%)	44 (14.3%)
11-20 years	1 (1.5%)	4 (6.1%)	41 (62.1%)	20 (30.3%)
21-30 years	2 (4.3%)	0	30 (63.8%)	15 (31.9%)
31-39 years	1 (5.6%)	1 (5.6%)	12 (66.7%)	4 (22.2%)

Chi-square test for group differences, **p<.01,*p<.05

Table 28: Distribution of frequency and percentage of Health with demographic variables (N = 438)

	Poor	Fair	Good	Very good	Excellent
Religion					
Hindu	3(0.8%)	97(25.1%)	207(53.6%)	61(15.8%)	18(4.7%)
Buddhism	0	13(28.9%)	21(46.7%)	10(22.2%)	1(2.2%)
Christian	0	1(25.0%)	3(75.0%)	0	0
Position					
Supervisor	0	5(20.8%)	12(50.0%)	6(25.0%)	1(4.2%)
Ward in-charge	0	13(28.3%)	20(43.5%)	9(19.6%)	4(8.7%)
General staff	3(0.8%)	95(25.8%)	200(54.3%)	56(15.2%)	14(3.8%)
Marital status					
Married	1 (0.4%)	64 (27.0%)	117 (49.4%)	47 (19.8%)	8 (3.4%)
Unmarried	2 (1.0%)	49 (25.0%)	112 (57.1%)	22 (11.2%)	11 (5.6%)
Widowed or widower	0	0	2	(50.0%)	2 (50.0%)
Divorced	0	0	1(100%)	0	0
Type of work					
Permanent	0	38 (24.7)	85 (55.2%)	22 (14.3%)	9 (5.8%)
Temporary	3 (1.1%)	69 (26.3%)	134 (51.1%)	47 (17.9%)	9 (3.4%)
Daily wages	0	6 (27.3%)	13 (59.1%)	2 (9.1%)	1 (4.5%)
Age					
18-30 years	3 (1.1%)	76 (26.8%)	147 (51.85)	48 (16.95)	10 (3.5%)
31-45 years	0	23 (23.5%)	59 (60.2%)	14 (14.3%)	2 (2.0%)
46 -59 years	0	14 (25.0%)	26 (46.4%)	59 (60.2%)	14 (14.3%)
Experience					
.1-10 years	3 (1.0%)	82 (26.7%)	160 (52.1%)	50 (16.3%)	12 (3.9%)
11-20 years	0	17 (25.8%)	38 (57.6%)	9 (13.6%)	2 (3.0%)
21-30 years	0	8 (17.0%)	27 (57.4%)	9 (19.1%)	3 (6.4%)
31-39 years	0	6 (33.3%)	7 (38.95)	3 (16.7%)	2 (11.1%)

Chi-square test for group differences, no differences was found

Table 29: Distribution of frequency and percentage of Job Satisfaction with demographic variables (N = 438)

	Not satisfied at all	Slightly satisfied	Moderately satisfied	Very satisfied	Extremely satisfied
Religion					
Hindu	9 (2.3%)	50 (13.0%)	236 (61.1%)	79 (20.5%)	12 (3.1%)
Buddhism	0	8 (17.8%)	22 48.9%)	9 (20.0%)	6 (13.3%)
Christian	0	1 (25.0%)	2 (50.0%)	1 (25.0%)	0
Others	0	1 (33.3%)	1 (33.3%)	1 (33.3%)	0
Position					
Supervisor	0***	0	10 (41.7%)	12 (50.0%)	2 (8.3%)
Ward in-charge	1 (2.2%)	2 (4.3%)	23 (50.0%)	16 (34.8%)	4 (8.7%)
General staff	8 (2.2%)	58 (15.8%)	228 (62.0%)	62 (16.8%)	12 (3.3%)
Marital status					
Married	5 (2.1%)	33 (13.9%)	135 (57.0%)	52 (21.9%)	12 (5.1%)
Unmarried	4 (2.0%)	27 (13.8%)	123 (62.8%)	36 (18.4%)	6 (3.1%)
Widowed or widower	0	0	2 (50.0%)	2 (50.0%)	0
Divorced	0	0	1 (100%)	0	0
Type of work					
Permanent	2 (1.3%)*	16 (10.4%)	83 (53.9%)	42 (27.3%)	11 (7.1%)
Temporary	7 (2.7%)	42 (16.0%)	161 (61.5%)	45 (17.2%)	7 (2.7%)
Daily wages	0	2(9.1%)	17 (77.3%)	3 (13.6%)	0
Age					
18-30 years	5 (1.8%)***	44 (15.5%)	177 (62.3%)	51 (18.0%)	7 (2.5%)
31-45 years	4 (4.1%)	11 (11.2%)	61 (62.2%)	16 (16.3%)	6 (6.1%)
46 -59 years	0	5 (8.9%)	23 (41.4%)	23 (41.4%)	5 (8.9%)
Experience					
.1-10 years	7 (2.3%)**	46 (15.0%)	194 (63.2%)	54 (17.6%)	6 (2.0%)
11-20 years	2 (3.0%)	7 (10.6%)	38 (57.6%)	12 (18.2%)	7 (10.6%)
21-30 years	0	5 (10.6%)	19 (40.4%)	19 (40.4%)	4 (8.5%)
31-39 years	0	2 (11.1%)	10 (55.6%)	5 (27.8%)	1 (5.6%)

Chi-square test for group differences, ***p<.001,**p<.01,*p<.05

Table 30: Distribution of frequency and percentage of Job performance with demographic variables (N = 438)

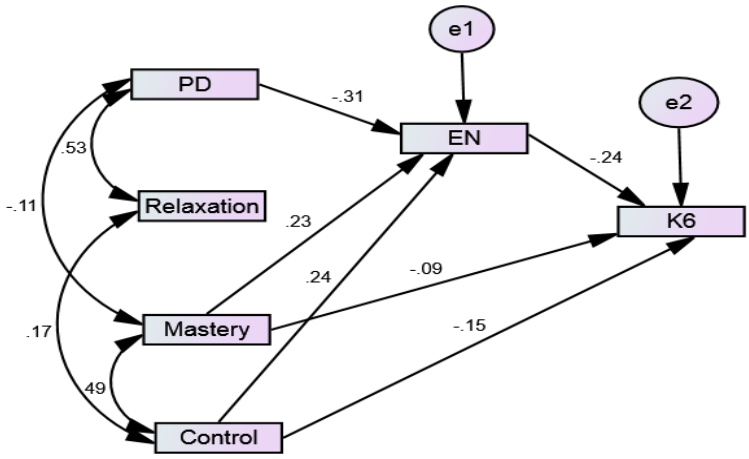
	Above average score (7.8)	Below average score (7.8)
Religion		
Hindu	256 (66.3%)	130 (33.7%)
Buddhism	31 (68.9%)	14 (31.1%)
Christian	3 (75%)	1 (25%)
Others	2 (66.7%)	1 (33.3%)
Position		
Supervisor	21 (87.5%)**	3 (12.5%)
Ward in-charge	38 (82.6%)	8 (17.4%)
General staff	233 (63.3%)	135 (36.7%)
Marital status		
Married	170 (71.7%)*	67 (28.3%)
Unmarried	119 (60.7%)	77 (39.3%)
Widowed or widower	3 (75.0%)	1 (25.0%)
Divorced	0	1 (100%)
Type of work		
Permanent	118 (76.6%)**	36 (23.4%)
Temporary	161 (61.5%)	101 (38.5%)
Daily wages	13 (59.1%)	9 (40.9%)
Age		
18-30 years	171 (50.2%)***	113 (39.8%)
31-45 years	75 (76.5%)	23 (23.5%)
46 -59 years	46 (82.1%)	17.9%)
Experience		
.1-10 years	189 (61.6%)**	118 (38.4%)
11-20 years	50 (75.8%)	16 (24.2%)
21-30 years	37 (78.7%)	10 (21.3%)
31-39 years	16 (88.9%)	2 (11.1%)

Chi-square test for group differences, **p<.01,*p<.05

Table 31: Distribution of frequency and percentage of psychological distress with demographic variables according to above and below average score of psychological distress (N = 438)

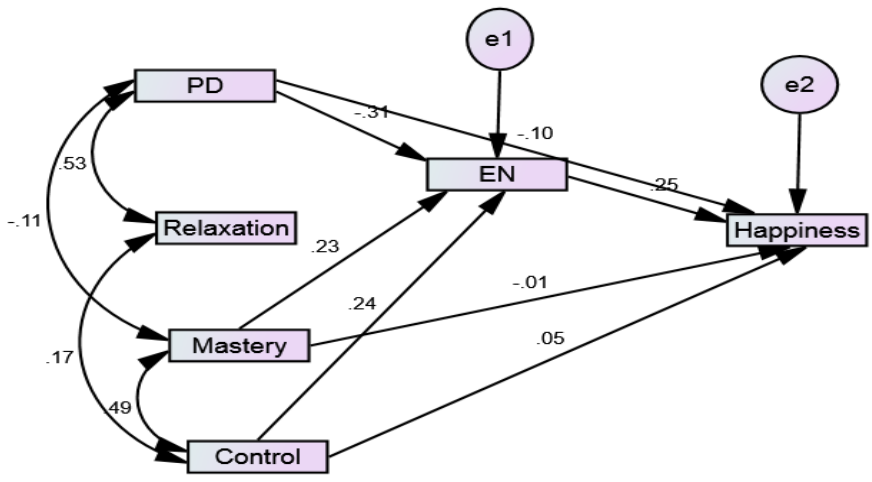
	Above average score (4.5)	Below average score (4.5)
Religion		
Hindu	165 (42.7%)	221 (57.3%)
Buddhism	23 (51.1%)	22 (48.9%)
Christian	2 (50%)	2 (50%)
Others	1 (33.3%)	2 (66.7%)
Position		
Supervisor	6 (25.0%)	18 (75.0%)
Ward in-charge	19 (41.3%)	27 (58.7%)
General staff	166 (45.1%)	202 (54.9%)
Marital status		
Married	100 (42.2%)	137 (57.8%)
Unmarried	90 (45.5%)	106 (54.1%)
Widowed or widower	1 (25.0%)	3 (75.0%)
Divorced	0	1 (100%)
Type of work		
Permanent	59 (38.3%)	95 (61.7%)
Temporary	120 (45.8%)	142 (54.2%)
Daily wages	12 (54.5%)	10 (45.5%)
Age		
18-30 years	134 (47.2%)	150 (52.8%)
31-45 years	38 (38.8%)	60 (61.2%)
46 -59 years	19 (33.9%)	37 (66.1%)
Experience		
.1-10 years	143 (46.6%)**	164 (53.4%)
11-20 years	28 (42.4%)	38 (57.6%)
21-30 years	10 (21.3%)	37 (78.7%)
31-39 years	10 (55.6%)	8 (44.4%)

Chi-square test for group differences, **p<.01



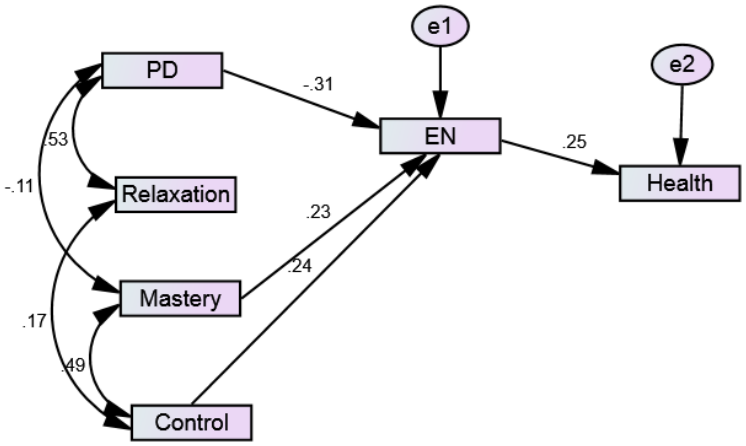
Chi = 9.35
df = 5
P = .09
GFI= .98
AGFI = .91
TLI = .92
CFI = .97
RMSEA = .07
AIC = 41.35

Figure 13. Standardized path coefficient among middle age group of participants with psychological distress



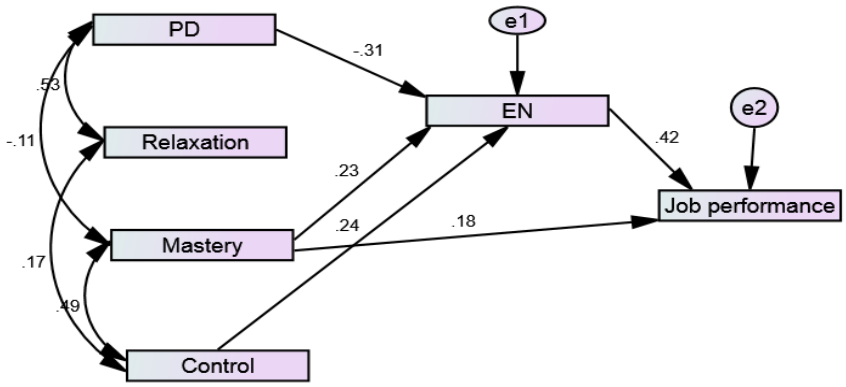
Chi = 8.88
df = 4
P = .06
GFI= .98
AGFI = .90
TLI = .88
CFI = .97
RMSEA = .08
AIC = 42.88

Figure 14. Standardized path coefficient among middle age group of participants with happiness



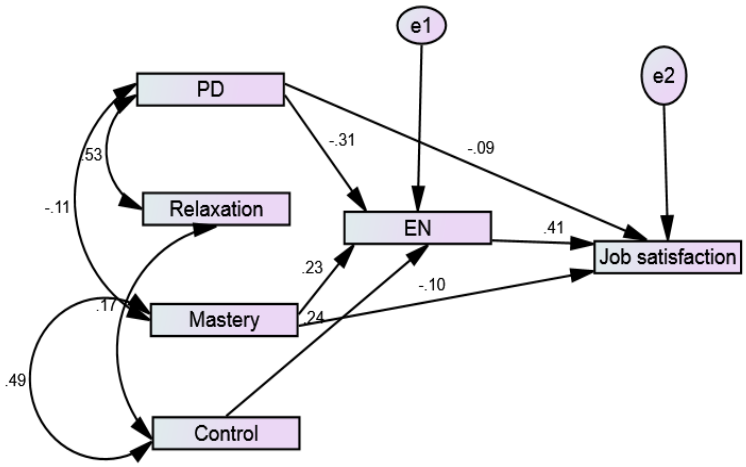
Chi = 10.01
df = 7
P = .18
GFI= .98
AGFI = .93
TLI = .95
CFI = .98
RMSEA = .05
AIC = 38.01

Figure 15. Standardized path coefficient among middle age group of participants with health



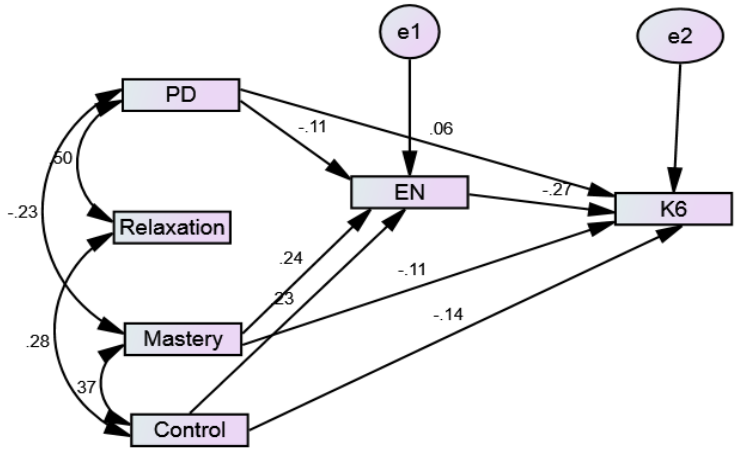
Chi = 36.99
df = 7
P = .00
GFI= .92
AGFI = .78
TLI = .67
CFI = .84
RMSEA = .16
AIC = 64.99

Figure 16. Standardized path coefficient among middle age group of participants with job performance



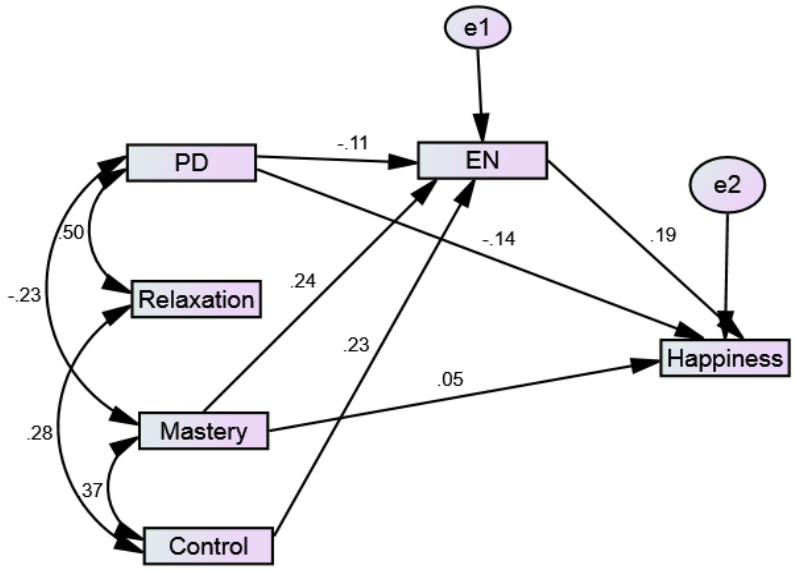
Chi = 8.43
df = 5
P = .13
GFI= .98
AGFI = .92
TLI = .94
CFI = .98
RMSEA = .06
AIC = 40.43

Figure 17. Standardized path coefficient among middle age group of participants with job satisfaction



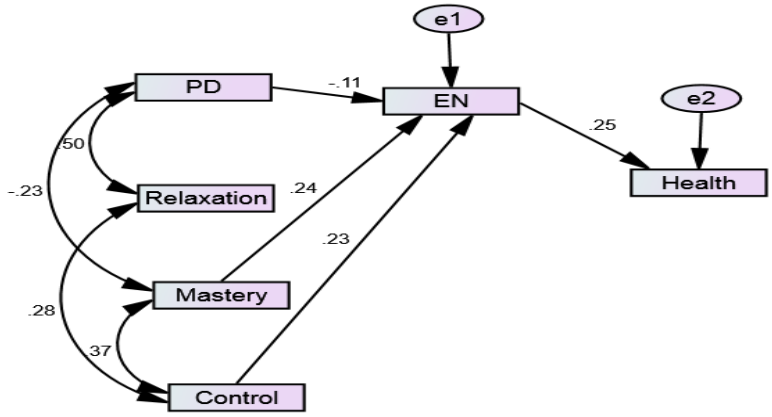
Chi = 18.63
df = 4
P = .00
GFI= .97
AGFI = .88
TLI = .80
CFI = .94
RMSEA = .11
AIC = 52.63

Figure 18. Standardized path coefficient among young age group of participants with psychological distress



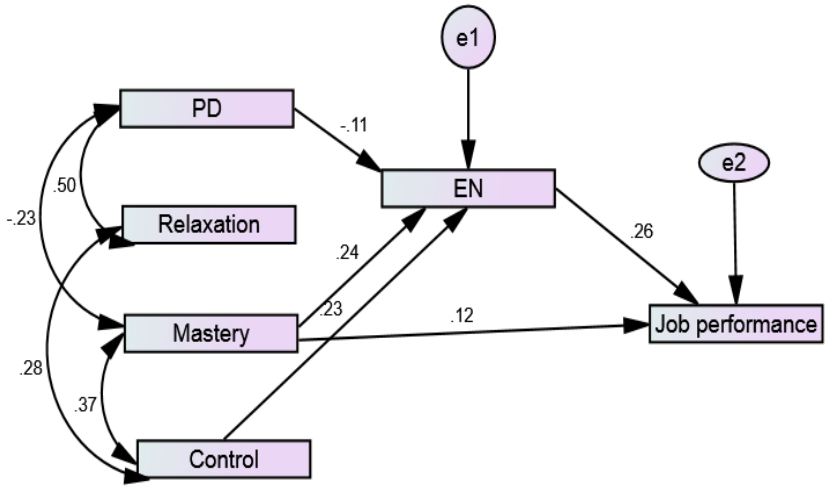
Chi = 25.43
df = 5
P = .00
GFI= .97
AGFI = .88
TLI = .76
CFI = .92
RMSEA = .12
AIC = 57.43

Figure 19. Standardized path coefficient among young age group of participants with happiness



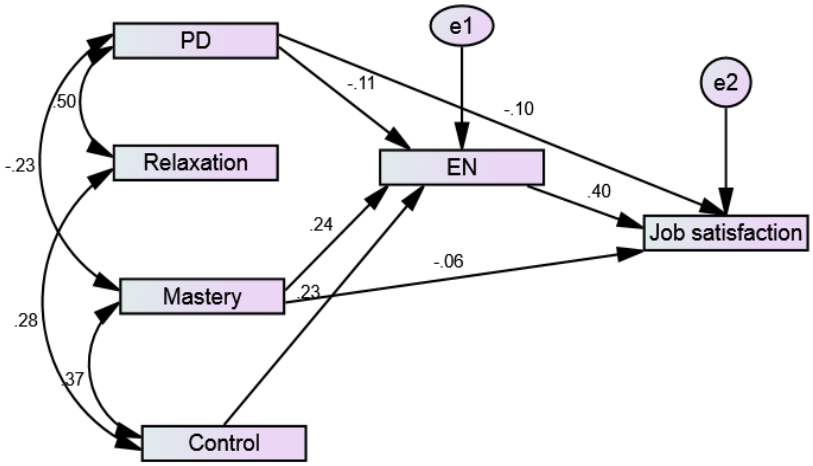
Chi = 27.58
df = 7
P = .00
GFI= .96
AGFI = .90
TLI = .83
CFI = .92
RMSEA = .10
AIC = 55.58

Figure 20. Standardized path coefficient among young age group of participants with health



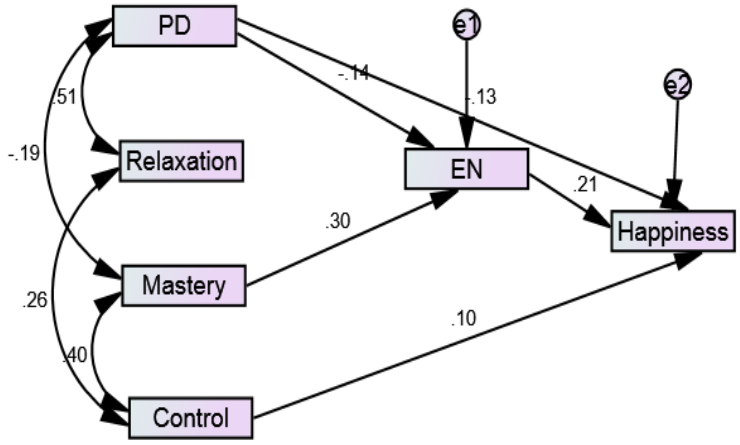
Chi = 19.77
df = 6
P = .00
GFI= .97
AGFI = .92
TLI = .87
CFI = .94
RMSEA = .09
AIC = 49.77

Figure 21. Standardized path coefficient among young age group of participants with job performance



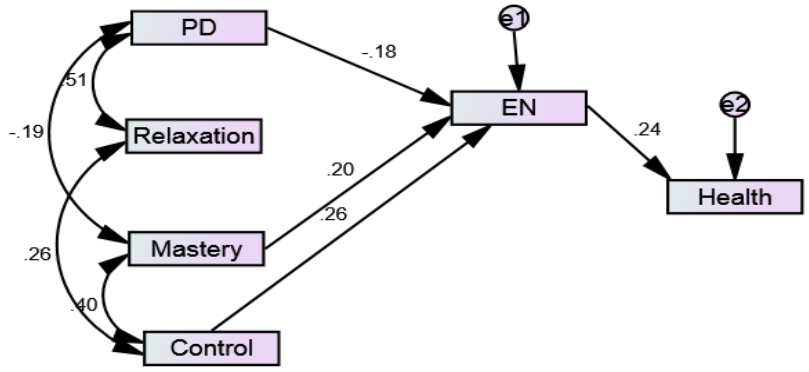
Chi = 18.94
df = 5
P = .00
GFI= .97
AGFI = .90
TLI = .85
CFI = .95
RMSEA = .09
AIC = 50.94

Figure 22. Standardized path coefficient among young age group of participants with job satisfaction



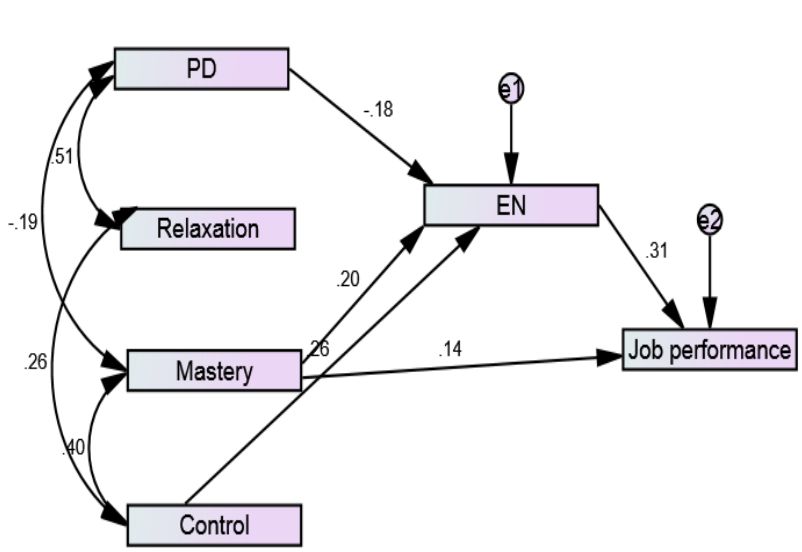
Chi = 35.16
df = 6
P = .00
GFI= .97
AGFI = .89
TLI = .78
CFI = .91
RMSEA = .11
AIC = 65.16

Figure 23. Standardized path coefficient among general staff (staff nurse) with happiness



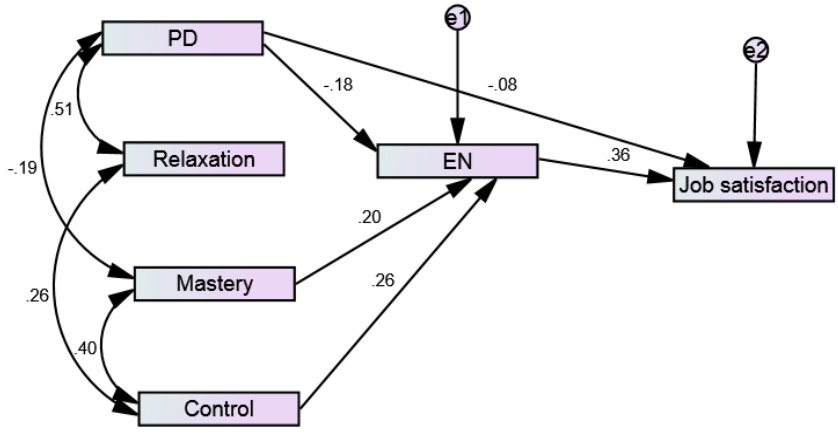
Chi = 21.15
df = 7
P = .00
GFI= .98
AGFI = .94
TLI = .90
CFI = .95
RMSEA = .07
AIC = 49.15

Figure 24. Standardized path coefficient among general staff (staff nurse) with health



Chi = 14.60
df = 6
P = .02
GFI= .98
AGFI = .95
TLI = .94
CFI = .97
RMSEA = .06
AIC = 44.60

Figure 25. Standardized path coefficient among general staff (staff nurse) with job performance



Chi = 15.19
df = 6
P = .01
GFI= .98
AGFI = .95
TLI = .93
CFI = .97
RMSEA = .06
AIC = 45.19

Figure 26. Standardized path coefficient among general staff (staff nurse) with job satisfaction

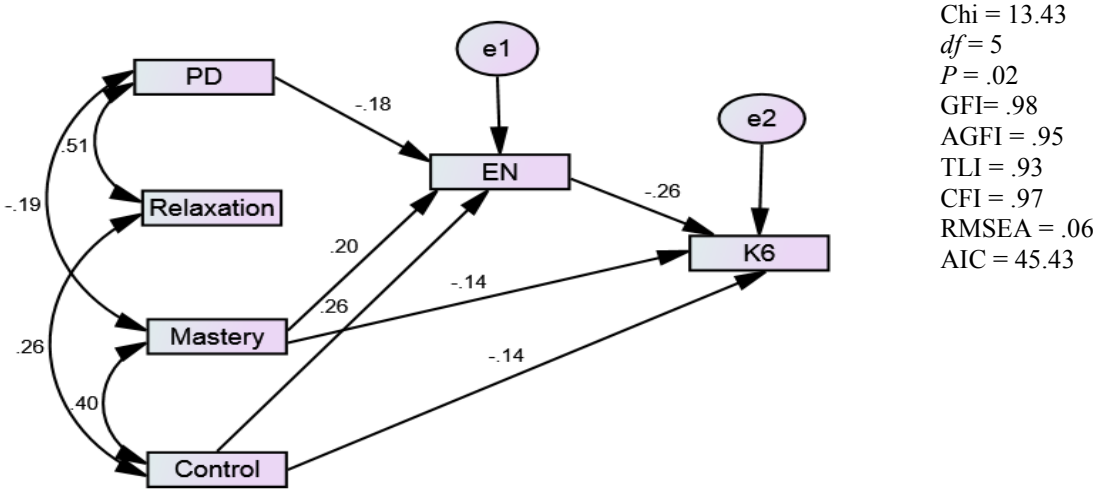


Figure 27. Standardized path coefficient among general staff (staff nurse) with psychological distress

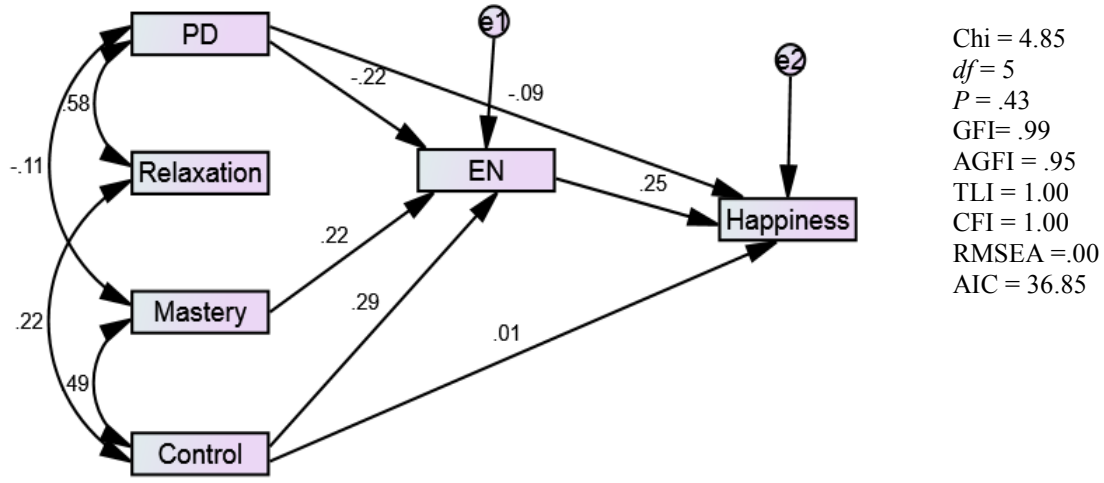
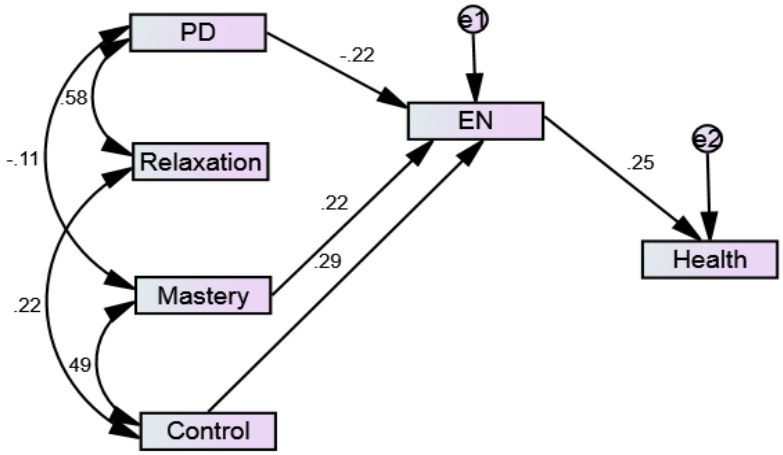
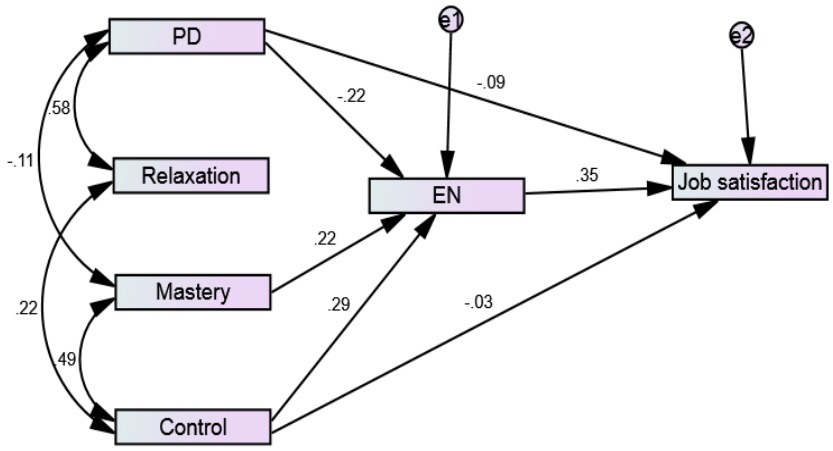


Figure 28. Standardized path coefficient among permanent workers with happiness



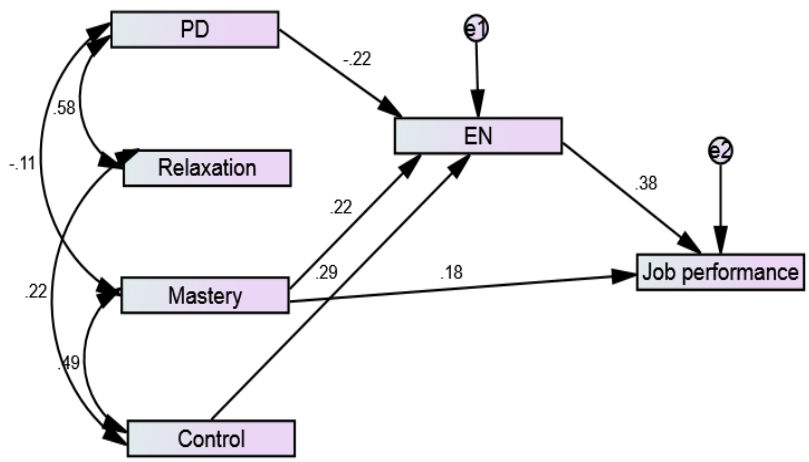
Chi = 9.30
df = 7
P = .23
GFI= .98
AGFI = .94
TLI = .97
CFI = .98
RMSEA = .04
AIC = 37.30

Figure 29. Standardized path coefficient among permanent workers with health



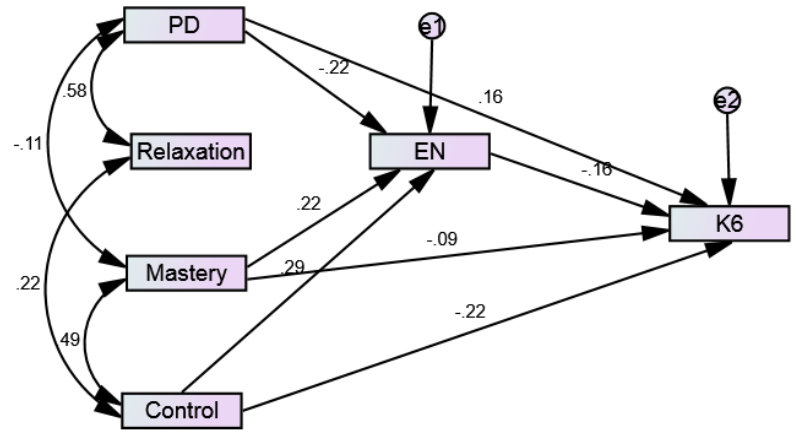
Chi = 6.55
df = 5
P = .25
GFI= .98
AGFI = .94
TLI = .97
CFI = .99
RMSEA = .04
AIC = 38.55

Figure 30. Standardized path coefficient among permanent workers with job satisfaction



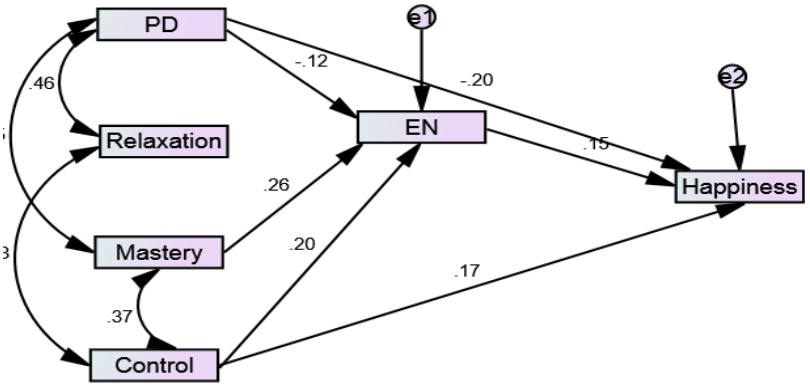
Chi = 5.29
df = 6
P = .50
GFI= .98
AGFI = .96
TLI = 1.00
CFI = 1.00
RMSEA = .00
AIC = 35.29

Figure 31. Standardized path coefficient among permanent workers with job performance



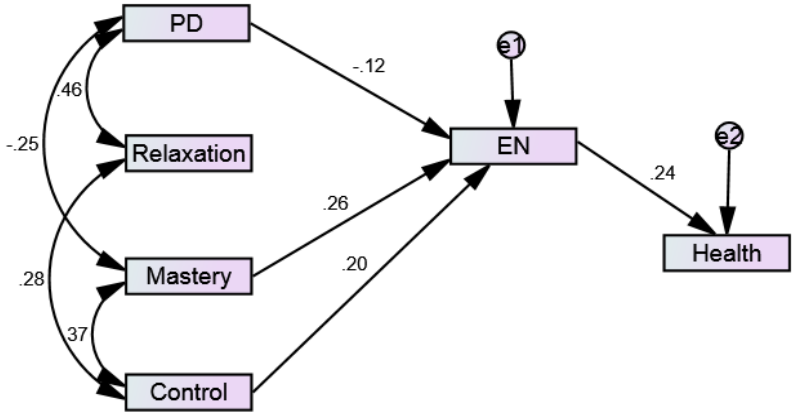
Chi = 4.47
df = 4
P = .34
GFI= .99
AGFI = .95
TLI = .99
CFI = .99
RMSEA = .02
AIC = 38.47

Figure 32. Standardized path coefficient among permanent workers with psychological distress



Chi = 9.65
df = 5
P = .08
GFI= .98
AGFI = .94
TLI = .93
CFI = .97
RMSEA = .06
AIC = 41.65

Figure 33. Standardized path coefficient among temporary workers with happiness



Chi = 13.88
df = 7
P = .05
GFI= .98
AGFI = .94
TLI = .92
CFI = .96
RMSEA = .06
AIC = 41.88

Figure 34. Standardized path coefficient among temporary workers with health

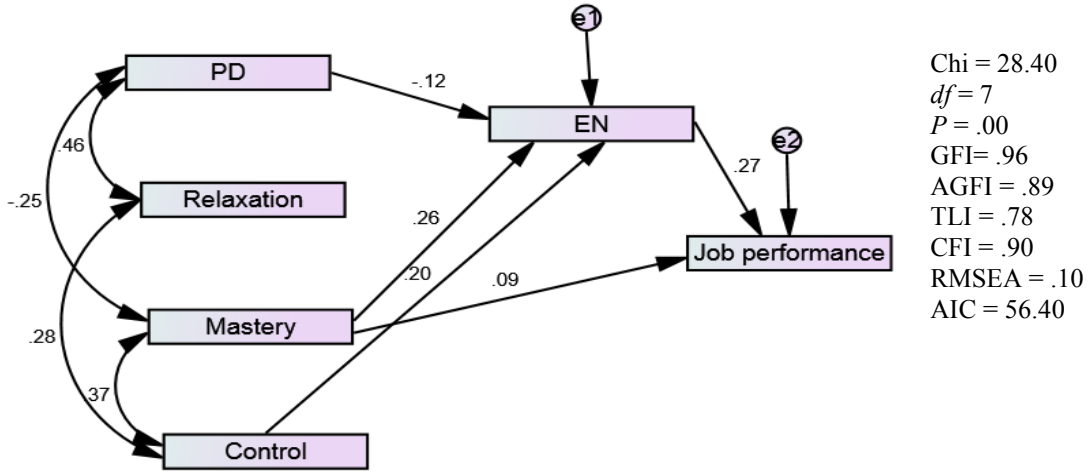


Figure 35. Standardized path coefficient among temporary workers with job performance

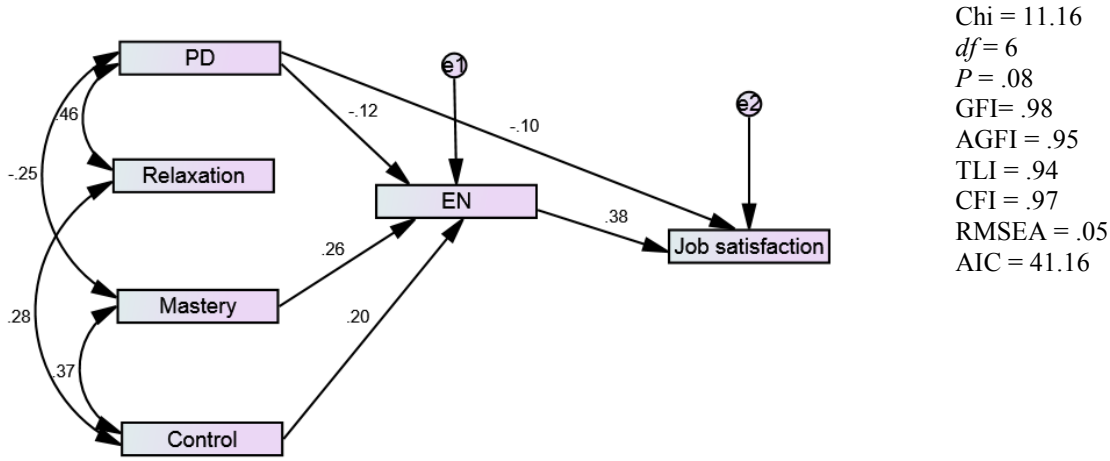


Figure 36. Standardized path coefficient among temporary workers with job satisfaction

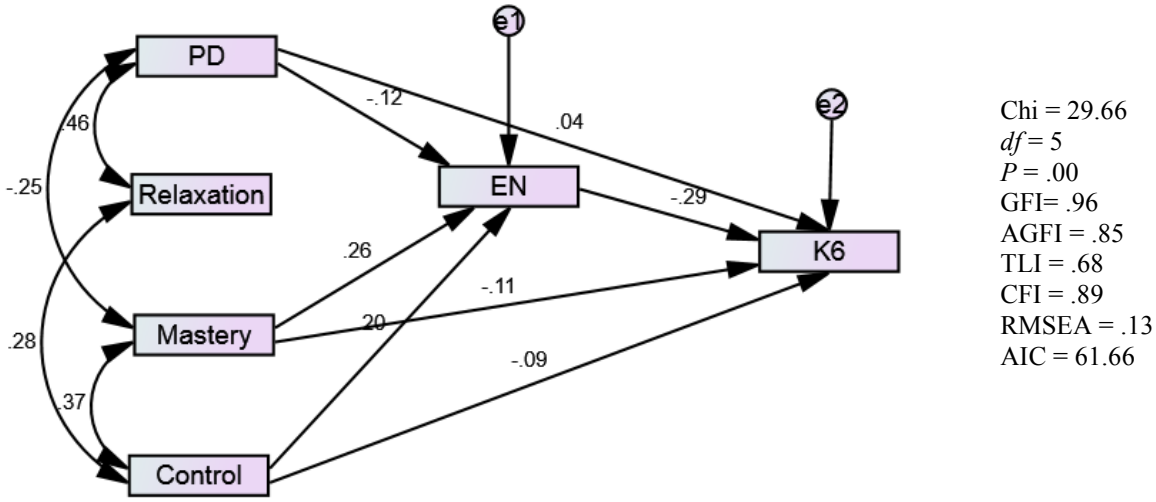


Figure 37. Standardized path coefficient among temporary workers with psychological distress

APPENDIX 2

Participants' information sheet in Nepali

प्रश्नावली सम्वन्धमा

आदरणीय सहभागीहरु ! कृपया प्रश्नावली भर्नुभन्दा अगाडि ध्यान दिएर पढ्नुहोस् ।

१. जापानको टोकियो युनिभर्सिटिमा अध्ययनरत विद्यावारिधिकी विद्यार्थी विमला पन्थीले गर्न लागेको अनुसन्धान "काम पछिको फुर्सदको समयमा गर्ने सुधार अनुभूतिले अस्पताल वा कार्यालयमा काम गर्ने कर्मचारिको स्वास्थ्यमा रहने भूमिका" मा सहभागी हुनको लागि तपाईलाई आमन्त्रण गरिन्छ ।

२. यो अध्ययनको उद्देश्य नेपालीमा अनुवादित प्रश्नावलीहरु (काम तथा कुशलता र सुधार अनुभूती) नेपालको परिप्रेक्ष्यमा प्रयोग गर्न उपयुक्त छन् कि छैनन् भनेर प्रमाणित गर्नु र सुधार अनुभूतिले स्वास्थ्यमा कस्तो भूमिका खेल्छ भनेर पत्ता लगाउनु हो ।

३. तपाईको आफ्नो अनुभव र काम प्रतिको दृष्टिकोणको प्रतिक्रिया तल उल्लेखित प्रश्नावली मार्फत दिनुहुन अनुरोध गरिन्छ । सबै प्रश्नावली भर्न लगभग ३०-३५ मिनेट लाग्छ ।

४. तपाईले दिएको उत्तर वा प्रतिक्रियामा कतै नाम उल्लेख नगरी गोप्य राखिनेछ । कृपया प्रश्नावलीमा तपाईको नाम उल्लेख नगर्नुहोस् । अध्ययनको अन्त्यमा सामुहिक तथ्यांक मात्र प्रस्तुत गरिनेछ । प्रश्नावली भरिसकेपछि खाममा वन्द गरेर बुझाउन अनुरोध गर्दछु ।

५. तपाई यस अध्ययनमा सहभागी हुन ऐच्छिक रुपमा मंजुर हुनुहुन्छ भने तपाईंलाई प्रश्नावली भर्न दिइनेछ । तपाईंले प्रश्नावली फिर्ता गर्नुभयो भने तपाईंले ऐच्छिक रुपमा यो अध्ययनको उद्देश्य बुझेर प्रश्नावली भर्नुभयो भन्ने बुझिनेछ र तपाईंले यस अध्ययनमा भाग नलिएता पनि तपाईंलाई तपाईंको काम, अध्ययन, अथवा कुनैपनि व्यक्तिगत कुरामा असर पर्नेछैन ।

६. यस अध्ययनमा सहभागी भएपछि कुनैपनि किसिमको पुरस्कारको (जस्तै: आर्थिक अथवा शैक्षिक) व्यवस्था छैन ।

७. यो अध्ययनमा सहभागिता जनाउनुभयो भने तपाईले दिएको प्रतिक्रियाले भावी अनुसन्धानकर्ताहरु र वैज्ञानिक वर्गहरुलाई नेपालको परिप्रेक्ष्यमा कार्यकुशलता सर्वेक्षण, र सुधार अनुभूति प्रश्नावलीको बारेमा अझ राम्रोसंग बुझ्न सहयोग पुग्नेछ । त्यस्तैगरी यस अध्ययनको परिणामले भविष्यमा व्यवसायिक स्वास्थ्य मनोविज्ञानमा अरु अनुसन्धान विस्तार गर्नको लागि फलदायक हुनेछ ।

८. यदि तपाईले यस अध्ययनमा सहभागिता जनाउन इच्छुक हुनुभएन भने तपाईले प्रश्नावली फिर्ता नगर्नपनि सक्नुहुन्छ र वैकल्पिक रुपमा नभरेको (खाली) प्रश्नावली फिर्ता गर्नपनि सक्नुहुनेछ ।

९. यो अनुसन्धान जापानको टोकियो युनिभर्सिटिको संस्थागत समिक्षा बोर्ड र नेपालको स्वास्थ्य अनुसन्धान परिषदबाट पारित भएकोछ ।

१०. यो अध्ययनमा भाग लिएपछि तपाईलाई कुनैपनि किसिमको खतरा अथवा हानी हुने छैन । तैपनि तपाईलाई यस अध्ययनले कुनैपनि किसिमको चोट पुग्यो अथवा तपाईलाई अरु कुराहरुको जानकारी लिन मन लाग्यो भने नहिचकिचाइकन सिधै अनुसन्धानकर्तालाई सो नम्बरमा फोन गर्न सक्नुहुनेछ । (विमला पन्थी ९८४३४७०१३५)

११. यो अध्ययनको नतिजा तपाईको कार्यप्रमुख मार्फत तपाईलाई जानकारि गराइनेछ र यसका साथसाथै राष्ट्रिय तथा अन्तर्राष्ट्रिय पत्रिका मा प्रकाशित गरिनेछ जसले गर्दा अरु इच्छुक व्यक्ति वा अनुसन्धान कर्ताले हाम्रो अनुसन्धानको वारेमा जानकारि लिन र यो नतिजालाई अरु अध्ययन गर्न प्रयोग गर्न सक्नेछन् ।

APPENDIX 3

Participants' information sheet in English

Dear Participants; please read carefully before filling the questionnaire

1. You are being invited to participate in a research study entitled "validation of Nepalese version of Dutch Work Addiction Scale, Utrecht Work Engagement Scale, and Recovery experience questionnaire" being conducted by the researcher who is the student of PhD course in The University of Tokyo, Japan.
2. The aim of this study is to validate the Nepalese version of Dutch Work Addiction Scale, Utrecht Work Engagement Scale, and Recovery experience questionnaire in Nepalese context.
3. You will be asked to complete those aforementioned questionnaires and some demographic and psychosocial well-being questionnaire as well. The questionnaires are about the well-being of the employee and their experience after work in the free time. It will take about 30 minutes to complete.
4. All responses will be both confidential and anonymous. Do not put your name on the questionnaire. If you return filled questionnaire it is expected that you agreed to participate in the study. Only group data will be reported.
5. Your participation in this research study is voluntary and you are permitted to withdraw from the study at any time without penalty or prejudice. If you choose not to participate in the study, you will not be disadvantaged professionally and academically.
6. This study is partially funded by the department of mental health and psychiatric nursing, The University of Tokyo, Japan. Your participation in the study will not be associated with any financial expense.
7. The benefit of participating in the study is that your responses will enable the researchers and scientific community to better understand the workaholism, work engagement and recovery experience questionnaire in Nepalese context. The result of this study will be fruitful to expand the future research on occupational health psychology in Nepal.
8. If you do not wish to participate in this study, you may not return the questionnaire, or alternatively may return a blank questionnaire.
9. This research has been approved from Research Ethic Committee of The University of Tokyo, Japan, and Nepal Health Research Council.
10. There are no risks or disadvantages anticipated with participating in the study. However, if this study causes any injury or if you require any further information about the study please contact the researcher directly on phone number provided (Bimala Panthee Phone: 9847075903 and Saraswati Dhungana Phone: 9849207669)
11. The results of this study will be shared to you through your head of the hospital and it will be published in national or international journal in order that other interested people many learn from our research. In addition, they may use our findings for their future research.

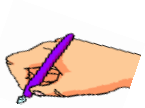
APPENDIX 4

Demographic variables in Nepali

ब्यक्तिगत विवरण सम्वन्धी प्रश्नावली

कृपया तल उल्लेखित प्रश्नहरुको उत्तर गाढा कलमले टिक अथवा कस गरेर दिनुहोस् । उत्तर दिंदा नहिचकिचाइकन तपाईको उत्तम उत्तर जनाउनुहोस् । तपाईले दिएको उत्तरमा तपाईले कुनै सङकोच मान्नुपर्दैन किनभने तपाईंले दिएका उत्तरलाई गोप्य रुपमा नाम नलेखिकन राखिनेछ । तपाईको इमान्दार उत्तरको लागि अनुरोध गरिन्छ । कृपया प्रश्नावलीमा तपाईंको नाम नलेख्नुहोस् ।

१. उमेर ..... वर्ष



२. लिङ्ग १. ( ) महिला २. ( ) पुरुष

२. वैवाहिक स्थिति १. ( ) विवाहित २. ( ) अविवाहित ३. ( ) विधवा अथवा विधुर

४. ( ) पारपाचुके भएको

४. परिवारको प्रकार १. ( ) एकल परिवार २. ( ) सगल परिवार ३. ( ) वृहत परिवार

५. धर्म १. ( ) हिन्दु २. ( ) बौद्ध ३. ( ) किश्चियन

४. ( ) मुश्लिम ५. ( ) अन्य.....

६. शिक्षा १. ( ) स्टाफ नर्स २. ( ) वि. एन./ वि. एस. सी. नर्सिङ

३. ( ) एम. एन. ४. ( ) विद्यावारिधि

८. काम गर्ने वार्डको नाम .....

९. कामको दर्जा १. ( ) सुपरिवेक्ष्यक २. ( ) इन्चार्ज ३. ( ) साधारण कर्मचारि

१०. कामको प्रकार १. ( ) स्थाई २. ( ) अस्थाई ३. ( ) ज्यालादारि

११. साप्ताहिक काम गर्ने घन्टा .....

१२. अहिलेसम्म काम गरेको जम्मा अवधि .....(वर्ष वा महिना)

APPENDIX 5

Demographic variables in English

Please answer the following questions by tick or cross with a dark pen. Record your best answer. You do not need to fear about this as the result of this study will be anonymous and confidential. Your honest answers are requested. Please do not put your name in the questionnaire.

1. Age……years

2. Marital status 1 ( ) Married 2 ( ) Unmarried 3 ( ) Widowed

4. Type of family 1 ( ) Nuclear 2 ( ) Joint 3 ( ) Extended 4 ( ) Alone

5. Religion 1 ( ) Hinduism 2 ( ) Buddhism 3 ( ) Islam 4 ( ) Christian 5 ( ) others, please specify …….

6. Education 1 ( ) (ANM) 2 ( ) staff nurse 3 ( ) BN 4 ( ) MN 5 ( ) PhD

8. Working Ward……

9. Position 1 ( ) supervisor 2 ( ) ward in-charge 3 ( ) general staff

10. Type of work 1 ( ) permanent 2 ( ) temporary 3 ( ) daily wages

11. Working hour per week……

12. Work Experience ……..year/month

APPENDIX 6

Nepalese version of Utrecht Work Engagement Scale

काम तथा कुशलता सर्वेक्षण (UWES)

तलका अठार वटा भनाईहरु तपाईले काममा कस्तो अनुभव गर्नुहुन्छ भन्ने विषयमा छन् । प्रत्येक भनाईहरु ध्यान दिएर पढ्नुहोस् र तपाईले कुनैपनि बेला आफ्नो काममा (जागिरमा) यस्तो अनुभव गर्नुभएको छ वा छैन भन्ने तय गर्नुहोस् । यदि तपाईले कहिल्यैपनि यस्तो महसुस गर्नुभएको छैन भने, भनाईपछिको ठाउँको " ० " (शून्य) मा गोलो लगाउनुहोस् । यदि तपाईले यस्तो महसुस गर्नुभएको छ भने तपाईको अनुभवलाई सबभन्दा राम्ररी वर्णन गर्ने संख्या (१ दखि ६) मा गोलो लगाएर कत्तिको धेरै पटक यस्तो महसुस गर्नुहुन्छ भन्ने कुरा जनाउनुहोस् ।

	कहिल्यैपनि होइन	लगभग कहिल्यैपनि होइन (बर्षमा दुई तीन पटक वा कम)	विरलै (महिनामा एक पटक वा कम)	कहिलेकाहीं (महिनामा दुई तीन पटक)	बारम्बार (हप्तामा एक पटक)	धेरै पटक (हप्तामा दुई तीन पटक)				सधैं (प्रत्येक दिन)	
	०	१	२	३	४	५				६	
१	मेरो काममा म एकदम शक्तिवान र शक्तिको चरम विन्दुमा पुगेको जस्तो महसुस गर्छु ।					०	१	२	३	४	५	६
२	मैले गर्ने काम उद्देश्यपूर्ण र अर्थपूर्ण पाउँछु ।					०	१	२	३	४	५	६
३	मैले काम गरिरहंदा समय बितेको पत्तै पाउँदिन ।					०	१	२	३	४	५	६
४	मेरो काममा म आफूलाई बलियो र फुर्तिलो महसुस गर्छु ।					०	१	२	३	४	५	६
५	मेरो कामबारे म उत्साहित छु ।					०	१	२	३	४	५	६
६	काम गरिरहेको बेलामा मैले काम बाहेक अरु सबै कुराहरु बिर्सिन्छु ।					०	१	२	३	४	५	६
७	मेरो कामले मलाई प्रेरणा दिन्छ ।					०	१	२	३	४	५	६
८	म बिहान उठ्दा मलाई काममा जाउँ जाउँ लाग्छ ।					०	१	२	३	४	५	६
९	कडा मेहनतका साथ काम गर्दा मलाई खुशी लाग्छ ।					०	१	२	३	४	५	६
१०	मैले गर्ने काममा मलाई गर्व छ ।					०	१	२	३	४	५	६
११	मेरो काममा म तल्लीन हुन्छु ।					०	१	२	३	४	५	६
१२	म एकचोटीमा एकैनासले धेरै लामो समयसम्म काम गरिरहन सक्छु ।					०	१	२	३	४	५	६
१३	मेरो लागि मेरो काम चुनौतीपूर्ण छ ।					०	१	२	३	४	५	६
१४	काम गर्दा म एक चित्तले / तन मनले पूर्णतया लागेर गर्छु ।					०	१	२	३	४	५	६
१५	मेरो काममा बाधा अड्चन, तथा समस्याहरु पर्दा विचलित नभईकन आफूलाई सजिलै सम्हाल्न सक्छु ।					०	१	२	३	४	५	६
१६	मलाई मेरो कामबाट अलगिनु पर्दा गाह्रो हुन्छ ।					०	१	२	३	४	५	६
१७	मेरो काममा काम कुराहरु सजिलो संग अगाडि नबढ्दा र बाधा अड्चन आएतापनि म मेरो काममा सधै दृढ रहन्छु ।					०	१	२	३	४	५	६
१८	मलाई मेरो कामबाट अलगिनु पर्दा गाह्रो हुन्छ किनभने म काम गर्दा काममा तल्लिन भएर रमाउदै गरेको हुन्छु ।					०	१	२	३	४	५	६

APPENDIX 7

Utrecht Work Engagement Scale in English

Work & Well-being Survey (UWES) ©

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4		
Never	few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	everyday

1_____At my work, I feel bursting with energy

2_____I find the work that I do full of meaning and purpose

3_____Time flies when I'm working

4_____At my job, I feel strong and vigorous

5_____I am enthusiastic about my job

6_____When I am working, I forget everything else around me

7_____My job inspires me

8_____When I get up in the morning, I feel like going to work

9_____I feel happy when I am working intensely

10_____I am proud of the work that I do

11_____I am immersed in my work

12_____I can continue working for very long periods at a time

13_____To me, my job is challenging

14_____I get carried away when I'm working

15_____At my job, I am very resilient, mentally

16_____It is difficult to detach myself from my job

17_____At my work I always persevere, even when things do not go well

APPENDIX 8

Nepalese version of Dutch Work Addiction Scale

काम तथा कुशलता सर्वेक्षण (DUWAS)

तलका दशवटा भनाइहरु तपाईले काममा कस्तो अनुभव गर्नुहुन्छ भन्ने बिषयमा छन् । कृपया प्रत्येक भनाईहरु ध्यानदिएर पढ्नुहोस् र आफ्नो काम (जागिर) बारे तपाईले कतिपटक यस्तो महशुस गर्नुहुन्छ भन्ने कुराको निर्णय गर्नुहोस् । प्रत्येक भनाइमा तपाईले कति धेरै पटक त्यस्तो महसुस गर्नुहुन्छ भन्ने कुरा आफूलाई सबभन्दा राम्ररी बर्णन गर्ने विकल्प रोज्नुहोस् । उदाहरणको लागि, यदि तपाईले कहिल्यै पनि वा लगभग कहिल्यै पनि यस्तो महशुस गर्नु भएको छैन भने उक्त भनाई पछि "१" (एक) मा गोलो चिन्ह लगाउनुहोस्, त्यस्तैगरी यदि तपाईंले सधै वा लगभग सधै यस्तो महशुस गर्नु भएकोछ भने "४" (चार) मा गोलो चिन्ह लगाउनुहोस् ।

		(लगभग) कहिल्यैपनि होइन	कहिलेकाहिं	धेरैजसो	(लगभग) सधैं
१	म हतारिएको तथा हडवडिएको र समय सगै दौडिरहेको जस्तो देखिन्छु ।	१	२	३	४
२	मेरा सहकर्मीहरुले काम सकिएको जानकारि दिइसकेपछि पनि म आफूलाई लगातार काम गरिरहेको पाउँछु ।	१	२	३	४
३	म व्यस्त रहन्छु र एकै समयमा विभिन्न कामहरुमा हात हालेको हुन्छु ।	१	२	३	४
४	म साथीहरुसंग भेटघाट गर्न, सोखहरु पुरा गर्न, वा फुर्सदका क्रियाकलापहरुमा समय बिताउनु भन्दा बढी समय काम गरेर बिताउँछु ।	१	२	३	४
५	म आफूलाई दुई तीन थोक वा चीज एकैसाथ गरिरहेको पाउँछु जस्तैः टेलिफोनमा कुरा गर्दै खाजा खाने र केही टिप्पणी (मेमो) लेख्ने आदि ।	१	२	३	४
६	मैले गर्ने काममा मलाई आनन्द नआएपनि मेरो लागि कडा मेहनतका साथ काम गर्नु जरुरी हुन्छ ।	१	२	३	४
७	मलाई लाग्छ कि म भित्रको केही कुराले मलाई कडा मेहनतका साथ काम गर्न प्रेरित गर्छ ।	१	२	३	४
८	रमाइलो नलाग्ने भएतापनि कडा मेहनतका साथ काम गर्न म बाध्य हुन्छु ।	१	२	३	४
९	कामबाट बिदा लिएको बेला मलाई गल्ती गरें भन्ने लाग्छ ।	१	२	३	४
१०	म काम नगरिकन खाली हात (यत्तिकै) आरामले बस्न सक्दिन ।	१	२	३	४

APPENDIX 9

Dutch Work Addiction Scale in English

Work and Well-being Survey (DUWAS)

The following ten statements are about how you feel at work. Please read each statement carefully and decide how often you ever feel this way about your job. Please indicate of each statement the alternative that best describes how frequently you feel that way. For instance, if you have never or almost never had this feeling, circle the "1" (one) after the statement. If you have had always or almost always this feeling circle "4" (four).

(Almost) never	Sometimes	Often	(Almost) always
1	2	3	4

1	I seem to be in a hurry and racing against the clock	1	2	3	4
2	I find myself continuing to work after my coworkers have called it quits	1	2	3	4
3	I stay busy and keep many irons in the fire.	1	2	3	4
4	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	1	2	3	4
5	I find myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone.	1	2	3	4
6	It is important to me to work hard even when I do not enjoy what I am doing.	1	2	3	4
7	I feel that there is something inside me that drives me to work hard.	1	2	3	4
8	I feel obliged to work hard, even when it is not enjoyable.	1	2	3	4
9	I feel guilty when I take time off work.	1	2	3	4
10	It is hard for me to relax when I am not working.	1	2	3	4

APPENDIX 10

Nepalese version of Recovery Experience Questionnaire

सुधार (रिकभरि) अनुभूति सम्बन्धी प्रश्नावली

काम पछि फुर्सदको समयमा सामान्यतया मनिसले गर्न सक्ने अनुभूतिहरुवारे तपाईले यहाँ केहि भनाइहरु पाउनुहुनेछ । कृपया प्रत्येक भनाइहरुमा तपाईं कत्तिको सहमत हुनुहुन्छ भन्ने कुरा तल उल्लेखित अंकमा गोलो लगाएर जनाउनुहोस् । भनाइहरुमाथि प्रतिक्रिया दिंदा, काम पछि फुर्सदको समयमा तपाईंको आफ्नै अनुभववारे सोच्नुहोस् । कुनै कुनै भनाइहरु उस्तै उस्तै लाग्ने भएतापनि सम्पूर्ण वुँदाहरुको जवाफ दिनको लागि अनुरोध गरिन्छ ।

कामपछिको फुर्सदको समयमा		**म पटक्कै सहमत छैन**	**म असहमत छु**	**म न सहमत न असहमत छु**	**म सहमत छु**	**म पूर्णतया सहमत छु**
१	मैले के गर्छु भनेर म आफै निर्णय गर्न सक्छु जस्तो लाग्छ ।	१	२	३	४	५
२	म नयाँ कुराहरु सिक्छु ।	१	२	३	४	५
३	म कामबारे बिर्सिन्छु ।	१	२	३	४	५
४	मेरो कार्यतालिका (शेड्युल) बारे म आफै निर्णय गर्छु ।	१	२	३	४	५
५	म कामबारे पटक्कै सोंच्दिन ।	१	२	३	४	५
६	म सबै काम छोडेर आराम लिन्छु ।	१	२	३	४	५
७	म बौद्धिक चुनौतीहरुको खोजिनीति गर्छु ।	१	२	३	४	५
८	मलाई चुनौतीपूर्ण लाग्ने काम कुराहरु गर्छु ।	१	२	३	४	५
९	म मेरो समय कसरी बिताउने भनेर आफै निणर्य गर्छु ।	१	२	३	४	५
१०	म आफैलाई मेरो कामबाट टाढा राख्छु ।	१	२	३	४	५
११	म आफूलाई आराम दिने खालका काम कुराहरु गर्छु ।	१	२	३	४	५
१२	म समयलाई आराम गर्न उपयोग गर्छु ।	१	२	३	४	५
१३	मैले प्रत्येक काम आफूले गर्न चाहेको तरीकाले गर्छु ।	१	२	३	४	५
१४	म समयलाई फुर्सदिलो तरिकाले विताउँछु ।	१	२	३	४	५
१५	म मेरो दृष्टीकोण/ सोंच / धारणा इत्यादि को बिस्तार गर्न केही न केही कार्य गर्छु ।	१	२	३	४	५
१ ६	म कामको भारबाट छुट्टी लिन्छु ।	१	२	३	४	५

APPENDIX 11

Recovery Experience questionnaire in English

Here you will find statements about experiences people can have during their off-job (leisure) time. Please indicate the degree to which each statement applies to you. When responding to the statement, please refer to your experiences during free evenings (and not weekends or vacations. It is important that you respond to all items – although they may seem similar.

	During my free evenings….	I do not agree at all				I do fully agree
01	I feel like I can decide for myself what to do.	1	2	3	4	5
02	I learn new things.	1	2	3	4	5
03	I forget about work.	1	2	3	4	5
04	I decide my own schedule.	1	2	3	4	5
05	I don't think about work at all.	1	2	3	4	5
06	I kick back and relax.	1	2	3	4	5
07	I seek out intellectual challenges.	1	2	3	4	5
08	I do things that challenge me.	1	2	3	4	5
09	I determine for myself how I will spend my time.	1	2	3	4	5
10	I distance myself from my work.	1	2	3	4	5
11	I do relaxing things.	1	2	3	4	5
12	I use the time to relax.	1	2	3	4	5
13	I take care of things the way that I want them done.	1	2	3	4	5
14	I take time for leisure.	1	2	3	4	5
15	I do something to broaden my horizons.	1	2	3	4	5
16	I get a break from the demands of work.	1	2	3	4	5

Scales with 4 items:

Psychological Detachment: 03, 05, 10, 16
Relaxation: 06, 11, 12, 14
Mastery: 02, 07, 08, 15
Control: 01, 04, 09, 13

APPENDIX 12

Nepalese version of psychological distress questionnaire (K6)

मनोवैज्ञानिक पिडा सम्वन्धी प्रश्नावली (K6)

तलका प्रश्नहरुमा तपाईले गएको एक महिना/३० दिनमा गर्नुभएका अनुभवहरु/अवस्थाका बारेमा सोधिएका छन् । तल दिईएका अवस्था तपाईले कतिपटक जस्तो अनुभव गर्नुभएको थियो तपाईको अनुभव संग सबैभन्दा बढि मिल्ने अंकमा गोलो चिन्ह लगाएर जनाउनुहोस् ।

गएको ३० दिनमा, तपाईं लगभग कतिपटक जस्तो ···	सधै	धेरैजसो	कहिलेकाहिं	विरलै/एकदम कम मात्र	कहिल्यै पनि भएन
क. आत्तिने, कहालिने, डराउने वा मुटु ढुकढुक हुने हुनुभएको थियो?	१	२	३	४	५
ख. भविष्यमा केही पनि गर्न सक्दिन भनेर हरेस खानुभएको थियो?	१	२	३	४	५
ग. छटपटी हुने, एक ठाउँमा स्थिर भएर बस्न नसक्ने वा कहाँ जाउँ के गरुँ जस्तो हुनुभएको थियो?	१	२	३	४	५
घ. तपाईंको मनमा भएको दिक्दारिपन, उदासिपन वा खिन्नताले गर्दा कुनैपनि कुराले केही गरेपनि खुशी हुननसक्ने हुनुभएको थियो?	१	२	३	४	५
ङ. जे काम गर्दापनि एकदमै जाँगर नलागिकन जबर्जस्ती गर्न परेको जस्तो लागेको थियो?	१	२	३	४	५
च. आफूलाई काम नलाग्ने बेकारको मान्छे जस्तो ठान्नुभएको थियो?	१	२	३	४	५

APPENDIX 13

Psychological distress questionnaire (K6) in English

The following questions ask about how you have been feeling during the past 30 days. For each question, please circle the number that best describes how often you had this feeling.

During the past 30 days, about how often did you feel….	**All of the time**	**Most of the time**	**Some of the time**	**A little of the time**	**None of the time**
a. ….nervous?	1	2	3	4	5
b. …..hopeless?	1	2	3	4	5
c. ….restless or fidgety?	1	2	3	4	5
d. …..so depressed that nothing could cheer you up?	1	2	3	4	5
e. ….worthless?	1	2	3	4	5

APPENDIX 14

Questions related to general health and well-being

साधारण स्वास्थ्य सम्वन्धी प्रश्नावली

१. सामान्य रुपमा भन्दा, तपाईले आफ्नो स्वास्थ्यलाई के भन्नुहुन्छ? एउटामा मात्र चिन्ह लगाउनुहोस् ।

१. ( ) उत्कृष्ट　　२. ( ) धेरै राम्रो

३. ( ) राम्रो　　४. ( ) ठिकै　　५. ( ) कमसल

२. सबैकुरा विचार गर्दाखेरि तपाई आफ्नो जीवनदेखि कत्तिको खुशी हुनुहुन्छ?

१. ( ) धेरै खुशी

२. ( ) खुशी

३. ( ) वेखुशी

४. ( ) एकदम वेखुशी

३. सामान्य रुपमा तपाई आफ्नो जागिर वा काममा कतिको सन्तुष्ट हुनुहुन्छ?

१. ( ) अत्याधिक धेरै सन्तुष्ट छु

२. ( ) धेरै सन्तुष्ट छु

३. ( ) सन्तुष्ट छु

४. ( ) अलिअलि सन्तुष्ट छु

५. ( ) अलिकति पनि सन्तुष्ट छैन

४। तलको ० देखि १० नम्बरको स्केल प्रयोग गरेर गएको ३० दिनमा तपाईले गरेको कामलाई समग्रमा तपाईले कसरि मूल्यांकन गर्नुहुन्छ?

सबभन्दा खराब काम										सबभन्दा उत्तम काम
०	१	२	३	४	५	६	७	८	९	१०

प्रश्नावली भर्नुभएकोमा धेरै धेरै धन्यवाद छ ! कुनै प्रश्न भर्न छुटेको छ कि कृपया एकपटक फेरी जाँच्नुहोस् ।

APPENDIX 15

Questions related to general health and well-being

1. In general, would you say your health is (check only one): 1( ) excellent 2 ( ) very good 3 ( ) good 4 ( ) fair 5 ( ) poor

2. Taking everything in account, how happy are you with your life? 1 ( ) very unhappy 2 ( ) unhappy 3 ( ) happy 4 ( ) very happy

3. How satisfied are you with your job in general? 1 ( ) extremely satisfied 2 ( ) very satisfied 3 ( ) moderately satisfied 4 ( ) slightly satisfied 5 ( ) not satisfied at all

4. Using the 0 to 10 scale, how would you rate your overall performance on the days you worked in the past 7 days? (circle the number)

Worst performance										Top performance
0	1	2	3	4	5	6	7	8	9	10